

# 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.

This manual replaces RS5320015 Revision 0.

## International Commercial Microwave Ovens

This Base Manual covers general information

Refer to individual Technical Sheet  
for information on specific models

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

**2002 Models are listed in bold.**

RS511	P1325801M
<b>RS511</b>	<b>P1327805M</b>
<b>RS511A</b>	<b>P1327806M</b>
RCS511	P1325802M
<b>RCS511</b>	<b>P1327809M</b>
RFS511	P1325803M
<b>RFS511</b>	<b>P1327812M</b>
RFS511SW2	P1325804M
<b>RFS511SW2</b>	<b>P1327813M</b>
URS511	P1325805M
<b>URS511</b>	<b>P1327807M</b>
URCS511	P1325806M
<b>URCS511</b>	<b>P1327810M</b>
URFS511	P1325807M
<b>URFS511</b>	<b>P1327814M</b>
DES11E	P1325808M
<b>DES11E</b>	<b>P1327808M</b>
DCS11E	P1325809M
<b>DCS11E</b>	<b>P1327811M</b>
DFS11E	P1325810M
<b>DFS11E</b>	<b>P1327815M</b>

# Important Information

## Important Notices for Servicers and Consumers

Maytag will not be responsible for personal injury or property damage from improper service procedures. 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 information. **IT IS THE TECHNICIANS RESPONSIBILITY TO REVIEW ALL APPROPRIATE SERVICE INFORMATION BEFORE BEGINNING REPAIRS.**



### **WARNING**

To avoid risk of severe personal injury or death, disconnect power before working/servicing on appliance to avoid electrical shock.

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**

Contact your local product distributor or visit the Web site at [www.amanacommercial.com](http://www.amanacommercial.com).

### **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, product or property damage.

# Table of Contents

Important Information .....	2	Disassembly Procedures	
Important Product Information .....	4	Outer Case Removal .....	20
Important Safety Information .....	5	Control Assembly (painted models) .....	20
General Information		Control Assembly (stainless steel models) .....	20
Placement of the Oven .....	9	Oven Light Removal .....	20
Radio Interference.....	9	Oven Light Socket Removal.....	20
Earthing Instructions .....	9	Splatter Shield Removal .....	21
Electrical Power Cord .....	10	Antenna and Cradle.....	21
Component Testing Procedures .....	11	Blower Motor or Wheel Removal .....	21
Power Test (Traditional 1 Liter Test).....	13	Door Disassembly .....	21
Service Information		Interlock Switch Assembly Removal .....	22
Proper Handling of Magnetron Tubes .....	14	Removal of Power Transformer, Capacitor and	
Magnetron Failure Modes .....	14	Diode (Rectifier) .....	23
Equipment .....	15	Magnetron Removal .....	23
Procedure For Measuring Radiation Leakage.....	15	Magnetron Tube Thermal Cut-Out Replacement .....	24
Measurement With the Outer Panel Removed .....	15	Oven Cavity Thermal Cut-Out .....	24
Measurement With a Fully Assembled Oven .....	15	Oven Tray Replacement .....	24
Record Keeping and Notification		Removal of Line Filter .....	25
After Measurement .....	15	Fuse Block .....	25
Troubleshooting		Appendix A	
Operating Instructions for the		Owner's Manual .....	A-2
Narda 8110B Radiation Monitor.....	16		
Radiation Monitor .....	16		
Operating Instructions for Holaday HI1501,			
HI1510, and HI1710 .....	17		
Troubleshooting Guide.....	18		

# Important Product Information



## WARNING

Precautions to be observed before and during servicing to avoid possible exposure to excessive microwave energy, or electrical shock disconnect power to oven.

- (A) Do not operate or allow oven to be operated with door open.
- (B) Make the following safety checks on all ovens to be serviced before activating the magnetron or other microwave source, and make repairs as necessary:
  - Interlock operation
  - Proper door closing
  - Seal and sealing surfaces (arcing, wear, and other damage)
  - Damage to or loosening of hinges and latches
  - Evidence of dropping or abuse
- (C) Before turning on microwave power for any service test or inspection within the microwave generating compartments, check the magnetron, waveguide or transmission line, and cavity for proper alignment, integrity, and connections.
- (D) Any defective or misadjusted components in the interlock, monitor, door seal, and microwave generation and transmission systems shall be repaired, replaced or adjusted by procedures described in this manual before oven is released to the consumer.
- (E) Check microwave leakage to verify compliance with the federal performance standard should be performed on each oven prior to release to the consumer.

## Wiring

Good service practice is to never route wiring over terminals and/or sharp edges. This applies to any wiring without regard to the circuit voltage. Wire insulation material and thickness is designed and regulated for electrical spacing purpose only, but cannot always be relied upon because of possible cuts and/or abrasions, which can occur during servicing.



## WARNING

To avoid risk of electrical shock, injury, or death, make sure these earthing instructions are followed.

## Earthing Instructions



## WARNING

Do not remove earthing prong when installing earthed appliance in a home or business that does not have three wire earthing receptacle, under no condition is earthing prong to be cut off or removed. It is the personal responsibility of the consumer to contact a qualified electrician and have properly earthed three prong wall receptacle installed in accordance with appropriate electrical codes

Should a two prong adapter plug be required temporarily, it is the personal responsibility of the consumer to have it replaced with properly earthed three prong receptacle or the two prong adapter properly earthed by a qualified electrician in accordance with appropriate electrical codes.

## Servicing of Earthed Products

The standard accepted color coding for earthing wires is GREEN or GREEN WITH YELLOW STRIPE. These earth leads are NOT to be used as current carrying conductors. It is extremely important that the technician replace any and all earths prior to completion of the service call. Under no condition should earth wire be left off causing a potential hazard to technicians and consumer.

# Important Safety Information

## **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: (a) Door (bent), (b) hinges and latches (broken or loosened), (c) door seals and sealing surfaces.
- (d) The oven should **NOT** be adjusted or repaired by anyone except properly qualified service personnel.

## **PRECAUTIONS A PRENDRE POUR EVITER LES RISQUES D'EXPOSITION A DES QUANTITES EXCESSIVES D'ENERGIE MICRO-ONDE**

- (a) **NE PAS** essayer de faire marcher le four avec la porte ouverte car cela risque d'exposer l'utilisateur à une quantité nocive d'énergie micro-onde. Ne jamais supprimer ou altérer les verrouillages de sécurité.
- (b) **NE RIEN METTRE** entre la face avant du four et la porte et ne pas laisser de saletés ou de produits de nettoyage s'accumuler sur les surfaces d'étanchéité.
- (c) **NE JAMAIS** faire fonctionner le four s'il est endommagé. Il est tout particulièrement important que la porte du four se ferme correctement et que les éléments suivants fonctionnent sans problème : a) la porte (faussée), b) les charnières et les verrouillages (cassés ou desserrés), c) les joints et les surfaces d'étanchéité de la porte.
- (d) Le four **NE DOIT ETRE** réparé que par des réparateurs qualifiés.

## **PRECAUCIONES PARA EVITAR LA POSIBLE EXPOSICION EXCESIVA A LA ENERGIA DE MICROONDAS**

- (a) **NO** intente hacer funcionar este horno con la puerta abierta ya que podría resultar en una exposición dañina a la energía de microondas. Es muy importante no pasar por alto o averiar los interruptores de seguridad.
- (b) **NO** coloque ningún objeto entre el frente del horno y la puerta. Tampoco permita que suciedad o residuos de limpiador se acumulen en las superficies de sellado del aparato.
- (c) **NO** haga funcionar el horno si éste estuviera averiado. Es de particular importancia que la puerta del horno se cierre correctamente y que no existan daños en: (a) la puerta (dobladuras), (b) las bisagras y el pestillo (rotos o flojos), (c) los sellos de las puertas y otras superficies de sellado.
- (d) El horno **NO** deberá ser ajustado o reparado por ninguna persona excepto personal de servicio propiamente calificado.

## **VORSICHTSMASSNAHMEN ZUM SCHUTZ GEGEN MIKROWELLENSTRAHLUNG**

- (a) **NICHT** versuchen, den Herd mit offener Tür zu betreiben, da Sie dadurch schädlicher Mikrowellenstrahlung ausgesetzt werden können. Auf keinen Fall die Sicherheitsverriegelung unwirksam machen oder ändern.
- (b) **KEINE** Gegenstände zwischen Herd und Tür einklemmen oder Schmutz und Rückstände von Reinigungsmitteln auf den Dichtflächen sich ansammeln lassen.
- (c) **KEINEN** beschädigten Herd benutzen. Es ist besonders wichtig, daß die Herdtür richtig schließt und die folgenden Teile nicht beschädigt sind: (a) Tür (z.B. verbogen), (b) Scharniere und Klappen (z.B. gebrochen oder lose), (c) Türdichtungen und Dichtflächen.
- (d) Das Gerät **NUR** von qualifiziertem Kundendienstpersonal reparieren lassen.

# Important Safety Information

## **VAROITUS MIKROAALTOSÄTEILYÄ**

Käyttäjää ei saa joutua alttiiksi mikroaaltoenergialle, jota voi säteillä magnetronista tai muusta mikroaalloja kehittävästä laitteesta, jos sitä käytetään väärin tai jos se kytketään väärin. Kaikkien mikroaaltoliitäntöjen sekä syöttöettä ulostulopuolella, aaltoputkien laippojen ja tiivisteiden tulee

olla varmistettuja. Mikroaaltouunia ei saa koskaan käyttää ilman kuormaa, jossa mikroaaltoenergiaa kuluu. Avoimeen aaltoputkeen tai antenniin ei saa koskaan katsoa virran ollessa kytkettynä.

## **VARNING FÖR MIKROVÅGSSTRÅLNING**

Mikrovågsenergi kan stråla från magnetronen eller från annan mikrovågsgenererande anordning om den används eller ansluts felaktigt. Alla anslutningar för mikrovåg, såsom flänsar och tätningar måste vara betryggande ur säkerhets-

synpunkt. Starta aldrig anordningen utan mikrovågsabsorberande belastning. Mikrovågsstrålning från en öppen vågledare eller antenn har sådan strålningstäthet att uppenbar skaderisk föreligger.

## **ADVARSEL FOR MIKROBØLGESTRALING**

Mikrobølgeenergi kan stråle fra magnetronen eller annen mikrobølgeproduserende anordning ved feilkopling eller feil bruk. Alle mikrobølgeinntak og -uttaksforbindelser, flenser og pakninger, må være sikkerhetsmessig betryggende

utført. Anordningen må aldri startes uten mikrobølgeabsorberende belastning. Se aldri inn mot en åpen bølgeleder eller antenne mens apparatet er i drift.

## **FORSIGTIG MIKROBØLGESTRÅLING**

Undgå at blive udsat for stråling fra mikrobølgegeneratoren eller andre dele som fører mikrobølgeenergi.

# Important Safety Information

## **PRECAUZIONI PER EVITARE L'EVENTUALE ECCESSIVA ESPOSIZIONE ALLE MICROONDE**

- (a) **NON** cercare di far funzionare questo forno con lo sportello aperto: ciò può causare l'esposizione nociva alle microonde. È importante non danneggiare o manomettere i dispositivi di sicurezza.
- (b) **NON** porre alcun oggetto fra il lato anteriore del forno e lo sportello o permettere il depositarsi di sporcizia o residui sulle superfici di tenuta.
- (c) **NON** usare un forno danneggiato. È molto importante che lo sportello del forno si chiuda bene e che non vi siano danni a: (a) sportello (piegato); (b) cardini e dispositivi di chiusura (rotti o allentati); (c) guarnizioni dello sportello e delle superfici di tenuta.
- (d) Il forno va regolato o riparato **ESCLUSIVAMENTE** da personale d'assistenza debitamente qualificato.

## **VOORZORGSMATREGELEN TER VOORKOMING VAN MOGELIJKE BLOOTSTELLING AAN OVERMATIGE MICROGOLFENERGIE**

- (a) Probeer **NIET** om deze magnetron met de deur open te gebruiken. daar gebruik met open deur schadelijke blootstelling aan microgolffenergie ten gevolge kan hebben. Het is belangrijk dat u de veiligheidssluitingen nooit onklaar maakt of ermee knoeit.
- (b) Plaats **GEEN** voorwerpen tussen de voorkant van de oven en de deur. Zorg dat geen vuil of schoonmaakmiddel op de sluitvlakken achterblijft.
- (c) Gebruik de magnetron **NIET** indien hij beschadigd is. Het is vooral belangrijk dat de deur goed sluit en dat er geen beschadigingen zijn aan: (a) de deur (verbogen), (b) de scharnieren en sloten (gebroken of los), (c) de deurdichtingen en sluitvlakken.
- (d) De magnetron mag **UITSLUITEND** door daartoe bevoegd servicepersoneel bijgesteld en gerepareerd worden.

# Important Safety Information



## CAUTION

Read the following information to avoid possible exposure to microwave radiation:

The basic design of the Amana or Menumaster microwave ovens make it an inherently safe device to both user and servicer. However, there are some precautions which should be followed when servicing the microwave oven to maintain this safety. These are as follows:

1. Always operate the unit from an adequately earthed outlet. Do not operate on a two-wire extension cord.
2. Before servicing the unit (if unit is operable), perform the microwave leakage test.
3. The oven should never be operated if the door does not fit properly against the seal, the hinges or hinge bearings are damaged or broken; the choke is damaged, (pieces missing, etc.); or any other visible damage can be noted. Check the choke area to ensure that this area is clean and free of all foreign matter.
4. If the oven operates with the door open and produces microwave energy, take the following steps.
  - A. Tell the user not to operate the oven.
  - B. Contact Maytag immediately.
5. Always have the oven disconnected when the outer case is removed except when making the "live" tests called for in this Service Manual. Do not reach into the equipment area while the unit is energized. Make all connections for the test and check them for tightness before plugging the cord into the outlet.
6. Always earth the capacitors on the magnetron filter box and H. V. Capacitor with an insulated-handle screwdriver before working in the high voltage area of the equipment compartment. Some types of failures will leave a charge in these capacitors and the discharge could cause a reflex action which could make you injure yourself.
7. In the area of the transformer, capacitor, diode, and magnetron there is HIGH VOLTAGE. When the unit is operating, keep this area clean and free of anything which could possibly cause an arc or earthing, etc.
8. Do not for any reason defeat the interlock switches. There is no valid reason for this action at any time; nor will it be condoned by Maytag.
9. IMPORTANT: Before returning a microwave to a customer, check for proper switch interlock action. The primary and secondary switches MUST open when the door is actuated. The monitor switch MUST close at a  $\frac{1}{4}$ " when the door is opened.
10. Before returning a microwave to a customer, verify the door spacing is reasonably uniform along the top, bottom, and sides, and that it measures  $\frac{1}{8}$ " or less.
11. The microwave oven should never be operated with:
  - Any components removed and/or bypassed.
  - Any of the safety interlocks found to be defective.
  - Any of the seal surfaces defective, missing, or damaged.
12. To ensure that the unit does not emit excessive microwave leakage and to meet the Department of Health Human Service guidelines, check the oven for microwave leakage using Narda Model 8100, 8200, Holaday HI1500, HI1501 or Simpson 380M leakage monitor as outlined in the instructions. The maximum leakage level allowed is 4 mW/cm<sup>2</sup>.
13. If servicer encounters an emission reading over 4 mW/cm<sup>2</sup> the servicer is to cease repair and contact the Maytag Service Department immediately for further direction. Maytag will contact the proper Government Agency upon verification of the test results.



# General Information

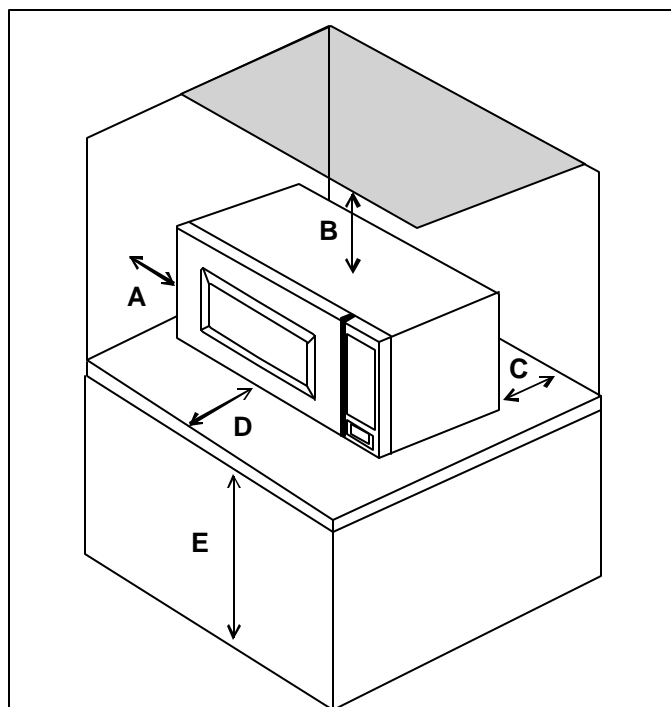
## Placement of the Oven

Do not install microwave next to or above source of heat, such as a deep fat fryer. This could cause the microwave to operate improperly and could shorten the life of electrical components.

Install microwave on a level countertop surface.

Do not block or obstruct oven filter. Allow access for cleaning.

All air vents must be kept clear during cooking. If air vents are covered during operation the oven may overheat. In this case, a sensitive thermal safety device automatically turns the oven off. The oven will be inoperable until the oven has cooled sufficiently.



- A—Allow at least 17.8 cm (7") of clearance around sides of unit.
- B—Allow at least 17.8 cm (7") of clearance on top unit.
- C—Allow at least 6.5 cm (2-1/2") of clearance between air discharge on back of unit and back wall.
- D—Allow at least 8 cm (3") inches from door front to edge of countertop, to avoid accidental tipping of the unit.
- E—Place oven on a level surface a minimum of 85 cm (33-1/2") above the floor.

## Radio Interference

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

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

## Earthing Instructions

This appliance **MUST** be earthed. If an electrical short circuit occurs, earthing reduces the risk of electric shock by providing an escape wire for the electric current. The cord for this appliance has a earthing wire with a earthing plug. Place the plug into an outlet that is properly installed and earthed. Do not use a two-prong adapter.



## WARNING

To avoid risk of electric shock, personal injury or death, do not alter the plug and use earthing plug properly.

Consult a qualified electrician if you do not understand the earthing instructions or if you wonder whether the appliance is properly earthed.

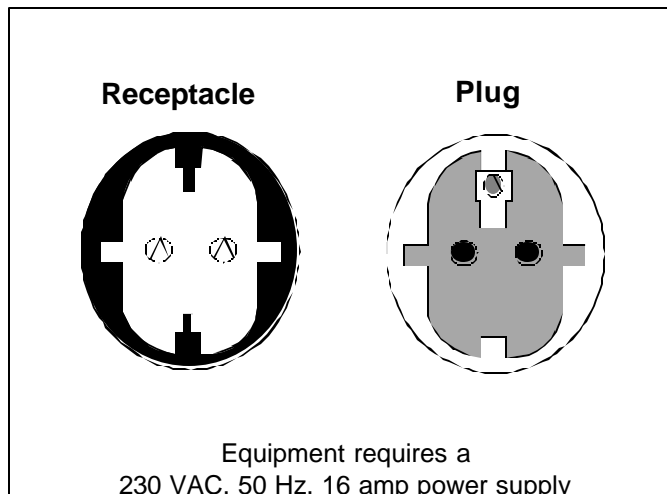
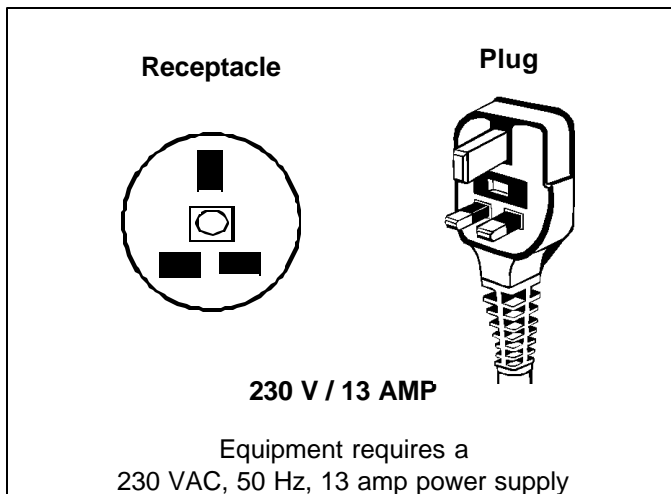
Keep the electrical power cord dry and do not pinch or crush it in any way.

The wires in the power cord are colored in accordance with the following code:

- |                        |                |
|------------------------|----------------|
| • <b>Green/Yellow:</b> | <b>Earth</b>   |
| • <b>Blue:</b>         | <b>Neutral</b> |
| • <b>Brown:</b>        | <b>Live</b>    |

# General Information

## Electrical Power Cord



Do not use an extension cord. If the product power cord is too short, have a qualified electrician install a three-prong receptacle. This unit should be plugged into a separate 230 VAC / 50 Hz power supply. If other equipment is on the same circuit, an increase in cooking times may be required and a fuse can be blown.

### Model Identification

When contacting provide product information located on rating plate. Record the following:

Model Number: \_\_\_\_\_  
Manufacturing Number: \_\_\_\_\_  
Serial or S/N Number: \_\_\_\_\_  
Date of purchase: \_\_\_\_\_  
Dealer's name and address: \_\_\_\_\_

### Service

Keep a copy of sales receipt for future reference or in case warranty service is required. To locate an authorized servicer contact your local product distributor or visit the Web site at [www.amanacommercial.com](http://www.amanacommercial.com).

Warranty service must be performed by an authorized servicer. We also recommend contacting an authorized servicer, if service is required after warranty expires.

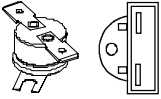
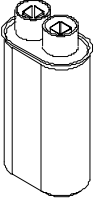

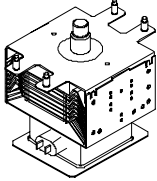
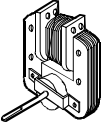
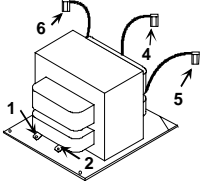
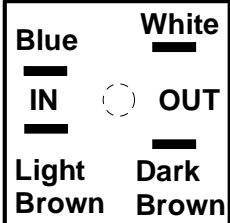
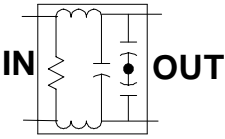
### Parts and Accessories

Purchase replacement parts and accessories over the phone. To order accessories for your product contact your local product distributor or visit the Web site at [www.amanacommercial.com](http://www.amanacommercial.com).

# Component Testing Procedures

## ⚠ WARNING

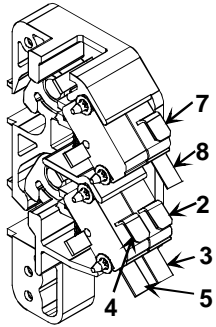
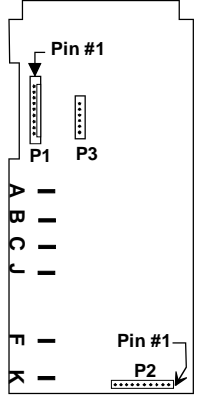
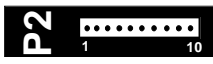
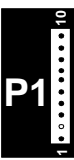
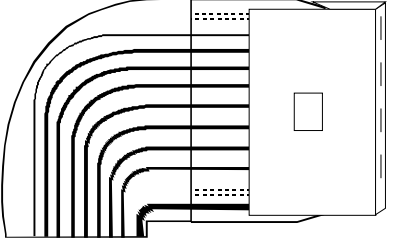
To avoid risk of electrical shock, personal injury, or death, disconnect power to oven and discharge capacitor before servicing, unless testing requires it.

Illustration	Component	Test	Results
	Thermal cutout	Disconnect all wires from TCO. Measure resistance across terminals. Magnetron TCO ..... Cavity TCO .....	Open at 138°C (280°F) and closed at 82°C (180°F) Opens at 117°C (243°F)
	Capacitor	<b>Discharge Capacitors</b>  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 MΩ. If no deflection occurs, or if continuous deflection occurs, replace capacitor.  Terminal to Case: Infinite resistance
	Diode assembly	<b>Discharge Capacitors</b>  Remove diode lead from capacitor and connect ohmmeter.  Reverse leads for second test.	Infinite resistance should be measured in one direction and 50KΩ or more in the opposite direction.  <b>NOTE:</b> Analog meter must contain a battery of 6 volts minimum.
	Magnetron	<b>Discharge Capacitors</b>  Remove wires from magnetron and connect ohmmeter to terminals. Also check between each terminal and ground.	Between Terminals: Less than 1 Ω  Each terminal to ground measures Infinite resistance. <b>NOTE:</b> This test is not conclusive. If oven does not heat and all other components test good replace the magnetron and re-test.
	Fan motor	Remove all wires from motor.  Measure resistance across coil. ....	Approximately 40 Ω
	Transformer 1 COM 2 230 V 3 4 5 6 H.V. Secondary Filament	<b>Discharge Capacitors</b> Remove all wires from terminals.  Measure resistance from: Primary #1 to #2 ..... Secondary #4 to transformer base plate. Filament #5 to #6 .....	Approximately < 1 Ω Approximately 83 Ω <1 Ω
	Line filter 	Disconnect wire from terminals. Measure resistance of the following terminals:  Blue to White.....  Dark Brown to Light Brown.....	< 1 Ω  < 1 Ω

# Component Testing Procedures

## ⚠ WARNING

To avoid risk of electrical shock, personal injury, or death, disconnect power to oven and discharge capacitor before servicing, unless testing requires it.

Illustration	Component	Test	Results																																																									
	<p>Interlock switch assembly</p> <p>2 ——— 3</p> <p>5 ——— 4</p> <p>7 ——— 8</p>	<p>Disconnect wires to switch.</p> <p>With door open measure resistance from:</p> <p>Terminal 2 to 3    Secondary .....</p> <p>Terminal 5 to 4    Primary .....</p> <p>Terminal 7 to 8    Monitor .....</p> <p>With door closed measure resistance from:</p> <p>Terminal 2 to 3    Secondary .....</p> <p>Terminal 5 to 4    Primary .....</p> <p>Terminal 7 to 8    Monitor .....</p> <p><b>After verifying or replacing the module, re-connect wires to switch and check operation of monitor circuit before operating the oven.</b></p>	<p>Infinite <math>\Omega</math></p> <p>Infinite <math>\Omega</math></p> <p>Indicates continuity</p> <p>Indicates continuity</p> <p>Indicates continuity</p> <p>Infinite <math>\Omega</math></p>																																																									
Fault Codes		<p>F1 – .....</p> <p>F2 – .....</p> <p>F3 – .....</p> <p>F4 – .....</p> <p>F5 – .....</p> <p>F6 – .....</p>	<p>Replace H.V. / L.V. Board</p> <p>Replace H.V. / L.V. Board</p> <p>Replace H.V. / L.V. Board</p> <p>Replace H.V. / L.V. Board</p> <p>Replace Touch Panel</p> <p>Replace H.V. / L.V. Board</p>																																																									
	<p>HV / LV board</p>   <p><b>P1 connector used for touch panel ribbon</b></p>	<p><b>All Models</b></p> <p>Line voltage to control board P2 connector Pin 1—Pin 3.....</p> <p>Output drive voltage to triac Triac terminals Gate—T1.....</p> <p>Fan relay (controls blower motor, oven light) Control board Terminals C—J.....</p> <p>Cook relay Control board Terminals F—K.....</p>	<p>Line voltage (All Conditions)</p> <p>0 VAC (Idle)</p> <p>0.9 VAC (Cook)</p> <p>Line voltage (Idle)</p> <p>0 VAC (Cook)</p> <p>Line voltage (Idle)</p> <p>0 volts (Cook)</p>																																																									
	<p>Touch panel</p>	<p>Continuity is indicated as 100 <math>\Omega</math> and below.</p> <p>Pin 1: is considered Ground</p> 	<table border="1"> <thead> <tr> <th>Pad</th> <th>Pins</th> <th>Measurement</th> </tr> </thead> <tbody> <tr><td>1</td><td>8 &amp; 10</td><td>Continuity</td></tr> <tr><td>2</td><td>7 &amp; 10</td><td>Continuity</td></tr> <tr><td>3</td><td>6 &amp; 10</td><td>Continuity</td></tr> <tr><td>4</td><td>5 &amp; 10</td><td>Continuity</td></tr> <tr><td>5</td><td>4 &amp; 10</td><td>Continuity</td></tr> <tr><td>6</td><td>3 &amp; 10</td><td>Continuity</td></tr> <tr><td>7</td><td>8 &amp; 9</td><td>Continuity</td></tr> <tr><td>8</td><td>7 &amp; 9</td><td>Continuity</td></tr> <tr><td>9</td><td>6 &amp; 9</td><td>Continuity</td></tr> <tr><td>0</td><td>5 &amp; 9</td><td>Continuity</td></tr> <tr><td>Start</td><td>4 &amp; 9</td><td>Continuity</td></tr> <tr><td>Stop/Reset</td><td>4 &amp; 8</td><td>Continuity</td></tr> <tr><td>X 2</td><td>6 &amp; 8</td><td>Continuity</td></tr> <tr><td>Time Entry</td><td>7 &amp; 8</td><td>Continuity</td></tr> <tr><td>Hold</td><td>3 &amp; 8</td><td>Continuity</td></tr> <tr><td>Defrost</td><td>6 &amp; 7</td><td>Continuity</td></tr> <tr><td>Medium</td><td>5 &amp; 7</td><td>Continuity</td></tr> <tr><td>Medium HI</td><td>4 &amp; 7</td><td>Continuity</td></tr> </tbody> </table>	Pad	Pins	Measurement	1	8 & 10	Continuity	2	7 & 10	Continuity	3	6 & 10	Continuity	4	5 & 10	Continuity	5	4 & 10	Continuity	6	3 & 10	Continuity	7	8 & 9	Continuity	8	7 & 9	Continuity	9	6 & 9	Continuity	0	5 & 9	Continuity	Start	4 & 9	Continuity	Stop/Reset	4 & 8	Continuity	X 2	6 & 8	Continuity	Time Entry	7 & 8	Continuity	Hold	3 & 8	Continuity	Defrost	6 & 7	Continuity	Medium	5 & 7	Continuity	Medium HI	4 & 7	Continuity
Pad	Pins	Measurement																																																										
1	8 & 10	Continuity																																																										
2	7 & 10	Continuity																																																										
3	6 & 10	Continuity																																																										
4	5 & 10	Continuity																																																										
5	4 & 10	Continuity																																																										
6	3 & 10	Continuity																																																										
7	8 & 9	Continuity																																																										
8	7 & 9	Continuity																																																										
9	6 & 9	Continuity																																																										
0	5 & 9	Continuity																																																										
Start	4 & 9	Continuity																																																										
Stop/Reset	4 & 8	Continuity																																																										
X 2	6 & 8	Continuity																																																										
Time Entry	7 & 8	Continuity																																																										
Hold	3 & 8	Continuity																																																										
Defrost	6 & 7	Continuity																																																										
Medium	5 & 7	Continuity																																																										
Medium HI	4 & 7	Continuity																																																										

# Component Testing Procedures



## WARNING

To avoid risk of electrical shock, personal injury, or death, disconnect power to oven and discharge capacitor before servicing, unless testing requires it.



## WARNING

To insure proper functioning of the interlock system if the 12 Amp. line fuse has opened, the switch assembly must be replaced along with the fuse.

For continued protection against radiation hazard, replace only with identical replacement components.

Precautions to be observed before and during servicing to avoid possible exposure to excessive microwave energy:

- Do not operate or allow the oven to be operated with the oven door open.
- Make the following safety checks on all ovens to be serviced before activating the magnetron or other microwave source, and make repairs as necessary: (1) Interlock operation, (2) Proper door closing, (3) Seal and sealing surface(s) (arcing, wear and other damage), (4) Damage to or loosening of hinges and latches, (5) Evidence of dropping or abuse.
- 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.
- Any failed 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.
- A microwave leakage check to verify compliance with the federal performance standard should be performed on each oven prior to release to the owner.

## Power Test (Traditional Test Method)

Test equipment required is Amana power test kit R0157397(Fahrenheit), or Menumaster power test kit M95D5 (Celsius).

1. Fill the plastic container to the bottom of the 1000 ml. line with cool tap water.
2. Using the thermometer; stir the water, measure and record the water temperature.  
**Initial water temperature should be approximately 60°F (20°C).**
3. Place container on the center of the oven shelf and heat the water for 63 seconds.

**NOTE:** Use a watch second hand, not the oven timer.

4. Stir the water, measure and record the temperature of the water after heating time is complete.
5. Subtract the starting water temperature (Step 2), from the ending water temperature (Step 4), to obtain the temperature rise.
6. See the Temperature Chart provided below.

**NOTES:**

- The IEC-705 test method requires precision measurements and equipment. It is not practical to perform the IEC test in the field. To convert the traditional power test results to the approximate IEC-705 rating, take the traditional power test results and add 100 watts per magnetron for the unit being tested.

**Example:** 930 — watts output using the traditional power test for model RS511  
 $\frac{+ 100}{1030}$  — watts (1 magnetrons X 100 watts)  
 1030 — Approximate IEC-705 results

- Always perform power test three times for accuracy, changing the water after each test is performed.
- Variation or errors in the test procedure will cause a variance in the temperature rise. Additional power tests should be made if temperature rise appears marginal.
- Low line voltage will cause lower temperature rise.

## Traditional Power Test Temperature Chart

SIXTY-THREE SECONDS run time chart for units less than 1550 Watts cooking power

$\Delta T$ (°F)	Cooking Power Output	$\Delta T$ (°F)	Cooking Power Output	$\Delta T$ (°C)	Cooking Power Output	$\Delta T$ (°C)	Cooking Power Output
12	464	23	891	7	490	15	1050
13	504	24	930	8	560	16	1120
14	542	25	969	9	630	17	1190
15	581	26	1007	10	700	18	1260
16	620	27	1046	11	770		
17	659	28	1085	12	840		
18	697	29	1124	13	910		
19	736	30	1162	14	980		
20	775	31	1201				
21	814	32	1240				
22	852						

# Service Information



## WARNING

To avoid risk of electrical shock, personal injury, or death, disconnect power to oven and discharge capacitor before servicing, unless testing requires it.

### Proper Handling of Magnetron Tubes



## CAUTION

A magnetron tube, like a radio or television tube must be handled with a reasonable amount of care. When handling a tube, always handle by the housing only. Use caution not to touch or strike the ceramic portion at the top. The carton used to ship service replacement tubes is reusable.

### Magnetron Failure Modes

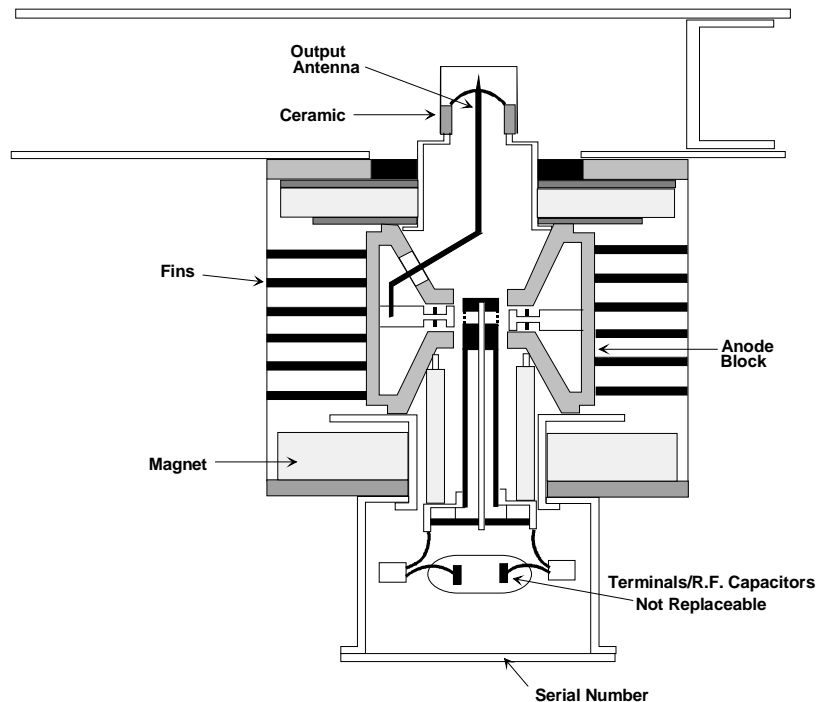
Magnetron failures that have been identified are generally grouped into categories shown below.

#### 1. Shorted

**Air** - This is a case where the tube has had the vacuum envelope destroyed and air has entered the tube. This will cause internal arcing and high secondary current if high voltage is applied.

**R.F. Capacitors** - May short to chassis. This condition will also cause loss of high voltage.

- 2. Open Heater (Filament)** - Can be determined by a ohmmeter when transformer leads are disconnected. Resistance is normally less than one ohm; filament does not short internally. Any tube removed should be checked since usage tends to make the filament more fragile. Later handling and shipping may open the filament and thereby mask the true failure mode when checked at the factory.
- 3. Low Power** - Caused by "wearout" of the emission characteristics of the directly heated cathode. Symptoms are: (1) tube current will take longer to get to operating point than a new tube (normally about 2 - 3 seconds), (2) tube current does not get high enough to cause the tube to oscillate with normal line voltage, (3) oven produces low power into a load, two-thirds or less than normal.
- 4. Physical Damage** - Caused by mishandling of magnetron tube.



# Service Information



## WARNING

To avoid risk of electrical shock, personal injury, or death, disconnect power to oven and discharge capacitor before servicing, unless testing requires it.



## WARNING

Check for radiation leakage after servicing. Should the leakage be more than 4 mW/cm<sup>2</sup> inform Maytag 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 in the customer's home.

## 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/cm<sup>2</sup> or less.
  - Leakage for fully assembled oven with door normally closed ...4 mW/cm<sup>2</sup> or less.
  - Leakage for a fully assembly oven (before the latch switch (primary) is interrupted) while pulling the door ... 4 mW/cm<sup>2</sup> or less.
1. Pour 275 cc ±15 cc (9 oz ±1/2 oz) of 20°C ± 5°C (68°F ± 9°F) water in a beaker which is graduated to 600 cc and place the beaker in the center of oven.
  2. Set the radiation monitor to 2450 MHz and use it following the manufacturer's recommended test procedure to assure correct results.
  3. While measuring the leakage, always use the two inch (5 cm) spacer supplied with the probe.
  4. 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 Panel Removed



## WARNING

Avoid contacting any high voltage components.

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

## 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.

# Troubleshooting



## WARNING

To avoid risk of electrical shock, personal injury, or death, disconnect power to oven and discharge capacitor before servicing, unless testing requires it.

### Operating Instructions for the Narda 8110B Radiation Monitor

Purpose of the monitor is to check radiation leakage around the microwave oven door and other places where radiation could possibly occur.

#### Radiation Monitor

This instrument measures radiation leakage in milliwatts per square centimeters ( $\text{mW}/\text{cm}^2$ ). The probe should be used with 2" (5cm) cone spacer. Water load of 275 cc. (approximately  $1\frac{1}{3}$  cup), is to be placed in the oven and used as a load during leakage test.

Operate the instrument on its internal rechargeable battery or a 115 or 230 V power supply. It may also be charged from a 115 or 230 V 50 or 60 Hz power source. "Meter Response" switch should be set on fast position. Slow setting requires too long of a time to register. "Alarm" control should be set on 50 which sounds an audible alarm when the meter reads 50% of full scale deflection. This is to provide warning against high levels which may damage the instrument.

"Range" switch may be used on the lower or higher meter scale. On an oven with an unknown leakage, use high scale first. Switch to low scale for low leakage. "Test" switch is used to check the battery and probe. If either is faulty, meter needle will not read above "Test Minimum" mark on the meter. Zero control is used to zero the needle.

With probe and cone spacer plugged into the instrument, turn monitor on-off switch to the on position. Check battery and probe "Test" switch. If battery reading does not come up to "Test Minimum" setting, plug in AC cord. If probe test fails, do not use probe.

During usage, if probe becomes inoperative or disconnected, audio alarm will come on.

Test probe must be held by the grip portion of the handle, otherwise false reading may result if operators hand is between the handle and probe.

Hold probe perpendicular to cabinet door. Place cone of probe on the door and/or cabinet-door seam and move along the seam. If leakage of the oven is unknown, move probe slowly. Any time the audible alarm sounds proceed with care in order not to exceed a full scale reading of the meter or remove the probe from the area of leakage. When testing near a corner or access area of the door, keep probe perpendicular to the areas making sure the probe end at the base of the cone does not get closer than 2" (5cm) to any metal. If it does, an erroneous reading may result.

Always use the 2" (5cm) spacer with probe. Also, always proceed carefully in areas of high leakage or the probe can be accidentally burned-out. Rotating stirrer causes high peaks of energy. Although meter has averaging capabilities, probe will react instantaneously to peak power changes which will cause burn-out.

If oven is likely to have a large amount of leakage approach the oven slowly with the probe, while observing meter. This is achieved by holding probe two or three feet from the oven and then moving toward oven surface or gap between the door and oven body while observing meter. When high leakage is expected, do not move probe horizontally along the oven surface, this could cause possible probe burn-out. Greatest leakage is generally found at the corners. After maximum leakage is established to be within the meter scale range, then probe may be moved horizontally around door surface.

**NOTE:** For further information see Amana Service Letters of the R-10, R-35, and R-59 Series and your Narda 8110B Instruction Manual.



# Troubleshooting



## WARNING

To avoid risk of electrical shock, personal injury, or death, disconnect power to oven and discharge capacitor before servicing, unless testing requires it.

### Operating Instructions for the Holaday HI1501, HI1510, and HI1710

Purpose of these monitors is to check radiation leakage around microwave oven door or other places where radiation could possibly occur.

Instrument measures radiation leakage in milliwatts per square centimeters (mW/cm<sup>2</sup>). Probe should be used with the 2" (5 cm) cone spacer. Water load of 275 cc. (approximately 1 1/3 cup), is to be placed in the oven and used as a load during leakage tests.

Operate the instrument on its internal 9 Volt battery power supply. "Range" switch is used on low and high while using test probe. On an oven with an unknown leakage, use high scale then switch to low scale and test for low leakage. "Bat Test" switch is used to check the battery and probe on the Holaday Instruments. If either is faulty, meter needle will not read above "Test Minimum" or battery mark on meter. Holaday Instrument has a probe test switch position. Meter needle must indicate in the "OK probe test" portion of the scale when in this position. Zero control is used to zero the needle. "ON-OFF" switch provides a means of turning the operating voltage on or off. "Range Multiplier" switch provides a selection either 0-2 or 0-10 and 0-100 on the Holaday Instruments sensitivity ranges.

Test probe must be held by the grip portion of the handle, otherwise a false reading may result if operators hand is between the handle and probe.

If oven is likely to have a large amount of leakage, approach oven slowly with the probe, while observing meter. This is achieved by holding the probe two or three feet from oven surface or gap between door and oven body while observing meter. When high leakage is expected, do not move probe horizontally along the oven surface. This could cause possible probe burn-out. Greatest leakage is generally found at the corners. After maximum leakage is established to be within the meter scale range, then probe may be moved horizontally around the door surface.

Hold probe perpendicular to cabinet door. Place cone of probe on the door and/or cabinet door seam and move along the seam. If leakage of the oven is unknown, move probe slowly. Proceed with care in order not to exceed a full scale reading of meter. When testing near a corner or access area of door, keep probe perpendicular to the areas making sure probe end at the base of the cone does not get closer than 2" (5cm) to any metal. If it does, an erroneous reading may result.

Always use the 2" (5cm) spacer with probe. Also, always proceed carefully in areas of high leakage or probe can be accidentally burned-out. Rotating antenna causes high peaks of energy. Although meter has averaging capabilities, probe will react instantaneously to peak power changes which will cause burn-out.

**NOTE:** For further instructions see Amana Service Letters of the R-10, R-35, and R-59 of your Instrument Instruction Manual.

**NOTE:** Simpson Electric Company Model 380M may also be used by using the above instructions for guideline and the 380M Instruction Manual.

# Troubleshooting Guide



## CAUTION

All repairs as described in this section are to be performed only after the listed caution procedures listed below have been followed.

- Check grounding before checking for trouble.
- Be careful of the high voltage circuit.
- Discharge high voltage capacitor by shorting across terminals with screwdriver.
- When checking the continuity of the switches or the high voltage transformer, disconnect one lead wire from these parts and then check continuity with the AC plug removed. To do otherwise may result in a false reading or damage to your meter.
- Do not touch any parts of the circuitry on the digital programmer circuit since static electric discharge may damage this control panel. Always touch yourself to ground while working on this panel to discharge any static charge in your body.

Use of the Schematic and/or Wiring Diagrams will assist the technician on the following component checks.

An Ohmmeter is required for most tests with a Multiplier Scale of X 10K (k - thousand ohms). Test procedures will be found elsewhere in this manual.

Condition	Possible Causes
1. No voltage at outlet.	<ul style="list-style-type: none"> <li>• Line fuse open (external). Check for overload circuit.</li> </ul>
2. Voltage available to outlet. No components operating (including oven light).	<ul style="list-style-type: none"> <li>• Open power cord.</li> <li>• Failed terminal and/or wiring.</li> <li>• Open line fuse. See Condition # 3.</li> <li>• Open line filter.</li> <li>• Open cavity thermal fuse.</li> <li>• Open magnetron TCO.</li> <li>• Interlock switch contacts open.</li> </ul>
3. Internal 12 amp line fuse open.  <b>NOTE:</b> If line fuse is open, the interlock switch assembly must be replaced, even if another component caused the fuse to open. Warranty claims involving fuse replacement will only be paid if switch assembly is replaced along with the fuse.	<ol style="list-style-type: none"> <li>1. Failed terminal and/or wiring in 230 volt circuit of unit.</li> <li>2. Shorted component in 230 volt circuit of unit.</li> <li>3. Interlock switch assembly (test).</li> <li>4. Replace fuse, if fuse blows quickly DO NOT proceed with step 5: recheck steps 1, 2, and 3.</li> <li>5. Check amperes and/or wattage compare to Specifications.</li> <li>6. If fuse blows after running a few seconds, disconnect power cord, disconnect and tape apart high voltage transformer primary wires, reconnect power cord.</li> <li>7. If fuse does not open, disconnect power cord, and check H.V. components and wiring.</li> <li>8. If fuse opens, check 230 volt section for loose connections or grounded wires. The timer, light and motor by themselves draw less than 1 Ampere. If the unit opens a fuse while the transformer is disconnected, there are usually burned areas visible.</li> </ol>

**NOTE:** When taking voltage measurements to the transformer the 230 V supply leads must be connected to the transformer terminals. The Voltage reading should then be taken with the voltmeter leads also connected to these terminals.

# Troubleshooting Guide

Condition	Possible Causes
<p>4. Oven light, timer, and blower motor operate. Oven does not cook. No voltage at power transformer primary leads (230V). See <b>NOTE</b>.</p> <p>Caution: All other transformer leads are high voltage.</p>	<ul style="list-style-type: none"> <li>• Failed wiring and/or terminal.</li> <li>• Failed HV /LV board.</li> <li>• Failed triac.</li> <li>• Failed interlock switch assembly (contacts 2 &amp; 3).</li> </ul>
<p>5. Same condition as # 4, but voltage is available at power transformer primary (230 VAC). See <b>NOTE</b>.</p>	<ul style="list-style-type: none"> <li>• Failed terminal and/or wiring in high voltage section.</li> <li>• Failed H.V. transformer.</li> <li>• Failed diode.</li> <li>• Failed capacitor.</li> <li>• Failed magnetron.</li> </ul>
<p>6. All oven components operate; unit cooks slowly, all modes.</p>	<ol style="list-style-type: none"> <li>1. Run Oven Performance Tests, if okay, customer education.</li> <li>2. Check voltage at outlet, if low, customer education.</li> <li>3. Check amperes and/or wattage, compare to Technical Sheet.</li> <li>4. Check tray and seal. If food debris has accumulated under ceramic tray, this debris will absorb microwave energy and affect performance test results.</li> <li>5. If above checks are acceptable, replace magnetron.</li> </ol>
<p>7. Oven cooks food unevenly.</p>	<ul style="list-style-type: none"> <li>• Customer is not following cookbook instructions, customer education.</li> <li>• Rotating antenna not turning, check mounting parts for grease or burrs. This may also indicate incorrect airflow due to foam gasket out of place, failed blower motor, failed blower wheel or interference with splatter shield.</li> </ul> <p><b>NOTE:</b> The antenna will not rotate properly when the splatter shield or outer case is removed.</p>

**NOTE:** When taking voltage measurements to the transformer the 230 V supply leads must be connected to the transformer terminals. The voltage reading should then be taken with the voltmeter leads also connected to these terminals.

# Disassembly Procedures



**WARNING**

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

Access to major electrical components can only be gained by removal of outer case assembly.

## Outer Case Removal

1. To remove outer case.
2. Remove screws (tamper resistant—use driver R0193551) located on each side of outer case and screws in back of oven.
3. Pull back on outer case and lift off.
4. Reverse procedures to reassemble.

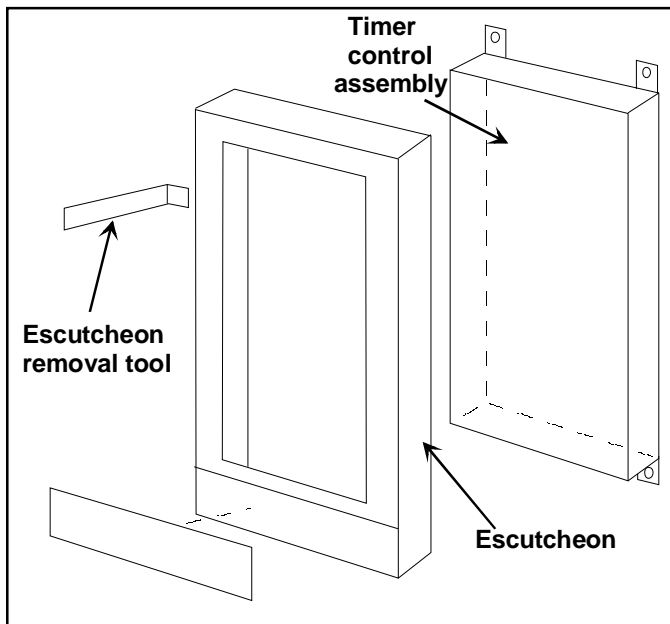


**CAUTION**

During outer case removal some foam gaskets may become damaged. These parts must be replaced for proper air circulation over components and through oven cavity.

## Control Assembly (painted models)

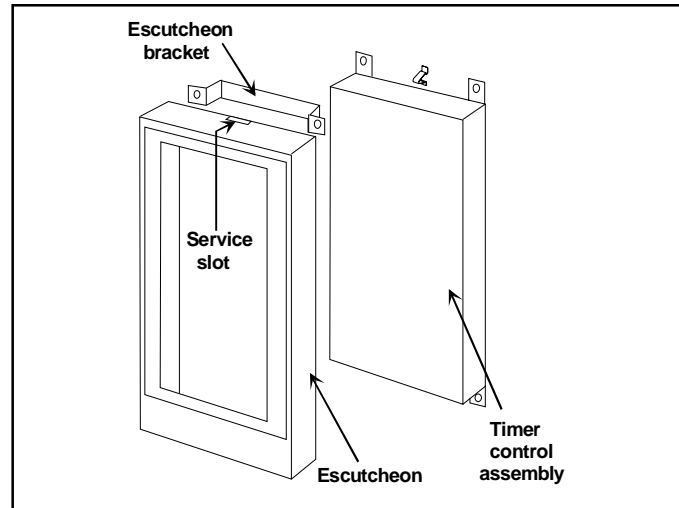
1. Disconnect power to oven and open door.
2. Using the Amana R0193557 escutcheon removal tool, insert the right angle edge under the left side of the control escutcheon 3.81 cm (1.5") from top and carefully pull back to release tabs from control assembly.
3. Remove screws securing control assembly to oven.
4. Disconnect wiring attached to control assembly components.
5. Reverse procedure to reassemble.



## Control Assembly (stainless steel models)

1. Disconnect power to oven.
2. Insert small bladed screwdriver in the service slot. Push down on the retainer clip and tilt escutcheon forward, lift, and remove.

**NOTE:** Removal of outer case will facilitate removal of timer wiring and components, but is not necessary in all cases.



## Oven Light Removal

1. Disconnect power to oven.
2. The access cover is located in the rear of the oven.
3. Remove screw securing access cover.
4. Turn counterclockwise to remove bulb.

## Oven Light Socket Removal

1. Disconnect power to oven.
2. Remove outer case, see "Outer Case Removal" procedure.
3. Remove oven light, see "Oven Light Removal" procedure.
4. Disconnect and label wire terminals from light socket.
5. Remove screw securing light socket to duct assembly.
6. Carefully remove socket out through oven light access hole.
7. Reverse procedure to reassemble.

# Disassembly Procedures



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

## Splatter Shield Removal

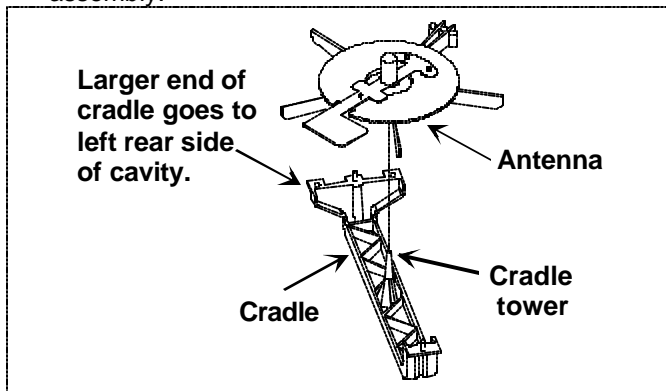
**NOTE:** Be careful not to bend antenna when removing splatter shield. Shield snaps into a lip in front of the oven and three slots in back.

1. Place your thumbs in the two indentations in front of the shield.
2. Press lightly towards the back and carefully lower shield away from antenna.
3. Pull shield out of the back slots and tilt sideways to remove from oven cavity.

## Antenna and Cradle

**NOTE:** Antenna assembly is mounted in a cradle. The antenna is located in a plastic tower in the middle of the cradle.

1. Remove outer case and splatter shield.
2. Remove two mounting nuts on top of oven cavity to remove cradle. Support cradle before removing mounting nuts to avoid damage to antenna assembly.



## Rotating Antenna Installation

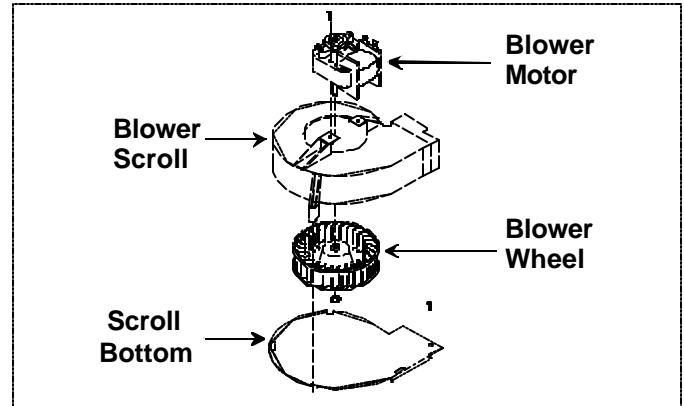
**NOTE:** Antenna and cradle must be free of any burrs for proper operation.

1. Carefully place antenna onto cradle tower.
2. Position cradle into mounting holes in cavity with larger end toward back and install mounting nuts. Be careful not to overtighten.

## Blower Motor or Wheel Removal

**NOTE:** Blower wheel does not have set screw but has a "D" type hole in the hub and clip on end of motor shaft.

1. Disconnect power to oven.
2. Remove outer case, see "Outer Case Removal" procedure.
3. Disconnect wiring from blower motor.
4. Remove screw securing scroll bottom to partition.



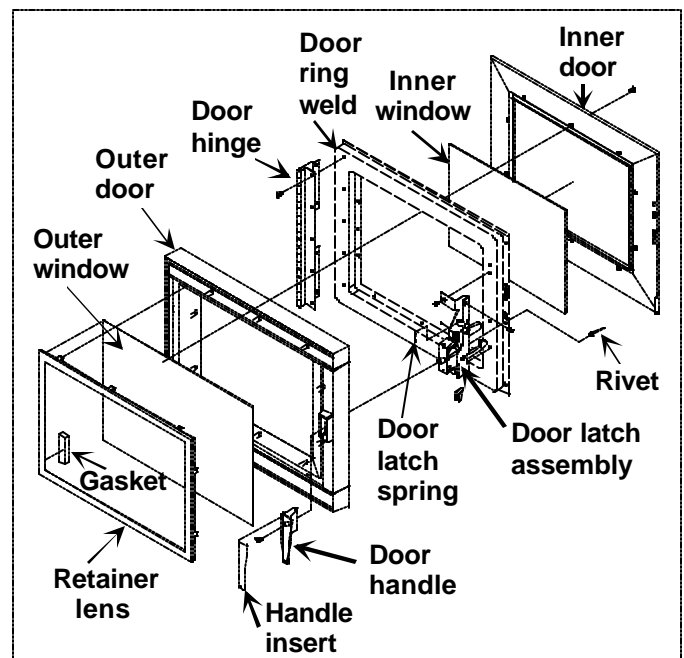
5. Remove screws from base pan bottom to plastic scroll legs.
6. Slide scroll discharge from partition and lift scroll assembly from unit.
7. Unsnap metal bottom from scroll.
8. Remove blower wheel clip and wheel.
9. Remove motor mounting screws from scroll.

## Door Disassembly

### Old Door Assembly

(unit with P13258\* manufacturing number)

1. Open door fully.
2. Remove ten Y-drive screws from inner door. (Use R0193574 driver.)
3. Remove inner door.
4. Remove handle insert and handle.
5. Remove outer door.
6. Remove door ring and latch handle assembly by removing screws on side of the door.



\*Use Manual Driver Part Number R0193574.

# Disassembly Procedures



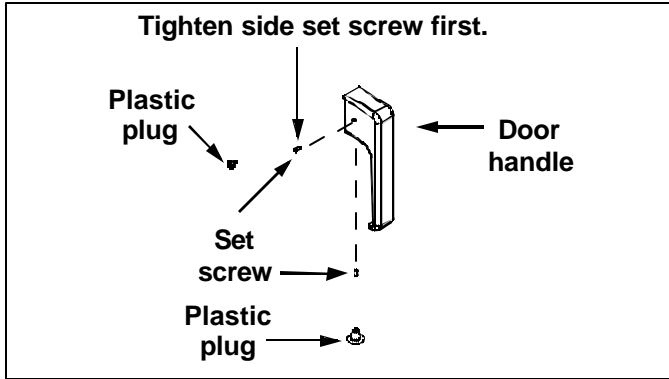
**WARNING**

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

## New Door Assembly

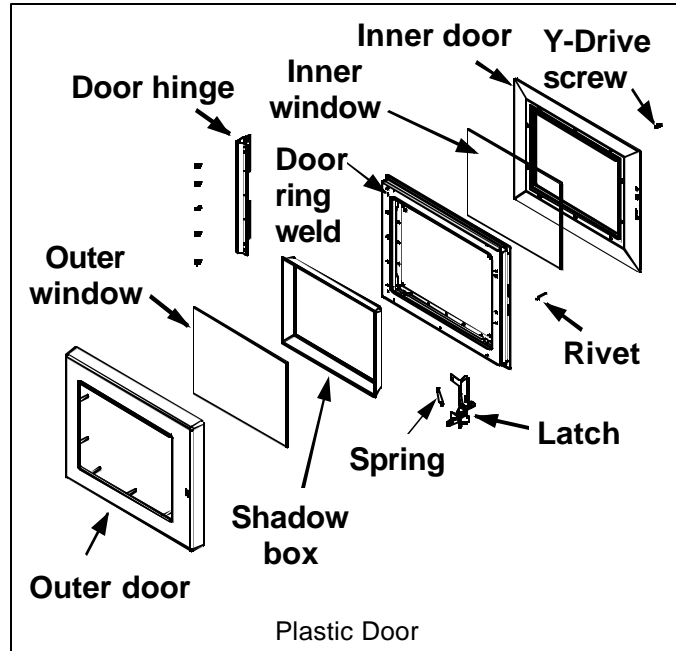
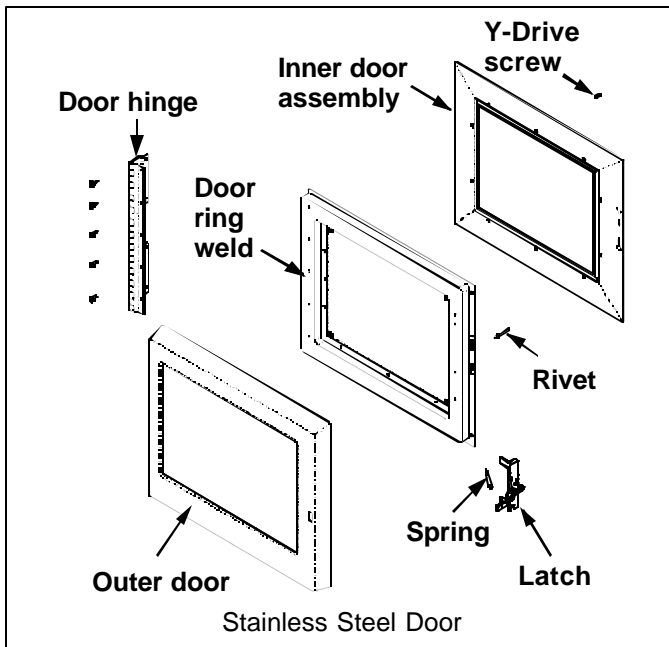
(unit with P13278\* manufacturing number)

1. Remove plugs from set screws on the door handle.
2. Loosen the set screws on the door handle and remove door handle.



3. Open door fully.
4. Remove ten Y-drive screws from inner door. (Use R0193574 driver.)
5. Remove outer door assembly.

**NOTE:** There are two different outer door styles (Stainless Steel and Plastic).



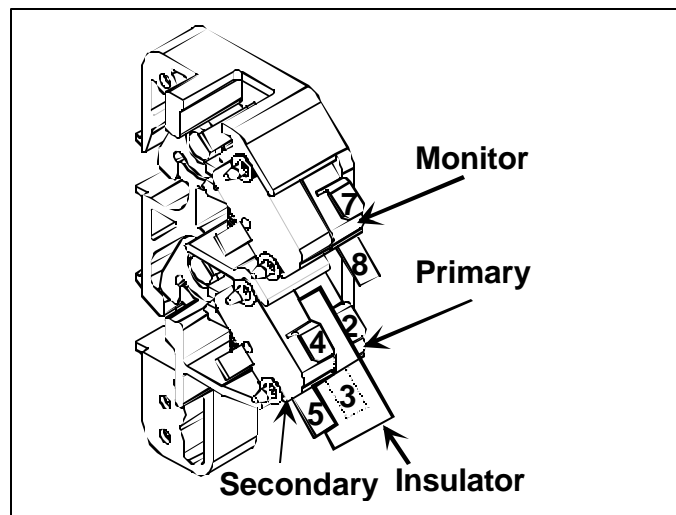
6. Remove inner door shield.

**NOTE:** A heat gun may be required to aid in removing the inner door shield from inner door.

7. Remove screws securing door latch to inner door and drill rivets to remove door latch.

## Interlock Switch Assembly Removal

1. Disconnect power to oven.
2. Remove outer case and open oven door.
3. Remove mounting screws from interlock mounting bracket and remove wiring from switch assembly.
4. Remove switch assembly.



# Disassembly Procedures



## WARNING

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

### Removal of Power Transformer, Capacitor and Diode (Rectifier)

1. Disconnect power to oven.



## CAUTION

Failure to comply with earthing instructions may result in personal injury due to electrical shock.

2. Remove outer case. Earth magnetron terminals to capacitor housing with an insulated-handle screwdriver by touching metal shaft first to the capacitor housing then to the capacitor terminals.

**NOTE:** When reinstalling, see "Item 7 Note, Magnetron Removal" or high voltage component failure may result.

3. Disconnect and label wire terminals and remove appropriate component mounting screw(s).
4. If installing a new diode see wiring diagrams for correct connection.
5. When installing new capacitor, spacing from the can to terminals or diode must be a minimum of 1/4" (6mm) or arcing will occur.

### Magnetron Removal

- Magnetron assembly used in oven covered in this manual is made up of the magnetron, permanent magnets, housing, filter box, and R.F. Capacitors. It can only be replaced as an assembly.



## CAUTION

Failure to earth capacitor may result in injury due to electrical shock. Capacitor terminals must be earthed prior to performing maintenance in high voltage section.

1. Disconnect power to oven.
2. Remove outer case, see "Outer Case Removal" procedure.
3. Disconnect magnetron leads after discharging them to magnetron capacitor housing.
4. Remove magnetron by loosening nuts securing magnetron studs to oven top and carefully remove the tube assembly.

**NOTE:** These are 8mm locknuts.

5. If add-on parts are in good usable condition (thermal cutouts, nuts, etc.), install them on the new tube assembly. **Record tube serial numbers.** Tube serial number is located on the bottom of housing. **Also record complete part number with suffix letters and correct failure code.**

6. Check replacement magnetron to ensure top wire mesh gasket is installed.
7. Microwave ovens covered by this manual have a high voltage circuit used in conjunction with the permanent magnet (PM) magnetron tube assembly. To ensure proper phasing of the complete high voltage secondary circuit, transformer and magnetron tube leads must be connected as shown in the wiring diagram.



## CAUTION

Failure to connect the components in this manner may cause premature failure of the diode or other high voltage failures.

8. To replace magnetron tube, insert antenna portion of the tube assembly into the waveguide and while holding magnetron tube assembly firmly against the waveguide, loosely reinstall nuts securing magnetron. Tighten nuts evenly to ensure proper sealing of the wire mesh gasket.

**NOTE:** Filament leads must be connected as shown in the wiring diagram to eliminate problems of high voltage and component failures (usually diode/short protector).



## CAUTION

When connecting filament lead wires to the magnetron terminals, be sure to connect lead wires in the proper position. The # 5 lead wire from filament transformer should be connected to "FA" terminal and lead wire from high voltage capacitor should be connected to "F" terminal.

9. Reconnect magnetron leads and install thermal switch.



## CAUTION

Quick connect junctions must be tight. Failure to correct loose terminal will lead to further tube and/or terminal failure.

10. Reinstall outer cabinet.



## WARNING

This unit must be unplugged to avoid electrical shock, personal injury or death when working on the microwave oven except when taking meter readings requiring live voltage.

# Disassembly Procedures

## **WARNING**

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

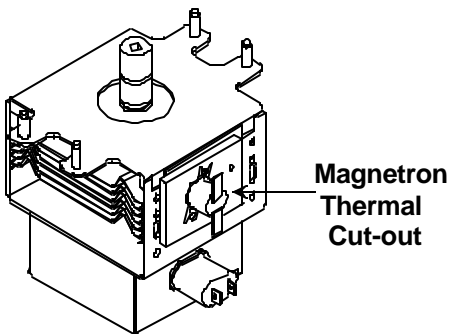
### Magnetron Tube Thermal Cut-Out Replacement

1. Disconnect power to oven.
2. Remove outer case, see "Outer Case Removal" procedure.
3. Remove screws securing thermal cut-out to magnetron.

## **WARNING**

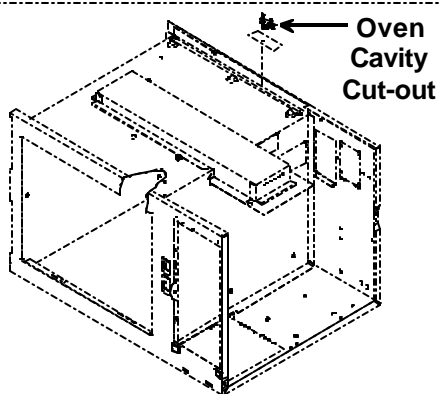
This unit must be unplugged to avoid electrical shock, personal injury or death when working on the microwave oven except when taking meter readings requiring live voltage.

4. Disconnect and label wire terminals from cut-out.
5. To reinstall, locate screws into the original mounting holes of magnetron tube.



### Oven Cavity Thermal Cut-Out

1. Disconnect power to oven.
2. Remove outer case see "Outer Case Removal" procedure.
3. Disconnect and label wire terminals.
4. Remove screws securing thermal cut-out to oven cavity.
5. Reverse procedure to reassemble.



**NOTE:** When reconnecting wiring to the thermal cut-out, connectors **MUST** be tight.

### Oven Tray Replacement

## **WARNING**

This unit must be unplugged to avoid electrical shock, personal injury or death when working on the microwave oven except when taking meter readings requiring live voltage.

**NOTE:** The tray is sealed in place with Silicone Rubber.

This type of sealant needs curing. Unit should not be used for minimum of one hour after application.

Follow all precautionary information shown on manufacturer's container.

1. Unplug oven from outlet.
2. Using a thin bladed knife, cut seal along the edges and remove tray from unit.
3. Remove any sealant residue. Thoroughly clean and degrease sump area.
4. Clean oven cavity bottom where new RTV sealant will make contact using mineral spirits or any non-flammable degreasing solvent.

**NOTE:** Detergents, soap, and water are not sufficient to remove oil and grease.

5. Place new tray into unit.
6. Apply a generous bead of RTV sealant (M0275598) around perimeter of the tray.
7. Using water spray bottle, apply a light water spray to fresh RTV.
8. Use scrapper (R0000039) to remove excess RTV.
9. Allow RTV sealant to cure one hour before using.



# Disassembly Procedures



## WARNING

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

### Removal of Line Filter



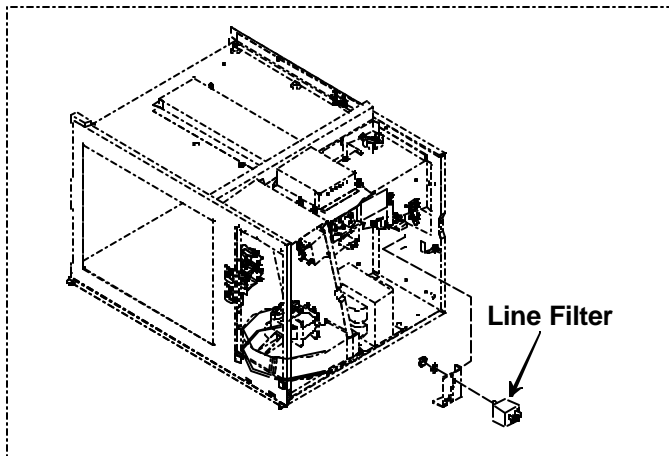
## WARNING

This unit must be unplugged to avoid electrical shock, personal injury or death when working on the microwave oven except when taking meter readings requiring live voltage.

1. Disconnect power to oven.
2. Remove outer case, see "Outer Case Removal" procedure.
3. Remove screws securing line filter mounting plate to rear of oven.
4. Remove nut from mounting plate.
5. Disconnect and label wire terminals and remove part.
6. Reverse procedure to reassemble.

### Fuse Block

1. Disconnect power to unit.
2. Remove outer case, see "Outer Case Removal" procedure.
3. Disconnect and label wire terminals.
4. Remove fuse from fuse block.
5. Remove screw (tamper resistant) securing fuse block to chassis.
6. Reverse procedures to reassemble.

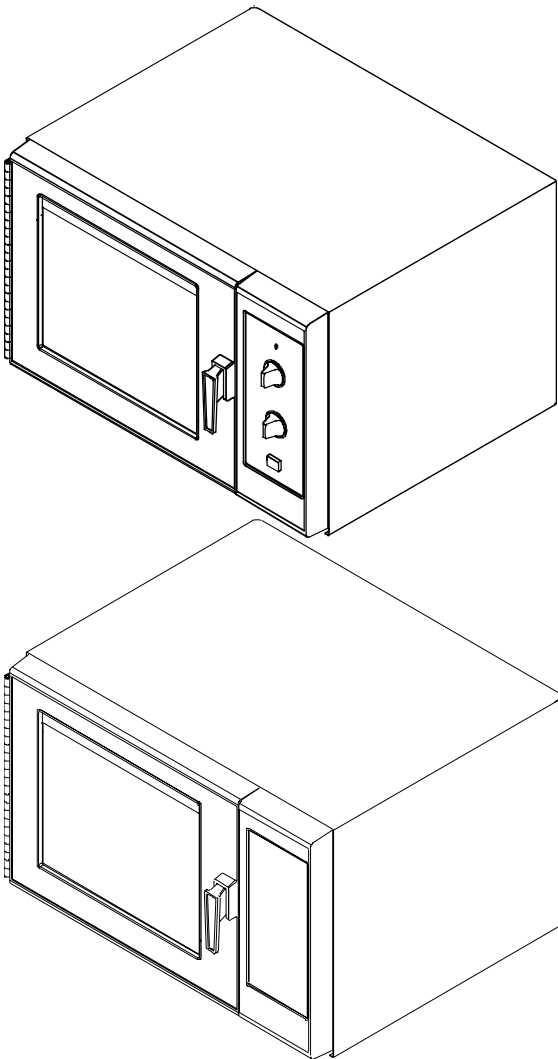


# Appendix A

# Owner's Manual

## Heavy Duty International Commercial 1100W Microwave Oven

Keep these instructions for future reference.  
If the oven changes ownership, this manual must accompany  
oven.



### Contents

Model Identification .....	2
IMPORTANT SAFETY INSTRUCTIONS .....	3
PRECAUTIONS TO AVOID POSSIBLE EXPOSURE TO EXCESSIVE MICROWAVE ENERGY .....	4
Installation .....	7
Earthing Instructions .....	7
Display and Features .....	8
Using the Oven Control (Electronic Models) .....	9
Programming the Oven Control (Electronic Models) .....	10
User Options (Electronic Models) .....	11
Care and Cleaning .....	12
Before Calling for Service .....	13

# IMPORTANT SAFETY INSTRUCTIONS



Recognize this symbol as a **SAFETY** message



## WARNING

When using electrical oven, basic safety precautions should be followed to reduce risk of burns, electric shock, fire, or injury to persons or exposure to excessive microwave energy.

1. READ all instructions before using oven.
2. READ AND FOLLOW the specific "PRECAUTIONS TO AVOID POSSIBLE EXPOSURE TO EXCESSIVE MICROWAVE ENERGY" on page 4.
3. This oven **MUST BE GROUNDED**. Connect only to properly GROUNDED outlet. See "EARTHING INSTRUCTIONS" on page 7.
4. Install or locate this oven **ONLY** in accordance with the installation instructions in this manual.
5. 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 oven **ONLY** for its intended use as described in this manual. Do not use corrosive chemicals or vapors in this oven. This type of oven is specifically designed to heat or cook. It is not designed for industrial or laboratory use.
7. As with any oven, **CLOSE SUPERVISION** is necessary when used by **CHILDREN** or **INFIRM PERSONS**.
8. **DO NOT** operate this oven if it has a damaged cord or plug, if it is not working properly, or if it has been damaged or dropped.
9. This oven, including power cord, must be serviced **ONLY** by qualified service personnel. Special tools are required to service oven. Contact nearest authorized service facility for examination, repair, or adjustment.
10. **DO NOT** cover or block filter or other openings on oven.
11. **DO NOT** store this oven outdoors. **DO NOT** use this product near water – for example, near a kitchen sink, in a wet basement, or near a swimming pool, and the like.
12. **DO NOT** immerse cord or plug in water.
13. Keep cord **AWAY** from **HEATED** surfaces.
14. **DO NOT** let cord hang over edge of table or counter.
15. See door cleaning instructions in *Care and Cleaning* section of manual on page 14.
16. For commercial use only.



## WARNING

To reduce the risk of fire in the oven cavity:

- a. **DO NOT** overcook food. Carefully attend oven 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. **KEEP** oven **DOOR CLOSED**, turn oven off, and disconnect the power cord, or shut off power at the fuse or circuit breaker panel, if materials inside the oven should ignite. Fire may spread if door is opened.
- d. **DO NOT** use the cavity for storage. **DO NOT** leave paper products, cooking utensils, or food in the cavity when not in use.

# SAVE THESE INSTRUCTIONS

# IMPORTANT SAFETY INSTRUCTIONS

## CAUTION

To avoid risk of personal injury or property damage, observe the following:

1. Briskly stir or pour liquids before cooking with microwave energy 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 oven.
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 using microwave energy. Pressure may build up and erupt. Pierce yolk with fork or knife before cooking.
4. Pierce skin of potatoes, tomatoes, and similar foods before cooking with microwave energy. When skin is pierced, steam escapes evenly.
5. Do not operate oven without load or food in oven cavity.
6. Use only popcorn in packages designed and labeled for microwave use. Popping time varies depending on oven wattage. Do not continue to heat after popping has stopped. Popcorn will scorch or burn. Do not leave oven unattended.
7. Do not use regular cooking thermometers in oven. Most cooking thermometers contain mercury and may cause an electrical arc, malfunction, or damage to oven.
8. Feeding bottles and baby food jars shall be open when heated and contents stirred or shaken before consumption, in order to avoid burns.
9. Do not use metal utensils in oven.
10. Never use paper, plastic, or other combustible materials that are not intended for cooking.
11. When cooking with paper, plastic, or other combustible materials, follow manufacturer's recommendations on product use.
12. Do not use paper towels which contain nylon or other synthetic fibers. Heated synthetics could melt and cause paper to ignite.
13. Do not heat sealed containers or plastic bags in oven. Food or liquid could expand quickly and cause container or bag to break. Pierce or open container or bag before cooking.
14. To avoid pacemaker malfunction, consult physician or pacemaker manufacture about effects of microwave energy on pacemaker.

## PRECAUTIONS TO AVOID POSSIBLE EXPOSURE TO EXCESSIVE MICROWAVE ENERGY

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

## SAVE THESE INSTRUCTIONS

# MESURES DE SECURITE IMPORTANTES



Ce symbole signale un message de SECURITE



## DANGER

Lors de l'utilisation d'appareils électriques, prendre les précautions élémentaires suivantes pour réduire les risques de brûlures, d'électrocution, d'incendie, de blessures ou d'exposition à un excès de micro-ondes.

1. **LIRE** la totalité des instructions avant d'utiliser le four.
2. **LIRE ET SUIVRE** les **PRECAUTIONS CONTRE LES RISQUES D'EXPOSITION A UN EXCES DE MICRO-ONDES**, page 4.
3. Ce four **DOIT ETRE MIS A LA TERRE**. Le brancher uniquement sur une prise correctement reliée à la terre. Voir les **INSTRUCTIONS DE MISE A LA TERRE**, page 7.
4. Mettre en service ou placer ce four **UNIQUEMENT** tel qu'indiqué dans les instructions de mise en service fournies dans ce manuel.
5. Certains aliments ou articles comme les oeufs et les récipients fermés hermétiquement tels que les bocaux, par exemple, peuvent exploser et **NE DOIVENT PAS ETRE UTILISES** dans ce four.
6. Utiliser ce four **UNIQUEMENT** pour les usages pour lesquels il est prévu, décrits dans ce manuel. Ne pas utiliser de vapeurs ni de produits chimiques corrosifs dans cet appareil. Ce type de four est spécifiquement conçu pour faire chauffer ou cuire les aliments. Il n'est pas prévu pour un usage industriel ou en laboratoire.
7. Comme pour tout autre appareil électrique, l'utilisation de cet appareil par les **ENFANTS** doit se faire **SOUS ETROITE SURVEILLANCE**.
8. **NE PAS** utiliser le four si la prise ou le cordon électrique est abîmé, si le four ne fonctionne pas correctement ou si l'appareil est tombé ou a été endommagé.
9. Cet appareil, cordon électrique compris, doit être réparé **UNIQUEMENT** par un technicien qualifié. Des outils spéciaux sont nécessaires à cette fin. Contacter le prestataire de service après-vente agréé le plus proche pour le faire examiner, réparer ou régler.
10. **NE PAS** couvrir ni boucher le filtre ni aucun orifice du four.
11. **NE PAS** placer cet appareil à l'extérieur. **NE PAS** l'utiliser près d'un endroit où il y a de l'eau, comme dans un sous-sol humide, près d'un évier ou d'une piscine ou en tout autre endroit similaire.
12. **NE PAS** plonger le cordon électrique ou la prise dans l'eau.
13. Garder le cordon électrique **A DISTANCE SURE** de surfaces **CHAUFFEES**.
14. **NE PAS** laisser le cordon pendre d'une table ou d'un comptoir.
15. Voir la marche à suivre pour l'entretien de la porte sous "*Entretien de l'extérieur du four*" dans la partie "*Entretien*" du manuel, page 14.
16. **Pour usage commercial uniquement.**



## DANGER

Pour réduire les risques d'incendie à l'intérieur du four :

- a. **NE PAS** trop cuire les aliments. Surveiller attentivement la cuisson si du papier, du plastique ou tout autre matériau combustible est utilisé pour faciliter la cuisson.
- b. Enlever toute attache métallique servant à fermer les sacs en plastique ou en papier avant de placer le sac dans le four.
- c. Si le feu prend dans le four, **LAISSER LA PORTE** du four **FERMEE**, éteindre le four et le débrancher ou couper le courant au niveau du fusible ou du disjoncteur. Si la porte du four est ouverte, l'incendie peut se propager.
- d. **NE PAS** utiliser l'intérieur du four comme espace de rangement. **NE PAS** laisser d'articles en papier, de récipients, d'ustensiles de cuisson nid'aliments dans le four pendant qu'il n'est pas utilisé.

# CONSERVER CES INSTRUCTIONS

# MESURES DE SECURITE IMPORTANTES



## ATTENTION

Pour éviter tous dégâts matériels ou blessures, observer les consignes suivantes :

1. Pour éviter toute ébullition ou éruption spontanée, remuer vigoureusement ou verser les liquides avant de les chauffer au four à micro-ondes. Ne pas trop chauffer. Si de l'air n'a pas été incorporé dans le liquide, celui-ci peut déborder dans le four ou après en avoir été retiré.
2. Ne pas faire de friture dans le four. La graisse pourrait surchauffer et devenir dangereuse à manipuler.
3. Les oeufs ne doivent pas être chauffés ou réchauffés au four à micro-ondes dans leur coquille ou avec leur jaune intact ; cela pourrait provoquer une accumulation de pression et l'éclatement de l'oeuf. Percer le jaune avec une fourchette ou un couteau avant la cuisson.
4. Percer la peau des pommes de terre, tomates et aliments similaires avant de les cuire au four à micro-ondes. Lorsque la peau est percée, la vapeur peut s'échapper uniformément.
5. Ne pas faire fonctionner l'appareil sans nourriture à l'intérieur.
6. Pour faire du pop-corn, utiliser uniquement du maïs en paquet spécial micro-ondes (indiqué sur l'étiquette). Le temps nécessaire pour faire éclater le maïs varie en fonction de la puissance du four. Ne pas continuer à faire chauffer le maïs une fois qu'il a fini d'éclater, car il peut brûler ou s'enflammer. Ne pas laisser le four sans surveillance.
7. Ne pas utiliser de thermomètre de cuisson pour four traditionnel dans le four. La plupart des thermomètres de cuisson contiennent du mercure qui peut causer des arcs électriques ou le mauvais fonctionnement du four, ou encore endommager celui-ci.
8. Ne pas faire chauffer de biberon au four.
9. Ne pas utiliser d'ustensiles métalliques dans le four.
10. Ne jamais utiliser de papier, de plastique ni autre matériau combustible non prévu pour la cuisson.
11. Si la cuisson utilise du papier, du plastique ou autre matériau combustible, suivre les recommandations du fabricant concernant son utilisation.
12. Ne pas utiliser de serviettes en papier contenant du nylon ou autres fibres synthétiques. Ces fibres pourraient fondre et faire enflammer le papier.
13. Ne pas faire chauffer de récipients ni de sacs en plastique hermétiquement fermés dans le four. La nourriture ou le liquide pourrait gonfler rapidement et faire éclater le récipient ou le sachet. Percer ou ouvrir celui-ci avant de le faire chauffer.
14. Pour éviter toute défaillance de stimulateur cardiaque, prière de se renseigner auprès du médecin ou du fabricant du stimulateur au sujet des effets de l'énergie micro-ondes sur ce dispositif.

## PRECAUTIONS CONTRE LES RISQUES D'EXPOSITION À UN EXCES DE MICRO-ONDES

- a. **NE PAS** essayer de faire fonctionner le four avec la porte ouverte car cela peut entraîner une exposition dangereuse aux micro-ondes. Il est important de ne pas modifier les verrouillages de sécurité ni d'entraver leur fonctionnement.
- b. **NE PAS** placer d'objet entre le cadre avant du four et la porte ni laisser de saletés ou de résidus de produit nettoyant s'accumuler sur les surfaces formant joint.
- c. **NE PAS** utiliser le four s'il est endommagé. Il est particulièrement important que sa porte ferme correctement et que les éléments suivants ne soient pas endommagés : (1) porte (faussée), (2) charnières et dispositifs de verrouillage (cassés ou présentant du jeu), (3) joints de la porte et surfaces formant joint.
- d. Ce four ne doit **PAS** être réglé ni réparé par une personne autre qu'un technicien de service après-vente dûment qualifié.

## CONSERVER CES INSTRUCTIONS

# 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.

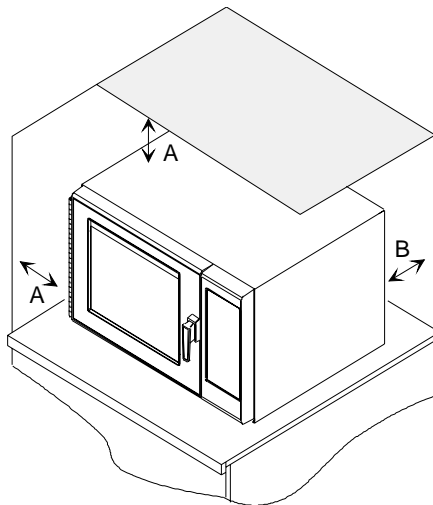
## Radio Interference

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.
- Place warning label in a conspicuous place close to microwave oven.
- Outlet should be located so that plug is accessible when oven is in place.



A—Allow at least 7" (17.8 cm) of clearance around top and sides of oven. Proper air flow around oven cools electrical components. With restricted air flow, oven may not operate properly and life of electrical parts is reduced.

B—Allow at least 2<sup>9</sup>/<sub>16</sub>" (6.5 cm) between air discharge on back of oven and back wall.

Oven Clearances



## WARNING

To avoid risk of electrical shock or death, this oven must be earthed.



## WARNING

To avoid risk of electrical shock or death, do not alter the plug.

## Earthing Instructions

**Oven MUST be earthed.** Earthing 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 earth wire with a earthing plug. The plug must be plugged into an outlet that is properly installed and earthed.

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

## 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 50 hertz circuit with a 230 voltage supply. When a microwave oven is on a circuit with other equipment, an increase in cooking times may be required and fuses can be blown.

## External Equipotential Earthing Terminal

Equipment has secondary earthing terminal. Terminal provides external earthing connection used in addition to earthing prong on plug. Located on outside of oven back, terminal is marked with symbol shown below.

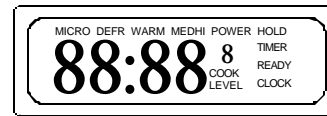




# Display and Features

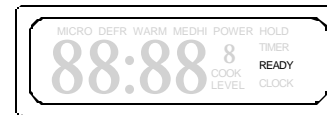
## Cooking Display

DISPLAYS	DESCRIPTION
READY	READY displays when oven control will accept entries.
00:00	Displays cooking time. If stage cooking is programmed, total cooking time is displayed.
DEFR MED MED HI	These settings display the current power level used for the microwave. If no display is shown, microwave is running at full power (100%).
POWER	POWER is displayed while the oven is generating microwave energy during a cooking cycle.



## Display

Some items in the display can be seen but are not available depending on model.



## Programming Display

DISPLAYS	DESCRIPTION
P:0	Displays when oven is in programming mode for single pad memory only.
P:	Displays when oven is in programming mode for double pad memory.
OP: --	Displays when oven is in user option mode. User options can then be set or specified.
CF:	Displays with a numerical cooking factor when the X2 pad is pressed.
P:-- <sup>1</sup>	Displays briefly when programming a specific cooking stage. Number (1 through 4) indicates the stage that is being programmed.

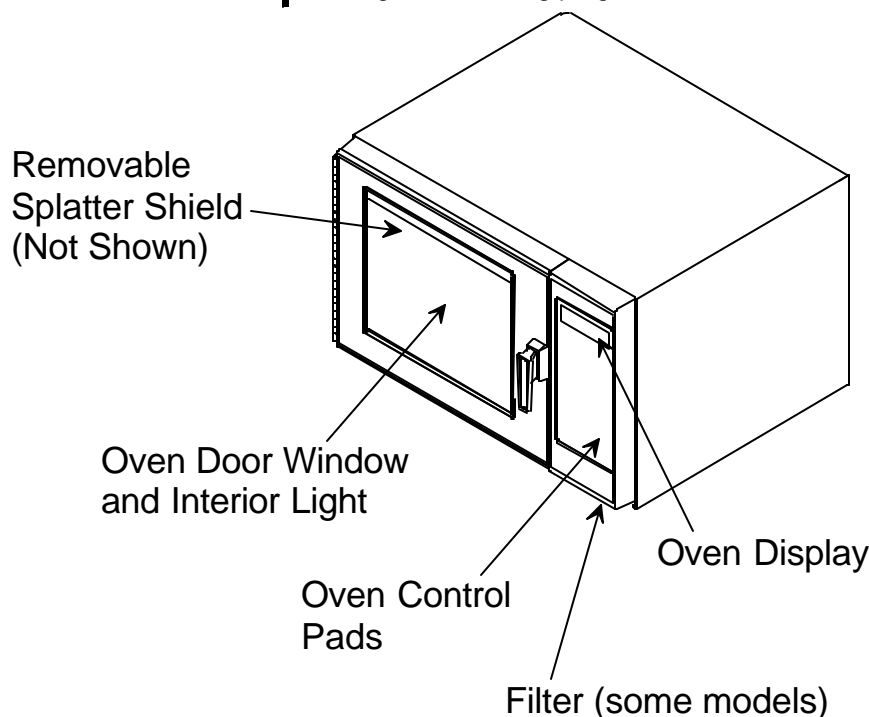
## Ready

Ready displays when an oven control will accept entries.



## Cooking Displays

25:20 displays total cooking time. When more than one cooking stage is programmed, total time for all stages displays. POWER displays when microwave energy is being generated. DEFR, MED, or MED HI will display to indicate microwave power level being used. If no power level is displayed, the microwave is operating at 100% power.



# Using the Oven Control (Electronic Control)



## Interrupting Operation

Open oven door or press STOP pad to interrupt operation. Display continues to show countdown time. Close door and press START pad to resume oven operation.



## Canceling Mistakes

If oven is not cooking, press STOP pad to clear display. If oven is cooking, press STOP pad once to stop oven, then again to clear display. If oven door is open and time shows in display, close oven door and press STOP pad to clear display.



## X2 Pad (some models)

To increase cooking time by a specific cooking factor when cooking more than one serving. The cooking factor is a percentage of the original cooking time (from 10 to 100%).

- Open oven door and place food in oven. Close door.
  - READY** displays. Fan and light will turn on.
- Press X2 pad.
  - Amount of time added is a percentage of the original preprogrammed cooking time.
  - The percentage can be changed. See *Programming the Oven Control* section in this manual.
- Press desired preprogrammed pad or pad sequence.
- Oven begins cooking. Displayed cooking time is the total of original cooking time and added X2 time.

## Manual Time Entry

To cook food using a specific entered time and power level.

- Open oven door and place food in oven. Close door.
  - READY** displays. Fan and light will turn on.
- Press TIME ENTRY pad.
  - READY** and display.
  - If pad does not work, open and close oven door and try again.
- Enter cooking time by using the numbered pads.
- Press a power level pad to change power level.
  - COOK LEVEL** displays with the power setting.
  - If a number is not displayed with COOK LEVEL the microwave is set to full power.
- Press START pad.
  - Oven operates and time counts down.
  - POWER, COOK LEVEL** and cooking time display.
- At end of cooking cycle oven beeps and shuts off.



## Programmed Pads

To cook food using pads preprogrammed with cooking sequences.

- Open oven door and place food in oven. Close door.
  - READY** displays. Fan and light will turn on.
- Press desired pad.
  - For single pad entry, press only one pad.
  - For double pad entry, press the two pads, in order, of the double digit number for the desired cooking sequence.
  - To change single or double pad entry option see *User Options* section in this manual.
- Oven begins to cook.
  - POWER**, power level and total cooking time display. If power level does not display, microwave is cooking at full power.
  - For additional cooking time, press preprogrammed pad again to begin cooking sequence again.
- At end of cooking cycle oven beeps and shuts off.



### Factory Settings

Pad	Time	Pad	Time
1	10 sec.	6	1:30 min.
2	20 sec.	7	2 min.
3	30 sec.	8	3 min.
4	45 sec.	9	4 min.
5	1 min.	0	5 min.

# Programming the Oven Control (Electronic Control)

## Programming Pads

Oven is shipped from the factory for single pad programming. To change the oven default to allow double pad programming, see *User Option* section.

To change the amount of time or the power level for a preset pad:

1. Open oven door.
  - **READY** displays.
  - If door is closed or STOP pad is pressed before programming is complete, changes are discarded and microwave exits programming mode.
2. Press and hold pad 1 for approximately 5 seconds.
  - This begins programming mode.
  - Microwave will beep and P:0 displays. Oven is in programming mode.
3. Press pad to be reprogrammed.
  - Press two pads if reprogramming a double pad program.
  - Power level and cooking time display.
  - If power level does not display, microwave is set to full power.
4. Enter cooking time by using the number pads.
5. Press a power level pad to change power level if desired.
6. Press START pad to set new programming to the pad.
  - If START is not pressed, changes will not be saved.
  - P:0 displays.
7. Press STOP pad or close oven door to exit programming mode.



? The display shows P: not P:0.

• When set to double pad programming, the display will show P: when programming pads for double digit cooking sequences. To change the oven to default to allow single pad programming only, see the *User Option* section.

## X2 Programming (some models)

This feature allows a preset percentage of original cook time, called a cooking factor, to be added to a cook sequence.

To change the cooking factor:

1. Open oven door.
2. Press and hold pad 1 for approximately 5 seconds.
3. Press pad to be reprogrammed.
4. Press the X2 pad.
5. Press a numbered pad to change the cooking factor.
  - Cooking factor can be set from 10% to 100%.
  - Default is 80%.
  - Pad 5 would change the cooking factor to 50%.
  - Pad 3 would change the cooking factor to 30%.
6. Press START pad to save changes.

## Programming Multiple Stages

Stage cooking allows consecutive cooking cycles without interruption. Up to four different cooking cycles can be programmed into a memory pad.

To use stage cooking:

1. Open oven door.
2. Press and hold pad 1 for approximately 5 seconds.
  - Microwave beeps and P:0 displays. Oven is in programming mode.
3. Press pad to be reprogrammed with stage cooking.
  - Press two pads if reprogramming a double pad program.
4. Enter cooking time by using the number pads.
5. Press a power level pad to change power level if desired.
6. Press TIME ENTRY pad.
  - Display briefly shows the pad number that is being programmed and the stage number to the upper right.
  - Display changes to cook time and power level for the next stage.
7. Enter cook time and power level as in steps 4 and 5.
  - To enter another cooking stage for that pad, press TIME ENTRY pad again.
  - Up to four different stages can be programmed.
8. Press START pad to set new programming changes to the pad.
9. Press STOP pad or close oven door to exit programming mode.



# User Options (Electronic Control)

## Didn't like an option?

Factory settings are marked in bold. To change the oven back to the factory setting, simply select the option that is marked in bold.

## My changes weren't saved.

In order for any changes to be saved, the START pad must be pressed after selecting an option. Shutting the oven door or pressing the STOP/RESET pad will not save changes.

## Changing user options

Options such as single or double pad programming, beep volume, and maximum cooking time can be changed to suit individual preferences.

To change options:

1. Open oven door.
  - If door is closed or RESET pad is pressed before programming is complete, changes are discarded and microwave exits programming mode.
2. Press and hold pad 2 for approximately 5 seconds.
  - This begins options mode.
  - Microwave will beep and **OP**: displays. Microwave is now in programming mode.
3. Press number pad that controls option to be changed.
  - See table below for options.
  - Current option will display.
4. Press number pad again to change the option.
  - Each time pad is pressed, option will change.
  - Match code displayed with code for desired option.
5. Press START pad to save changes.
  - To change additional options, repeat steps 3 and 4.
  - Changes appear after door is closed or STOP/RESET pad is pressed.

Numbered Pads	Display	Options (Factory Settings in Bold)
1 End of Cycle Beep	OP:10 OP:11 OP:12	<b>3 second continuous beep.</b> Continuous beep until door is opened. 5 beeps bursts until door is opened.
2 Speaker Volume	OP:20 OP:21 <b>OP:22</b> OP:23	Eliminates beep. Sets volume to low. <b>Sets volume to medium.</b> Sets volume to high.
3 Key Beep	OP:30 <b>OP:31</b>	Prevents beep when pad is pressed. <b>Allows beep when pad is pressed.</b>
4 Keyboard Enable Window	OP:40 OP:41 <b>OP:42</b> OP:43	15 seconds after oven door is opened, keyboard disabled. 30 seconds after oven door is opened, keyboard disabled. <b>1 minute after oven door is opened, keyboard disabled.</b> 2 minutes after oven door is opened, keyboard disabled.
5 Add Time During Heating	OP:50 <b>OP:51</b>	Prevents adding heating time while oven is heating. <b>Allows heating time to be changed while oven is heating when a memory pad is pressed.</b>
6 Reset Door Open	<b>OP:60</b> OP:61	<b>Allows oven to resume heating time countdown after door is opened during cycle.</b> Cancels heating time count down after door is opened during cycle.
7 Maximum Heating Time	<b>OP:70</b> OP:71	<b>Allows 60 minutes of heating time.</b> Allows 10 minutes of heating time.
8 Manual Operation	OP:80 <b>OP:81</b>	Allows use of preprogrammed pads only. <b>Allows use of manual time entry and preprogrammed pads.</b>
9 Double Digit Operation	<b>OP:90</b> OP:91	<b>Allows 10 (0-9) preprogrammed pads.</b> Allows 100 (00-99) preprogrammed pads.

# Care and Cleaning

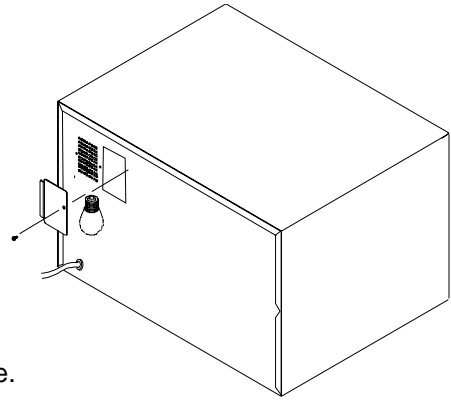


## WARNING

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

## Replacing Oven Light

1. Disconnect electrical supply.
2. Remove screw from back of oven.
3. While wearing protective gloves, turn light bulb counterclockwise to remove.
4. Replace light bulb with 230-volt, 25-watt appliance bulb. **Do not over-tighten bulb.** Over-tightening may make bulb difficult to remove later.
5. Replace light bulb cover before use.
6. Reconnect power supply.



## Removing Splatter Shield

Splatter shield keeps top of microwave oven cavity and antenna from becoming soiled. Clean soil from shield with damp cloth or clean with mild detergent and water. Splatter shield can be removed for easier cleaning.

**An authorized servicer MUST inspect equipment annually. Record all inspections and repairs for future use.**

1. Unplug oven to stop antenna from rotating.
2. Place fingers behind shield, pull forward, and then down.
  - DO NOT bend antenna.
  - If a gap for fingers behind splatter shield does not exist, push up on splatter shield front. Splatter shield may not be installed fully and cannot be removed until splatter shield front is properly installed.
3. Reinstall splatter shield by placing front tabs over lip at top of oven cavity front. Lift back of shield until shield snaps into place.
4. Reconnect power to oven.

PART	CARE AND CLEANING RECOMMENDATION
Interior, Exterior, and Door	<p>Clean microwave oven with mild detergent in warm water using soft sponge or cloth. Wring sponge or cloth to remove excess water before wiping equipment. If desired, boil a cup of water in microwave oven to loosen soil before cleaning.</p> <p><b>Important:</b></p> <ul style="list-style-type: none"> <li>• Do not use abrasive cleansers or cleaners containing ammonia or citrus. These could damage finish.</li> <li>• Never pour water into microwave oven bottom.</li> <li>• Do not use water pressure type cleaning systems.</li> </ul>
Discharge Air Vents	<p>Check monthly for a buildup of cooking vapors along intake and discharge louvers on bottom and back of oven. Clean air vents with damp cloth to ensure proper airflow. Dry thoroughly.</p>
Air Intake Filter	<p>Filter is located below oven door. Clean air intake filter weekly for proper airflow. Wash filter in hot water and mild detergent. Do not use oven without filter in place. Remove filter to clean.</p> <p><b>Important:</b></p> <p>To avoid overheating and oven damage, clean air filter regularly.</p> <ol style="list-style-type: none"> <li>1. Grasp filter tab and pull forward. Filter will release from retaining clips.</li> <li>2. To reinstall, place bottom of filter in clips and push top of filter into position.</li> </ol>
Control Panel	<p>Open oven door to deactivate oven timer. Clean with mild detergent in warm water using soft sponge or cloth.</p>

# Before Calling for Service



## WARNING

To avoid electrical shock which can cause severe personal injury or death, do not remove outer case at any time. Only an authorized servicer should remove outer case.

### Record all inspections and repair for future reference.

Symptom	Check
If oven does not operate:	<ul style="list-style-type: none"><li>• Check fuse or circuit breaker.</li><li>• Confirm oven is plugged into dedicated circuit.</li><li>• Confirm oven is on grounded and polarized circuit. Contact electrician to confirm.</li></ul>
If oven light does not work:	<ul style="list-style-type: none"><li>• Confirm light bulb is screwed in tightly.</li><li>• Confirm light bulb has not failed.</li></ul>
If oven does not accept entries when pad is pressed:	<ul style="list-style-type: none"><li>• Open and close oven door. Press pad again.</li></ul>
If oven malfunctions:	<ul style="list-style-type: none"><li>• Unplug oven, wait for 1 minute, and plug in oven.</li></ul>
If oven operates intermittently:	<ul style="list-style-type: none"><li>• Check air discharge area for obstructions.</li></ul>
Oven operates, but does not heat food:	<ul style="list-style-type: none"><li>• Place one cup cool water in oven. Heat for one minute. If water temperature does not rise, oven is operating incorrectly and a servicer should be called.</li></ul>

**Amana Commercial Online • <http://www.amanacommercial.com>**