

# Warning

**These precautions should be read to avoid any possible exposure to microwave radiation or electrical shock.**

The Amana Radarange microwave oven is designed to give you long, safe and peak performance. However, as with all electrical appliances, there are some things that you must follow to avoid potential personal hazards and give you the performance you expect.

## Visual check after uncrating.

After the oven is uncrated all packing material must be removed from the oven cavity.

Inspect the oven for any damage, such as misaligned door, damaged

gasketing around the door, dents or holes in the screen in the door or dents inside the oven cavity.

Any dents or breakage should be reported to your Amana Dealer immediately and the delivering carrier. Your Amana Dealer will tell you if the oven will operate correctly.

## Supply Voltage

The oven was set at the factory for 220 volt operation. If the supply voltage is higher, then the adjustment for 240 volt operation can be made by an authorized Amana Servicer.

### **WARNING: THIS APPLIANCE MUST BE EARTHED**

The wires in this mains lead are colored in accordance with the following code.

Green and Yellow:	Earth
Blue:	Neutral
Brown:	Live

As the colors of the wires in the mains lead of this appliance may not correspond with the colored markings identifying the terminals in your plug proceed as follows:

The wire which is colored green and yellow must be connected to the terminal in the plug which is marked with the letter E or by the earth symbol  $\perp$  or colored green and yellow.

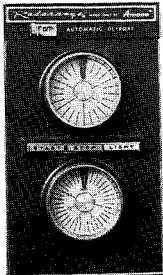
The wire which is colored blue must be connected to the terminal which is marked with the letter N or colored black.

The wire which is colored brown must be connected to the terminal which is marked with the letter L or colored red.

In other sections of the Owner's Manual and/or Cooking Guide mention is made of "Grounding." Grounding means connecting to earth.

**You can check the operation of the electric lock and interlock switch systems.**

The Radarange oven Model RR 5-4D contains a solenoid operated electric lock that engages when the oven is operating, and disengages when the oven is turned off. In addition, hidden back-up interlocks are activated by motion of the door as it is opened. Here is how you may check the operation of the electric lock and interlocks:



**First**, when the oven is in operation, the electric lock is engaged.

**Second**, press the RED stop button. The oven will shut off immediately. The cooking light on the control panel will go

off; the sound of the cooking fan will cease. The electric lock is now disengaged and the door should open freely. If the oven shuts off by other means (such as the timer running out), the plug being disconnected, or if slight door motion opens a back-up interlock switch, the electric lock is also disengaged.

**Third**, to check the operation of the back-up safety switch (interlock switch), you must have an operative oven light. If the oven light is working, press the WHITE light button to turn light OFF. Open door fully. The

light should come ON when door is opened. If the oven light does not come on, the back-up safety switch is inoperative.

**If under any of the preceding conditions the oven does not operate properly, do not use the oven. Call your Amana dealer or authorized service man.**

**DO NOT REMOVE THE OUTER CASE DOOR OR CONTROL PANEL** at any time. Doing so would expose you to dangerously high voltage.

**PRECAUTIONS TO AVOID POSSIBLE EXPOSURE TO EXCESSIVE MICROWAVE ENERGY**

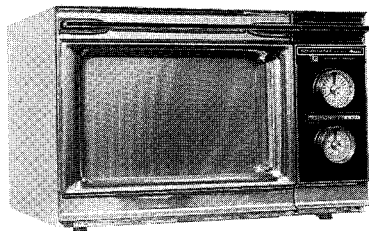
(a) Do not attempt to operate this oven with the door open since open-door operation can result in harmful exposure to microwave energy. It is important not to defeat or tamper with the safety interlocks.

(b) Do not place any object between the oven front face and the door or allow soil or cleaner residue to accumulate on sealing surfaces.

(c) Do not operate the oven if it is damaged. It is particularly important that the oven door close properly and that there is no damage to the: (1) Door (bent), (2) hinges and latches (broken or loosened), (3) door seals and sealing surfaces.

(d) The oven should not be adjusted or repaired by anyone except properly qualified service personnel.

**Be sure to read completely the operating instructions which follow.**

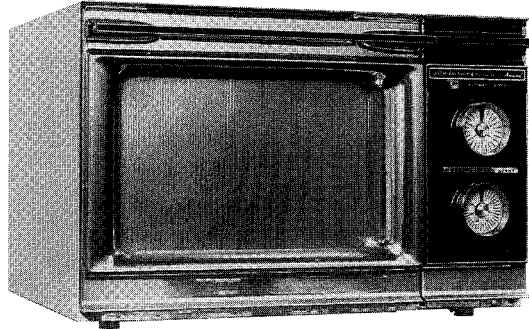


*Radarange*<sup>®</sup>  
MICROWAVE OVEN

MADE ONLY BY *Amana*<sup>®</sup>

Model RR 5-4D

# About your new *Radarange*<sup>®</sup> MICROWAVE OVEN



Model RR 5-4D

---

## Safety Features

---

Your Radarange Oven has a Stop-switch. When it is pushed, the oven stops cooking instantly. To resume cooking, the Start-switch must be pushed. When the oven is operating, the electric lock is engaged and the door cannot be opened.

Your oven has two safety features which keep the microwaves inside the oven. First is the primary door seal that keeps microwaves from passing around the door.

Second, the door gasket is made from a special vinyl with large amounts of carbon black. If any microwaves should pass by the door seal, this gasket has the ability to absorb them.

In addition to stop-start or latch switches, all models have back-up interlock switches that operate from door motion. These switches are located internally behind the door hinge arms.

---

## Introduction to Radarange Cooking

---

There are many recipes in the Radarange cookbook covering a wide variety of foods.

Of equal importance, it is designed so that you will be able to follow, step-by-step, the actual use of the Radarange Oven using a "do-it-yourself" demonstration.

If you follow these steps you will be using the Radarange Oven almost immediately for most of your food preparation.

---

## Learn what not to do.

---

Be sure to read the sections about the types of cooking utensils you should and should not use. It is important that you do not use any cookware of any kind that is made from metal or has a metal content.

The Radarange Oven will be one of your most prized kitchen appliances.

# Things not to do

**We do not recommend operating the oven empty.** When there is no food to absorb it, microwave energy can damage the Magnetron tube.

**We do not recommend the use of metal cookware of any kind in the oven.** The use of metal cookware, trays or foil will increase cooking time and decrease energy efficiency. It usually causes uneven cooking and can cause "arcing". With extended use, metal cookware can damage the Magnetron tube.

**Do not operate oven when door gasket or door seal is damaged.** To do so would allow microwave energy to escape. The gaskets must be replaced with a special type from your Amana Dealer. Do not substitute other materials or gaskets.

**Do not allow anyone to service oven except an Authorized Servicer.** This will void the warranty.

**Do not build the oven into the walls or cabinet with the sides, top or bottom air flow restricted.** The Magnetron must have sufficient air flow around it. Your Amana Dealer has an accessory kit you may purchase for built-in uses.

**Do not use a regular meat thermometer to check food when the oven is operating.** Most meat thermometers contain metal and can cause arcing and malfunction and/or damage to the oven.

**Do not rest food or cookware on the door.** This can misalign the door and destroy the positive seal.

**Do not cook or reheat eggs in the shell. Do not cook or reheat eggs with an unbroken yolk.** It may result in a pressure buildup and sudden eruption. Instead, gently pierce the yolk with a fork before cooking or heating.

**Do not reheat liquids in a microwave oven without first stirring or pouring.** Prior to microwave heating, mix air into the liquid or break up the surface film (that forms on soups, for example) to prevent pressure buildup and eruption.

**Do not bake potatoes, tomatoes, or apples unless the skin has been pierced.** You should be sure that all foods with an outer skin or membrane are pierced to allow steam to escape during cooking.

**Do not cook vegetables in a plastic bag (or air tight container) unless the bag has been pierced.** This allows steam to escape during cooking.

**Do not cook in a container with a restricted opening** such as a pop bottle, or salad oil bottle.

**Do not make popcorn in the Radarange Oven.** Popping corn in a microwave oven can damage the Magnetron tube and present a fire hazard.

## **SAFETY FEATURES:**

**The Radarange oven does not emit X-ray radiation.** All Radarange Ovens are safety and performance tested according to standards of Underwriters Laboratories and the U.S. Government.

**You cannot operate the oven with the door open.**

When you release the Electric Lock, the oven shuts off before the door can be opened. In effect, the microwaves are extinguished as quickly as a light bulb is controlled by a light switch.

Also, there are interlock or "safety" switches that back up the Electric Lock system. Any one of three switches stops the oven from operating, allowing the lock to disengage and the door to open.

**Glass tray must be in place.**

The fluted glass removable oven tray must be in place when operating the oven. This allows the microwaves to be reflected up into the bottom of food that is being cooked. The tray is a special type of glass. If it is accidentally broken, it must be replaced with the same type of glass from your Amana Dealer.

## Dishes you may use

**Heat-proof glass utensils** such as those pictured at right may be used. Check dishes with decorations to see that they contain no metal.

**Ceramic utensils** such as Corning Ware® may be used.

**Plastic containers** may be used. Hot foods may distort the container of some types of plastic. Oily or greasy foods may remove glaze on some plastics.

**China dishes** without metal trim may be used.

**Paper products**, such as paper plates, toweling to cover foods that might splatter, or used to absorb grease, may be used in the oven.

### **If in doubt, use this dish test:**

If you are questioning the type of dishes you have, this simple dish test will help you determine whether to use them in the Radarange Oven.

1. Place a cup filled with water in the particular dish to be tested.
2. Place them in Radarange Oven.
3. Set timer for 1¼ (one and one-quarter) minutes.
4. Push start switch.

**Test results:** If the water is very warm and the dish cool, you may use the dish. If dish is slightly warm around the edges use it for short term cooking. If water is cool and the dish hot do not use dish.



### **Cooking Bags, Pouch Packs and Plastic Wraps**

**Cooking bags.** Be sure to use a string tie instead of the small metal tie which is packed with cooking bags. Pierce a hole in the bag for steam to escape or it may expand and burst.

You will notice a great deal of moisture may slow cooking somewhat. Remove excess moisture using a spoon or baster.

**Pouch packs** that you fill and seal at home may be used. Pierce bag before heating for steam escape or it may expand and burst.

**Plastic wraps.** Use to cover foods you are reheating. Some wraps, because of the type of plastic, will become sticky and difficult to remove after being heated. Some may shrink around the dish or food.



## **Cookware you do not use**

**Do not use** metal pans. Metal handles on ceramic dishes or metal trim cannot be used in the oven. Metal trim or filigree may burn up because of high currents that are produced by the microwaves.

**Do not use** Centura® dinnerware or Corelle Living Ware® "closed" handle cups. The manufacturer recommends against their use in microwave ovens. Other pieces from the Corelle pattern can still be used.

**Do not use** foil pans for entrees or pot pies. The food item next to the metal container will not cook evenly since it is shielded by the metal.

**Do not use** aluminum foil except in turkey roasting; small strips may be used on wing tips and leg bones as described in the Amana Cook Book.

**Do not use** melamine dishes, as they usually contain some metal and can char or crack.

### **USE OF METAL CAN SHORTEN THE LIFE OF THE MAGNETRON TUBE.**

The use of cooking utensils or ceramic ware containing metal, or other metal products in the Radarange Oven can shorten the life or damage the Magnetron tube.

Fast cooking in the Radarange Oven is accomplished because the microwave energy is able to penetrate the food from all sides.

If metal is used in the Radarange Oven, it will reflect the microwaves and does not allow the area shielded from the microwaves to cook as well as you would like. This means that the results will not be what you anticipate.

# Simple, easy to operate controls



The operation of the Radarange is very simple. All you do is select the time you desire on one of the two timers and push the start switch. Pushing the start switch with the door closed automatically engages the electric door lock.

The timer indicator will revolve counterclockwise until the time is up and then shut off the oven. While the oven is in operation, a light will be on behind the timer you are using.

## Two Timer Controls

The top control will allow cooking times up to 6 minutes.

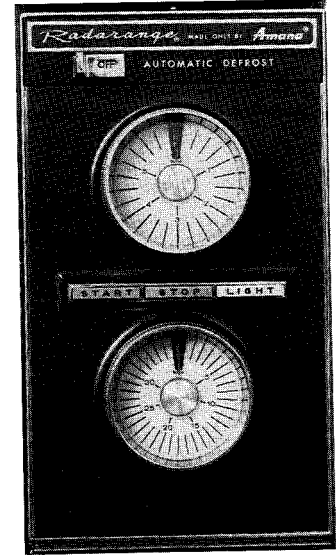
The bottom control will allow cooking times up to 36 minutes.

To set either Timer Control turn the control in either direction to the time you want.

## 6-minute Timer Control

The timer is numbered clockwise from 0 to 6. Each mark between the numbers represents 15 seconds. Turn the control to the time you desire. Then push the "start" switch. Red timer indicator will revolve counterclockwise from the time you have set to zero. The oven will then turn off.

To set for 6 minutes, move timer counterclockwise slightly past zero.



## 36-minute Timer Control

The timer is numbered clockwise from 0 to 36. Each mark is one minute. Turn the control to the time you desire, then push the "start" switch.

The red timer indicator will revolve counterclockwise from the time you have set to zero. The oven will then turn off.

To set for 36 minutes, move the timer counterclockwise slightly past zero.

## Electric Lock

The electric lock is automatically engaged when the start switch is pushed and the door closed. When the stop switch is pushed or time runs out, the unit shuts off instantly. The

electric lock disengages and the door may be opened freely.



#### Start switch

Push the "start" switch after you have set either one of the timer controls. The "start" switch will not operate the oven unless one of the timer controls has been set.



Interior light switch turns the light on and off inside the oven cavity.



Stop switch instantly stops the oven from operating.

**To check food while oven is operating**  
If at anytime during the cooking cycle you wish to stir, or check food, merely push the "stop" button. The electric lock will disengage and the oven will shut off.

To resume cooking, close the door and push the "start" switch. You do not have to reset the timer. The oven automatically resumes time from the point it stopped when you pushed the "stop" switch.

#### New Automatic Defrost adds more versatility to Radarange Oven cooking

The Radarange Oven Automatic Defrost thaws frozen food automatically.

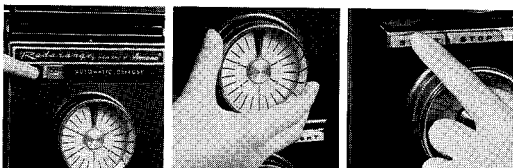
When the Automatic Defrost Control bar is in the "on" position, it monitors the unit and allows it to operate for 24 seconds, then shuts it off for 36 seconds, for every minute

that is set on either the 6-minute or 36-minute Timer Control.

This allows the frozen food to heat, then rest while the heat is distributed through the food. The cycle continues until the Timer Control returns to the "off" position.

**Low temperature cooking.** You can use the Automatic Defrost to tenderize lesser cuts of meat, simmer soups and sauces for better consistency and stew for a fine blending of flavors.

#### Operation of the Automatic Defrost



**Step 1**  
Place frozen food in the unit. Slide the Automatic Defrost slide to the red "On" position.

**Step 2**  
Set the Timer Control, either the 6 minute or 36 minute control, to the time needed for thawing or low temperature cooking.

**Step 3**  
Push the "Start" switch. The Radarange Oven will then cycle "on" and "off" automatically for the full time preset on the Timer Control.

To interrupt the Automatic Defrost cycle. Push the "Stop" switch. This shuts off the oven immediately. The Timer Control will also stop at the elapsed time.

To restart the Automatic Defrost cycle. Push the "Start" switch. The oven will continue to operate on the "on/off" cycle for the remaining time shown on the Timer Control. You do not have to re-set the Timer Control.

Automatic Defrost Control must be in the "off" position for continuous cooking.

Guide for defrosting and low temperature cooking on pages 10-12.

You should read this section for guidelines and general principles of use of the Automatic Defrost for thawing and low temperature cooking.

# Automatic Defrost Times

	STEP 1 Automatic Timer Control Setting	STEP 2 Standing Time	STEP 3 Automatic Timer Control Setting for Final Defrosting
<b>BEEF</b>			
Hamburger Pattie — 4 oz.	2 min.	—	—
Ground Beef — 1 lb. — 2 lb.	3 min. 15 sec. 6 min. 45 sec.	3 min. 3 min.	1 min. 45 sec. 3 min. 15 sec.
Pot Roast — 2 lb. — 5 lb.	6 min. 45 sec. 16 min. 45 sec.	3 min. 5 min.	3 min. 15 sec. 8 min. 15 sec.
Rolled Rib Roast — 4 lb. — 7 lb.	13 min. 15 sec. 23 min. 15 sec.	5 min. 10 min.	6 min. 45 sec. 11 min. 45 sec.
Round Steak — 1 lb. — 5 lb.	3 min. 15 sec. 11 min. 5 sec.	3 min. 5 min.	2 min. 45 sec. 5 min. 30 sec.
T-Bone Steak — 8-16 oz.	2 min. 15 sec.	3 min.	1 min. 5 sec.
Short Ribs — 3 lb. — 7 lb.	6 min. 45 sec. 15 min. 15 sec.	5 min. 10 min.	3 min. 15 sec. 8 min.
<b>PORK</b>			
Bacon — ½ lb. — 1 lb.	1 min. 5 sec. 2 min. 15 sec.	1 min. 3 min.	45 sec. 1 min. 15 sec.
Pork Chops (4) — 4 oz. ea. (6) — 4 oz. ea.	2 min. 15 sec. 3 min. 15 sec.	3 min. 3 min.	1 min. 15 sec. 2 min. 45 sec.
Pork Spareribs — 3 lb. — 5 lb.	6 min. 45 sec. 11 min. 5 sec.	5 min. 5 min.	3 min. 15 sec. 5 min. 30 sec.
<b>POULTRY</b>			
Chicken (Cut-up Fryer) — 2½ lb.	9 min. 25 sec.	5 min.	4 min. 45 sec.
Chicken (Whole Fryer) — 2½ lb.	8 min. 15 sec.	5 min.	4 min. 15 sec.
Turkey — 8 lb.	26 min. 45 sec.	15 min.	13 min. 15 sec.
Turkey Roll — 2 lb.	6 min. 45 sec.	3 min.	3 min. 15 sec.
<b>SEAFOOD</b>			
Fish Fillets — 1 lb.	2 min. 15 sec.	3 min.	1 min. 15 sec.
Lobster Tail (4) — 4 oz. ea.	2 min. 15 sec.	3 min.	1 min. 15 sec.
Shrimp — 1 lb.	3 min. 15 sec.	3 min.	1 min. 45 sec.
<b>GAME</b>			
Cornish Game Hen — 1 lb. 6 oz.	4 min. 45 sec.	3 min.	2 min. 30 sec.

Total Time for Defrosting	Directions
2 min.	
5 min. 10 min.	Remove thawed portion. Turn over after standing time.
10 min. 25 min.	Turn over after standing time. Rest 5 min. after final defrost.
20 min. 35 min.	Turn over after standing time. Rest 5 min. after final defrost.
6 min. 16 min. 35 sec.	Turn over after standing time.
3 min. 20 sec.	Turn over after standing time.
10 min. 23 min. 15 sec.	Turn over after standing time. On quantities over 3 lbs., rest 5 min. after final defrost.
1 min. 50 sec. 3 min. 30 sec.	Turn over after standing time. Remove thawed portion.
3 min. 30 sec. 6 min.	Turn over after standing time.
10 min. 16 min. 35 sec.	Turn over after standing time. On quantities over 3 lbs., rest 5 min. after final defrost.
14 min. 10 sec.	Separate pieces after 1st defrosting time. Turn over after standing time.
12 min. 30 sec.	Turn over after standing time. Rest 5 min. after final defrost.
40 min.	Turn over after standing time. Rest 10 min. after final defrost.
10 min.	Remove from metal container. Turn over after standing time.
3 min. 30 sec.	Turn over after standing time.
3 min. 30 sec.	Turn over after standing time.
5 min.	Turn over after standing time.
7 min. 15 sec.	Turn over after standing time.

**Low temperature cooking tenderizes lesser cuts of meats; develops full body in soups & sauces; blends flavors while stewing**

The Automatic Defrost Control, with its interrupted cooking cycle, allows lower temperature cooking. The alternating cooking and resting cycle keeps the temperature of the foods from rising quite as fast as it does in normal continuous cooking in the Radarange Oven. This is particularly good for simmering stews and sauces and for tenderizing less tender cuts of meat.

**Sauces** have a fuller flavor and even consistency.

**Stews** blend the flavor of all of the ingredients to a more full-bodied mixture of spices and herbs.

It's easy to convert recipe times from the Amana Radarange Cookbook to a time to be used in conjunction with the Automatic Defrost. All you do is take the total cooking time of the recipe and multiply by 2½. This increases the total time but you will still be nearly twice as fast as conventional cooking.

**Easier meal planning.** Since the Radarange Oven cooks most foods in about 1/4 of conventional cooking time, the Automatic Defrost can allow you extra time for preparation of other foods.

When you use the Radarange Oven, the Automatic Defrost Cycle can serve you many ways in making meal preparation much easier with less clean up.

# New Radarange Automatic Defrost

---

## Defrosting

Because thawing should be accomplished evenly throughout frozen food, the oven is designed to operate at only 33% of the normal power when in the defrost cycle. This allows large food, such as a turkey, to be completely thawed on the outside, yet retain some ice crystals on the inside. At the same time there will be little evidence of cooking on the outside.

Foods such as roasts, turkey, chicken, veal, lamb and bulk hamburger which contain a high water content take longer to defrost. We use a formula of 6.5 minutes times the total pounds to arrive at total defrosting time.

Some meat products such as ribs, steaks and pork chops contain a lesser volume of water and thus require a shorter defrosting period. We recommend a formula of 4.5 minutes times the total pounds as being sufficient for defrosting without cooking.

---

## Standing Time

When a meat product is defrosted with the aid of the defrost cycle, we often recommend a standing time, or resting period, in the middle and/or at the end of the defrosting period. Standing time allows the temperature

to equalize throughout the product. During this standing time, you should take normal sanitary precautions and cover the foods loosely.

---

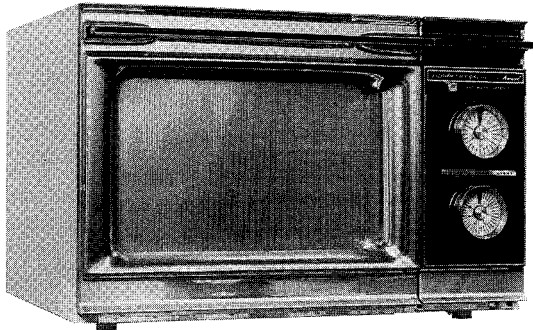
## Hints for Successful Defrosting

The precision of your new Radarange oven makes defrosting easy. As with any cooking procedure, there are a few things that you can do to help the process along.

- Wrap meat items in material suitable for use in the Radarange oven so that moisture loss will be at a minimum.
- Puncture airtight wrappings to allow any build-up of steam to escape freely.
- Place item in glass cookware to catch excess juices that may develop during the thawing period.
- Check the food during the defrosting time — particularly meat products that are of uneven thickness — to prevent any cooking action on the edges.
- Should cooking begin on edges, turn the meat over and around (180° turns).

Some foods are easier to defrost and will not require use of the defrost cycle. Foods such as cakes, breads, frozen vegetables and other small volume items can and should be cooked from frozen to serving without a resting time. The **Radarange Cook Book** has charts covering various frozen items. These can be found under the headings: "Convenience Foods" and "Frozen Vegetables."

# Take care of your *Radara*ange® MICROWAVE OVEN



Model RR 5-4D

---

## Cleaning the oven

---

There is little to do to keep the Radarange Oven in tip-top condition. The oven cavity, door seals and gaskets can be wiped with a paper towel or cleaned with a mild detergent in warm water and a soft sponge or cloth. Do not use an abrasive cleaner.

To clean glass tray lift up the tray and remove. Wash in warm water and detergent. Replace with rough side down.

Never pour water into the bottom of the oven.

**Do not operate oven when empty.** Whenever you operate the oven be sure that you have food in it. Otherwise, you might damage the Magnetron tube.

**Do not rest food or cookware on door.** The door is not designed to hold the weight of foods as you put them in or remove them from the oven. Additional weight might cause the door to become misaligned and result in improper operation.

**Do not remove outer case at any time.** The outer case and control panel should not be removed at any time, except by an Authorized Serviceman. If it is removed by another person, the warranty is voided.

# Maintenance Tips

## Changing oven dial or cavity light bulb

**ALWAYS UNPLUG THE OVEN FROM THE POWER SOURCE BEFORE YOU CHANGE THE BULB.**

**Dial Light Bulb.** Remove the control knobs by pulling the knob straight away from the oven. Remove the dial with the times printed on it. Unscrew the bulb. When replacing the lamp, use a 10 watt 250V, 10S6/10 bulb. Reverse the procedure when replacing control knob on shaft.

**Cavity Light Bulb.** The light for the inside of the oven can be changed only from the back. On the upper right hand side of the back of the oven is a metal plate held by screws. The light bulb is located behind this plate. Remove the screws to remove the plate. Remove the bulb. When replacing the lamp, use a 25 watt 250V, 25T8DC bulb. Reverse this procedure when putting the cover plate back in position.

## Cleaning the discharge air vents

There will be a slight buildup of cooking vapors in the discharge vent. These should be cleaned occasionally with a damp cloth.

## Allow air flow around the oven

Free air flow from the front and the back of oven is a must. The air flows around the electronic components. At least one inch must be left between the air inlet on the back of the oven and a back wall. If air flow is restricted the oven will not operate properly and life of electrical parts is shortened. Nothing should be stored beneath the oven that will interfere with inlet air. Do not attempt to remove the front of the timer panel; it is an integral part of the oven.

## How to clean the splatter shield inside the oven

The Splatter Shield keeps the top of the oven and stirrer (a fanlike blade that reflects the microwaves inside the oven cavity) from getting dirty. Normally, a damp cloth will remove any splatter on the shield. However, if you want to clean it more thoroughly, remove the splatter shield. On the RR5-4D model remove the phillips screws at the front of the oven. Pull the shield towards front of the oven. When replacing be sure it fits snugly in clips at the back of the oven before replacing the screws.

## Electrical

The Radarange is designed to operate on 220 volt or 240 volt, 50 Hertz current. To reduce nuisance interruptions, it should be plugged into a circuit that does not have other appliances or lights on it.

If your local area uses 240 volts, a serviceman must change a tap on the transformer to convert the oven to a 240 volt operation.

**The oven must be grounded.** When the oven is installed we suggest that you contact an electrician or qualified serviceman to make sure that your power receptacle is actually grounded.

If you move the oven from area to area, be sure the receptacle you use is fully grounded.

## Before you call the serviceman

If the oven should become inoperative, we suggest that you check the following:

1. Do the lights in the oven cavity, or timer dials come on?
2. Does the Timer Control move?
3. Is the oven plugged securely into the outlet?
4. Are the wall receptacle fuse(s) blown?

Then, if the oven still does not operate call your Authorized Serviceman. Do not attempt to make any adjustments or repairs yourself. It can be dangerous for an untrained person to make repairs.