SHARP®

TOASTER OVEN WITH MICROWAVE OPERATION MANUAL

** DRAFT **

Carousel®

MODEL

R-55TS

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READ ALL INSTRUCTIONS CAREFULLY BEFORE USING

FOR CUSTOMER ASSISTANCE

To aid in reporting this toaster oven with microwave in case of loss or theft, please record below the model number and serial number located on the unit. We also suggest you record all the information listed and retain for future reference.

Please provide the following information when you write or call: model number, serial number, date of purchase, your complete mailing address (including zip code), your daytime telephone number (including area code) and description of the problem.

MODEL NUMBER_____	SERIAL NUMBER_____
DATE OF PURCHASE _____	
DEALER _____	TELEPHONE _____
SERVICER _____	TELEPHONE _____

TO PHONE:

DIAL 1-800- BE-SHARP (237-4277) for :

SERVICE (for your nearest Sharp Authorized Servicer)
PARTS (for your authorized parts distributor)
ADDITIONAL CUSTOMER INFORMATION

DIAL 1-800-642-2122 for :

ACCESSORIES

TO WRITE:

Sharp Electronics Corporation
Customer Assistance Center
1300 Naperville Drive
Romeoville, IL 60446-1091

TO ACCESS INTERNET: www.sharpusa.com

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.

CONSUMER LIMITED WARRANTY

SHARP ELECTRONICS CORPORATION warrants to the first consumer purchaser that this Sharp brand product (the "Product"), when shipped in its original container, will be free from defective workmanship and materials, and agrees that it will, at its option, either repair the defect or replace the defective Product or part thereof with a new or remanufactured equivalent at no charge to the purchaser for parts or labor for the period(s) set forth below.

This warranty does not apply to any appearance items of the Product nor to the additional excluded item(s) set forth below nor to any Product the exterior of which has been damaged or defaced, which has been subjected to improper voltage or other misuse, abnormal service or handling, or which has been altered or modified in design or construction.

In order to enforce the rights under this limited warranty, the purchaser should follow the steps set forth below and provide proof of purchase to the servicer.

The limited warranty described herein is in addition to whatever implied warranties may be granted to purchasers by law. ALL IMPLIED WARRANTIES INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR USE ARE LIMITED TO THE PERIOD(S) FROM THE DATE OF PURCHASE SET FORTH BELOW. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.

Neither the sales personnel of the seller nor any other person is authorized to make any warranties other than those described herein, or to extend the duration of any warranties beyond the time period described herein on behalf of Sharp.

The warranties described herein shall be the sole and exclusive warranties granted by Sharp and shall be the sole and exclusive remedy available to the purchaser. Correction of defects, in the manner and for the period of time described herein, shall constitute complete fulfillment of all liabilities and responsibilities of Sharp to the purchaser with respect to the Product, and shall constitute full satisfaction of all claims, whether based on contract, negligence, strict liability or otherwise. In no event shall Sharp be liable, or in any way responsible, for any damages or defects in the Product which were caused by repairs or attempted repairs performed by anyone other than an authorized servicer. Nor shall Sharp be liable or in any way responsible for any incidental or consequential economic or property damage. Some states do not allow the exclusion of incidental or consequential damages, so the above exclusion may not apply to you.

THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS. YOU MAY ALSO HAVE OTHER RIGHTS WHICH VARY FROM STATE TO STATE.

Your Product Model Number & Description:	R-55TS, Home Use Carousel Microwave Oven. (Be sure to have this information available when you need service for your Product.)
Warranty Period for this Product:	One (1) year parts and labor. The warranty period continues for an additional four (4) years, for a total of five (5) years, with respect to the magnetron tube in the Product for parts only; labor and service are not provided free of charge for this additional period.
Additional Item(s) Excluded from Warranty Coverage (if any):	Non-functional accessories, turntable and light bulb.
Where to Obtain Service:	From a Sharp Authorized Servicer located In the United States. To find the location of the nearest Sharp Authorized Servicer, call Sharp toll free at 1-800-BE-SHARP (1-800-237-4277).
What to do to Obtain Service:	Ship prepaid or carry in your Product to a Sharp Authorized Servicer. Be sure to have **Proof of Purchase** available. If you ship the Product, be sure it is insured and packaged securely.

TO OBTAIN SUPPLY, ACCESSORY OR PRODUCT INFORMATION, CALL
1-800-BE-SHARP OR VISIT www.sharpusa.com.
Save the proof of purchase as it is needed should your oven ever require warranty service.

PRODUCT INFORMATION CARD

The product information card which is on the inside of the microwave oven carton should be completed within ten days of purchase and returned. We will keep it on file and help you access the information in case of loss, damage or theft. This will also enable us to contact you in the unlikely event that any adjustments or modifications are ever required for your oven.

IMPORTANT SAFETY INSTRUCTIONS

When using electrical appliances basic safety precautions should be followed, including the following:

WARNING - To reduce the risk of burns, electric shock, fire, injury to persons or exposure to excessive microwave energy:

1. **Read all instructions before using the appliance.**
2. Read and follow the specific **"PRECAUTIONS TO AVOID POSSIBLE EXPOSURE TO EXCESSIVE MICROWAVE ENERGY"** on inside front cover.
3. This appliance must be grounded. Connect only to properly grounded outlet. See **"GROUNDING INSTRUCTIONS"** on page 3.
4. Install or locate this appliance only in accordance with the provided installation instructions.
5. Some products such as whole eggs and sealed containers —for example, closed glass jars — are able to explode and should not be heated in this oven.
6. Use this appliance only for its intended use as described in this manual. Do not use corrosive chemicals or vapors in this appliance. This type of oven is specifically designed to heat, cook or dry food. It is not designed for industrial or laboratory use.
7. As with any appliance, close supervision is necessary when used by children.
8. Do not operate this appliance if it has a damaged cord or plug, if it is not working properly or if it has been damaged or dropped.
9. This appliance should be serviced only by qualified service personnel. Contact nearest Sharp Authorized Servicer for examination, repair or adjustment.
10. Do not cover or block any openings on the appliance.
11. Do not store or use this appliance outdoors. Do not use this product near water—for example, near a kitchen sink, in a wet basement, near a swimming pool or similar locations.
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 surface cleaning instructions on page 22.
16. To reduce the risk of fire in the oven cavity:
    a. Do not overcook food. Carefully attend appliance when paper, plastic or other combustible materials are placed inside the oven to facilitate cooking.
    b. Remove wire twist-ties from paper or plastic bags before placing bag in oven.
    c. If materials inside the oven ignite, keep oven door closed, turn oven off and disconnect the power cord or shut off power at the fuse or circuit breaker panel.
    d. Do not use the cavity for storage purposes. Do not leave paper products, cooking utensils or food in the cavity when not in use.
17. Liquids, such as water, coffee or tea are able to be overheated beyond the boiling point without appearing to be boiling. Visible bubbling or boiling when the container is removed from the microwave oven is not always present. THIS COULD RESULT IN VERY HOT LIQUIDS SUDDENLY BOILING OVER WHEN A SPOON OR OTHER UTENSIL IS INSERTED INTO THE LIQUID. To reduce the risk of injury to persons:
    a. Do not overheat the liquid.
    b. Stir the liquid both before and halfway through heating it.
    c. Do not use straight-sided containers with narrow necks. Use a wide-mouthed container.
    d. After heating, allow the container to stand in the microwave oven at least for 20 seconds before removing the container.
    e. Use extreme care when inserting a spoon or other utensil into the container.
18. If the oven light fails, consult a SHARP AUTHORIZED SERVICER.
19. Do not operate any heating or cooking appliance beneath this appliance.
20. Do not mount unit over or near any portion of a heating or cooking appliance.
21. Do not mount over a sink.
22. Do not store anything directly on top of the appliance surface when the appliance is in operation.

SAVE THESE INSTRUCTIONS

UNPACKING AND INSTALLATION INSTRUCTIONS

Unpacking and Examining Your Oven

Remove:

1. all packing materials from inside the oven cavity; however, DO NOT REMOVE THE WAVEGUIDE COVER, which is located on the right cavity wall. Read enclosures and SAVE the Operation Manual.
2. the feature sticker, if there is one, from the outside of the door.

Check the oven for any damage, such as misaligned or bent door, damaged door seals and sealing surfaces, broken or loose door hinges and latches and dents inside the cavity or on the door. If there is any damage, do not operate the oven and contact your dealer or SHARP AUTHORIZED SERVICER.

Choosing a Location for Your Oven

You will use the oven frequently so plan its location for ease of use. The oven must be placed on a countertop which is a minimum of 36 inches from the floor. It's wise, if possible, to have counter space on at least one side of the oven. Allow at least 2 inches on the sides, top and at the rear of the oven for air circulation. Do not place or install the oven in any area where heat and steam are generated; for example, next to or above a conventional gas or electric range or above a conventional wall oven. Heat and steam may damage the electronics or the mechanical parts of the oven.

GROUNDING INSTRUCTIONS

This appliance must be grounded. This oven is equipped with a cord having a grounding wire with a grounding plug. It must be plugged into a wall receptacle that is properly installed and grounded in accordance with the National Electrical Code and local codes and ordinances. In the event of an electrical short circuit, grounding reduces risk of electric shock by providing an escape wire for the electric current.

WARNING – Improper use of the grounding plug can result in a risk of electric shock.

Electrical Requirements

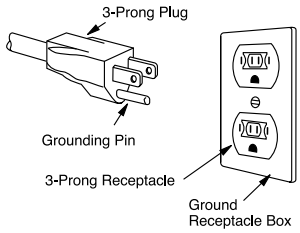
The electrical requirements are a 120 volt 60 Hz, AC only, 15 amp. or more protected electrical supply. It is recommended that a separate circuit serving only this appliance be provided.

The oven is equipped with a 3-prong grounding plug. It must be plugged into a wall receptacle that is properly installed and grounded. Should you only have a 2-prong outlet, have a qualified electrician install a correct wall receptacle.

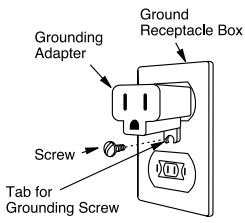
A 3-prong adapter may be purchased and used temporarily if local codes allow. Follow package directions.

A short power-supply cord is provided to reduce risk of becoming entangled in or tripping over a longer cord.

Permanent and Correct Installation



Temporary Use



Extension Cord

If it is necessary to use an extension cord, use only a 3-wire extension cord that has a 3-blade grounding plug and a 3-slot receptacle that will accept the plug on the microwave oven. The marked rating of the extension cord should be AC 115-120 volt, 15 amp. or more.

Be careful not to drape the cord over the countertop or table where it can be pulled on by children or tripped over accidentally.

Notes:
1. If you have any questions about the grounding or electrical instructions, consult a qualified electrician or service person.
2. Neither Sharp nor the dealer can accept any liability for damage to the oven or personal injury resulting from failure to observe the correct electrical connection procedures.

Radio or TV Interference

Should there be any interference caused by the microwave oven to your radio or TV, check that the microwave oven is on a different electrical circuit, relocate the radio or TV as far away from the oven as feasible or check position and signal of receiving antenna.

INFORMATION YOU NEED TO KNOW

ABOUT YOUR OVEN

This Operation Manual is valuable: read it carefully and always save it for reference.

Good recipes are included in this operation manual. Check them as well as this section for cooking principles, techniques, hints.

NEVER use the oven without the turntable and support nor turn the turntable over so that a large dish could be placed in the oven. Only remove for cleaning or for the menus specified in this manual. The turntable will turn both clockwise and counterclockwise.

ALWAYS have food in the oven when it is on to absorb the microwave energy.

When using the oven at power levels below 100%, you may hear the magnetron cycling on and off. It is normal for the exterior of the oven to be warm to the touch when cooking or reheating.

Condensation is a normal part of microwave cooking. Room humidity and the moisture in food will influence the amount of moisture that condenses in the oven. Generally, covered foods will not cause as much condensation as uncovered ones. Vents on the oven back must not be blocked.

After using, the cooling fan may come on to cool the oven cavity. The display will show COOLING, and you will hear the sound of the fan.

Unlike microwave-only ovens, your oven may become hot during cooking. Be cautious.

The oven is for food preparation only. It should not be used to dry clothes or newspapers.

Your oven is rated 650 watts by using the IEC Test Procedure. In using recipes or package directions, check food a minute or two before the minimum time and add time accordingly.

ABOUT FOOD

FOOD	DO	DON'T
Eggs, sausages, nuts, seeds fruits & vegetables	• Puncture egg yolks before cooking to prevent "explosion". • Pierce skins of potatoes, apples, squash, hot dogs and sausages so that steam escapes.	• Cook eggs in shells. • Reheat whole eggs. • Dry nuts or seeds in shells.
Popcorn	• Use specially bagged popcorn for the microwave oven. • Listen while popping corn for the popping to slow to 1 or 2 seconds.	• Pop popcorn in regular brown bags or glass bowls. • Exceed maximum time on popcorn package.
Baby food	• Transfer baby food to small dish and heat carefully, stirring often. Check temperature before serving. • Put nipples on bottles after heating and shake thoroughly. "Wrist" test before feeding.	• Heat baby food in original jars. • Heat disposable bottles. • Heat bottles with nipples on.
General	• Cut baked goods with filling after heating to release steam and avoid burns. • Stir liquids briskly before heating and allow to stand at least for 20 seconds after heating before stirring or drinking to avoid eruption. • Use deep bowl, when cooking liquids or cereals, to prevent boilovers.	• Heat or cook in closed glass jars or air tight containers. • Can in the microwave as harmful bacteria may not be destroyed. • Deep fat fry. • Dry wood, gourds, herbs or wet papers.

ABOUT UTENSILS AND COVERINGS

It is not necessary to buy all new cookware. Many pieces already in your kitchen can be used successfully in your new convection microwave oven. The chart below will help you decide what utensils and coverings should be used in each mode.

Utensils and Coverings	Microwave Only	Grill, Bake
Aluminum foil	Yes Small flat pieces of aluminum foil placed smoothly on food can be used to shield areas from cooking or defrosting too quickly. Keep foil at least 1 inch from walls of oven. Ensure not to touch foil to the turntable.	Yes For shielding
Aluminum containers	Yes Can be used if 3/4 filled with food. Keep 1 inch away from walls and do not cover with foil.	Yes
Browning dish	Yes Do not exceed recommended preheating time. Follow manufacturer's directions.	No
Glass ceramic (Pyroceram.®)	Yes Excellent	Yes Excellent
Glass, heat-resistant	Yes Excellent. A pie plate is necessary for popping popcorn.	Yes Excellent
Glass, non-heat-resistant	No	No
Lids, glass	Yes Excellent	Yes
Lids, metal	No	Yes
Metal cookware	No	Yes
Metal, misc: dishes with metallic trim, screws, bands, handles. Metal twist ties	No	No
Oven cooking bags	Yes Good for large meats or foods that need tenderizing. DO NOT use metal twist ties.	Yes
Paper plates	Yes For reheating	No
Paper towels	Yes To cover for reheating and cooking. Do not use recycled paper towels which may contain metal filings.	No
Paper, ovenable	Yes	Yes

Utensils and Coverings	Microwave Only	Grill, Bake
Microwave-safe plastic containers	Yes Use for reheating and defrosting. Some microwave-safe plastics are not suitable for cooking foods with high fat and sugar content. Follow manufacturer's directions.	No
Plastic, Thermoset®	Yes	Yes
Plastic wrap	Yes Use brands specially marked for microwave use. DO NOT allow plastic wrap to touch food. Vent so steam can escape.	No
Pottery, porcelain stoneware	Yes Check manufacturer's recommendation for being microwave safe.	Yes
Styrofoam	Yes For reheating	No
Wicker, wood, straw	Yes May be used for short periods of time. Do not use with high fat or high sugar content foods. Could char.	No

DISH CHECK. If you wish to check if a dish is safe for microwaving, place the empty dish in the oven and microwave on HIGH for 30 seconds. If the dish becomes very hot, do NOT use it for microwaving.

AUTOMATIC COOKING Use the recommended container in the cooking chart in this operation manual, cookbook and display.

ACCESSORIES There are many microwave accessories available for purchase. Evaluate carefully before you purchase so that they meet your needs. A microwave-safe thermometer will assist you in determining correct doneness and assure you that foods have been cooked to safe temperatures when using microwave-only cooking. Sharp is not responsible for any damage to the oven when accessories are used.

ABOUT MICROWAVE COOKING

- Arrange food carefully. Place thickest areas towards outside of dish.
- Watch cooking time. Cook for the shortest amount of time indicated and add more as needed. Food severely overcooked can smoke or ignite.
- Cover foods while cooking. Check recipe or cookbook for suggestions: paper towels, wax paper, microwave plastic wrap or a lid. Covers prevent spattering and help foods to cook evenly.
- Shield with small flat pieces of aluminum foil any thin areas of meat or poultry to prevent overcooking before dense, thick areas are cooked thoroughly.
- Stir foods from outside to center of dish once or twice during cooking, if possible.
- Turn foods over once during microwaving to speed cooking of such foods as chicken and hamburgers. Large items like roasts must be turned over at least once.
- Rearrange foods such as meatballs halfway through cooking both from top to bottom and from the center of the dish to the outside.
- Add standing time. Remove food from oven and stir, if possible. Cover for standing time which allows the food to finish cooking without overcooking.
- Check for doneness. Look for signs indicating that cooking temperatures have been reached.

  Doneness signs include:

  - Food steams throughout, not just at edge.
  - Center bottom of dish is very hot to the touch.
  - Poultry thigh joints move easily.
  - Meat and poultry show no pinkness.
  - Fish is opaque and flakes easily with a fork.

ABOUT SAFETY

- Check foods to see that they are cooked to the United States Department of Agriculture's recommended temperatures.

TEMP	FOOD
160°F	... for fresh pork, ground meat, boneless white poultry, fish, seafood, egg dishes and frozen prepared food.
165°F	... for leftover, ready-to-reheat refrigerated, and deli and carry-out “fresh” food.
170°F	... white meat of poultry.
180°F	... dark meat of poultry.

To test for doneness, insert a meat thermometer in a thick or dense area away from fat or bone. NEVER leave the thermometer in the food during cooking, unless using a microwave thermometer when cooking with only microwave power.

- ALWAYS use potholders to prevent burns when handling utensils that are in contact with hot food. Enough heat from the food can transfer through utensils to cause skin burns.
- Avoid steam burns by directing steam away from the face and hands. Slowly lift the farthest edge of a dish's covering and carefully open popcorn and oven cooking bags away from the face.
- Stay near the oven while it's in use and check cooking progress frequently so that there is no chance of overcooking food.
- NEVER use the cavity for storing cookbooks or other items.
- Select, store and handle food carefully to preserve its high quality and minimize the spread of foodborne bacteria.
- Keep waveguide cover clean. Food residue can cause arcing and/or fires.
- Use care when removing items from the oven so that the utensil, your clothes or accessories do not touch the safety door latches.

ABOUT CHILDREN AND THE MICROWAVE

Children below the age of 7 should use the microwave oven with a supervising person very near to them. Between the ages of 7 and 12, the supervising person should be in the same room.

The child must be able to reach the oven comfortably; if not, he/she should stand on a sturdy stool.

At no time should anyone be allowed to lean or swing on the oven door.

Children should be taught all safety precautions: use potholders, remove coverings carefully, pay special attention to packages that crisp food because they may be extra hot.

Don’t assume that because a child has mastered one cooking skill he/she can cook everything.

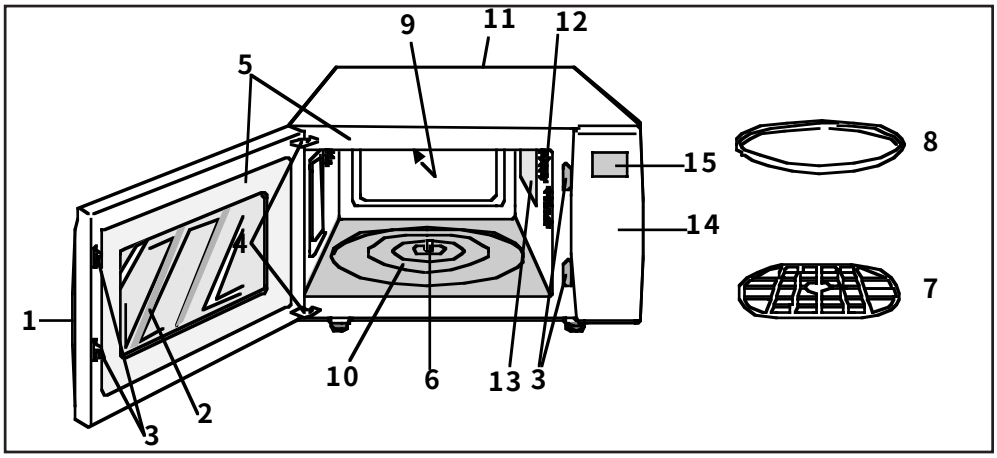
Children need to learn that the toaster oven is not a toy. See page 21 for Child Lock feature.

ABOUT GRILL, BAKE, AUTOMATIC COOKINGS

- The oven cabinet, cavity, door, accessories and dishes will become hot. To PREVENT BURNS, use thick oven gloves when removing the food or turntable from the oven.
- When preheating, the turntable can be left in or removed. When preheat is over, open oven door and quickly place turntable and foods to be baked inside.
- Do not cover turntable with aluminum foil.
- Round pizza pans are excellent cooking utensils for many items. Choose pans that do not have extended handles.

PART NAMES

MICROWAVE OVEN PARTS



1 Door opening handle
Pull to open door.

2 Oven door with see-through window

3 Safety door latches

The oven will not operate unless the door is securely closed.

4 Door hinges

5 Door seals and sealing surfaces

6 Turntable motor shaft

7 Removable turntable support

Carefully place the turntable support in the center of the oven floor.

The turntable motor shaft should be set into the recess of the turntable support.

8 Removable turntable

Place the turntable on the turntable support securely. The turntable will rotate clockwise or counterclockwise. Only remove for cleaning or for the menus specified in this manual.

9 Top grill heater (top heater)

10 Bottom grill heater (bottom heater)

The bottom heater is under the cacvity floor.

11 Ventilation openings (Rear)

12 Oven light

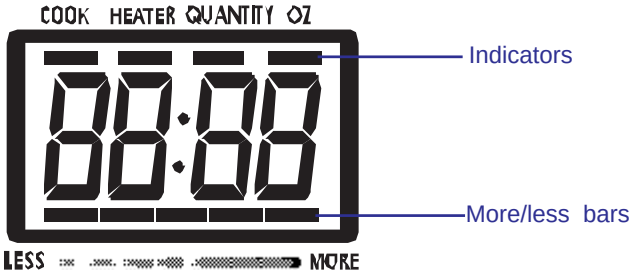
It will light when oven is operating or door is open.

13 Waveguide cover: DO NOT REMOVE.

14 Auto-Touch control panel

15 Time display: 95 minutes

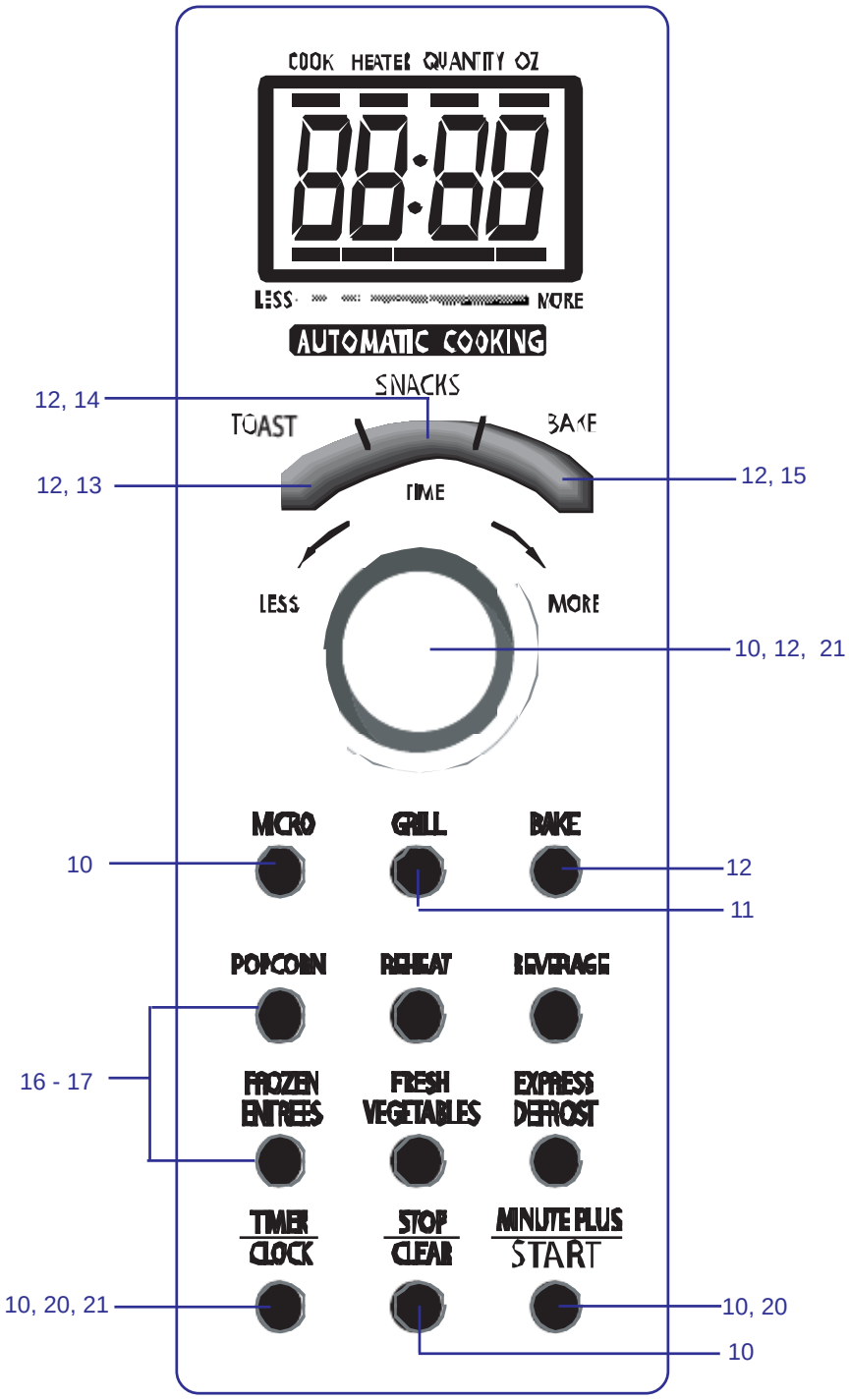
DISPLAY



Indicators will light to indicate what function is in process and quantity .
More/less bars will light to indicate the length of automatic cooking or the desired doneness for automatic cooking.

PART NAMES

R-55TS



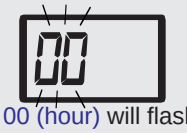
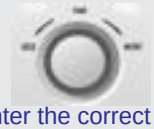
Number next to the control panel illustration indicates page on which there are a feature description and usage information.

BEFORE OPERATING

- Before operating your new microwave oven make sure you read and understand this operation manual completely.
- Before the oven can be used, follow these procedures:
  1. Plug in the oven. Close the door. The oven display will then begin flashing 88:88.
  2. Touch **STOP/CLEAR**. : will appear.
  3. Set clock. See below.
  4. Condition the heaters by heating oven without food. See page 11.

TO SET THE CLOCK

- Suppose you want to enter the correct time of day 12:30 (A.M. or P.M.).

PROCEDURE	DISPLAY
1 Touch **CLOCK**.	 00 (hour) will flash.
2 Enter the correct hour by rotating the TIME controller.	
3 Touch **CLOCK** again.	00 (minute) will flash.
4  Enter the correct minute by rotating the TIME controller.	
5 Touch **CLOCK** again.	

- If the electrical power supply to your microwave oven should be interrupted, the display will intermittently show 88:88 after the power is reinstated. If this occurs during cooking, the program will be erased. The time of day will also be erased. Simply touch **STOP/CLEAR** and reset the clock for the correct time of day.

STOP/CLEAR

Touch **STOP/CLEAR** to:

1. Erase if you make a mistake during programming.
2. Cancel timer.
3. Stop the oven temporarily during cooking.
4. Return the time of day to the display.
5. Cancel a program during cooking, touch twice.

MANUAL OPERATION

MICROWAVE TIME COOKING

Your oven can be programmed for 95 minutes (95.00) using the TIME controller. The input unit of cooking (defrosting) time varies from 10 seconds to five minutes. It depends on the total length of the cooking (defrosting) time as shown on the table below:

Cooking Time:	Increasing unit:
0-5 minutes	10 seconds
5-10 seconds	30 seconds
10-30 minutes	1 minute
30-95 minutes	5 minutes

You can rotate the **TIME** controller clockwise or counter-clockwise. If you rotate it counter-clockwise, the cooking time will decrease from 95 minutes by degrees.

- Suppose you want to cook for 5 minutes at 100%.

PROCEDURE	DISPLAY
1 Enter cooking time.	
2 Touch **START**	

TO SET POWER LEVEL

There are six preset power levels. Using lower power levels increases the cooking time which is recommended for foods such as cheese, milk and long slow cooking of meats. Consult cookbook or recipes for specific recommendations.

Touch MICRO	Approximate Percentage of Power	Commmon Words for Power Level
once	100%	High
twice	70%	Medium High
3 times	50%	Medium
4 times	30%	Med Low/Defrost
5 times	10%	Low
6 times	0%	

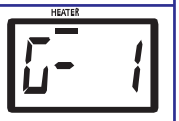
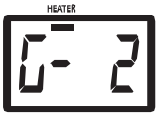
- Suppose you want to defrost for 5 minutes at 30%.

PROCEDURE	DISPLAY
1 Enter defrost time.	
2 x 4 Touch **MICRO** 4 times or hold down until the desired power level appears.	
3 Touch **START**.	
4 When the defrost time is complete, a long tone will sound and End will appear in the display.	

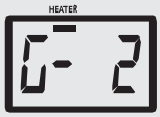
You can program up to 3 automatic cooking sequences. Follow directions on page 20. Note that the power level must be entered first when programming multiple sequences.

GRILL

Use the GRILL setting for steaks, chops, chicken pieces and many other foods. Your oven has 2 grill heaters, and 2 grill cooking modes. Select the desired grill mode by touching **GRILL** to the desired mode. See below chart. You can enter cooking time up to 30 minutes.

Mode	Touch **GRILL**	Cooking method	Display
GRILL 1	Once	Top heater	
GRILL 2	Twice	Top and bottom heaters	

- Suppose you want to grill a steak for 15 minutes on GRILL 2.

PROCEDURE	DISPLAY
1 x 2 Touch **GRILL** twice.	
2 Enter cooking time.	
3 Touch **START**.	

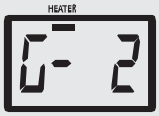
HINT:
Turning foof over around the half of the cooking time is recommended for better results.

NOTE:
- After cooking is complete the cooling fan will continue working for a short time to lower the temperature of the electrical and mechanical parts.

Caution:
The oven cabinet, cavity, door, turntable, turntable support and dishes will become hot. To PREVENT BURNS, use thick oven gloves when removing the food or turntable.

CONDITION THE HEATERS

You may detect smoke or a burning smell when using the oven the first time. This is normal and not a sign that the oven is out of order. To avoid this problem, when first using the oven, operate both top and bottom heaters without food for 20 minutes.

PROCEDURE	DISPLAY
1 x 2 Touch **GRILL** twice.	
2 Enter cooking time.	
3 Touch **START**.	
4 The oven will count down. When the oven has finished cooking, open the door to cool the oven cavity.	

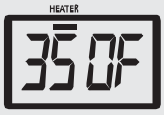
BAKE

Use the BAKE setting for cakes, breads and many other foods. This microwave oven has 4 pre-set oven temperatures which use a combination of the top and bottom heaters. The BAKE is preprogrammed preheating.

Press **BAKE**	Once	Twice	3 times	4 times
Oven Temp (° F)	400	375	350	325

The urntable and turntable support should be in the oven during the preheating.

* Suppose you want to bake a cake for 25 minutes at 350° F.

PROCEDURE	DISPLAY
1 x 3 Touch **BAKE** 3 times.	
2 Enter cooking time.	
3 Touch **START**. Preheat starts. No food in oven.	
When the oven reaches the programmed temperature, a signal will sound 4 times.*	
4 Open the door. Place food in the oven. Close the door. Touch **START**.	

* If the oven door is not opened, the oven will automatically hold at the preheat temperature for 30 minutes. After this time has elapsed, an audible signal will sound and the oven will turn off.

NOTE:

- Touching the **BAKE** pad during cooking will display the programmed temperature. This will not affect the programme or cooking time.
- Temperature measurements taken whilst the oven is in bake mode will differ from the displayed level. This is due to the grill elements turning on and off in order to regulate the oven temperature. This will not affect the cooking results as long as the operation manual and cook book are followed correctly.
- After cooking is complete the cooling fan will continue working for a short time to lower the temperature of the electrical and mechanical parts.

Caution:
The oven cabinet, cavity, door, turntable, turntable support and dishes will become hot. To PREVENT BURNS, use thick oven gloves when removing the food or turntable.

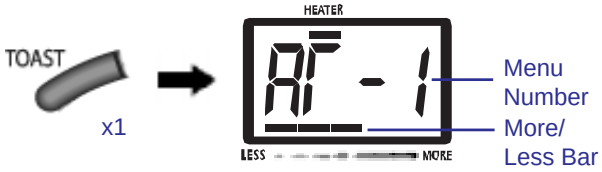
SPECIAL FEATURES

AUTOMATIC COOKING

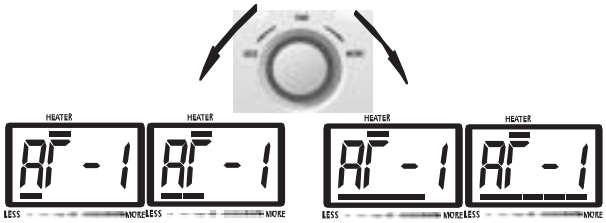
Your oven has 3 special heater cooking modes:

- AUTOMATIC TOAST
- AUTOMATIC SNACK
- AUTOMATIC BAKE

The **AUTOMATIC COOKING** automatically works with the appropriate cooking mode and cooking time for each menu. 5 popular menus are included in each AUTOMATIC COOKING. To select a menu, touch suitable AUTOMATIC COKING pad until the desired menu number appears in the display.



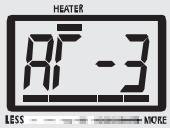
Each menu has 5 different time settings, and they are shown as the number of the Time bar in the display. 3 Time bars setting is programmed as a standard. You can choose desired time setting with the **TIME** controller. Refer to each AUTOMATIC COOKING chart on page 13 - 15.



Caution:
The oven cabinet, cavity, door, turntable, turntable support and dishes will become hot. To PREVENT BURNS, use thick oven gloves when removing the food or turntable.

Example:

* Suppose you want to toast 2 frozen waffles.

PROCEDURE	DISPLAY
1 x 3 Select desired menu by touching AUTOMATIC TOAST. (Ex: Touch 3 times for waffle.)	
2 Select desired setting by rotating the TIME controller. (Ex: Select 5 Time bars for 2 frozen waffles.)	
3 Touch **START**.	

AUTOMATIC TOAST CHART

MENU	PROCEDURE

AT-1 Bread

Number of Bars	Cooking Time	Recommended Quantity/ Menu
1	3 min. 40 sec.	
2	4 min.	
3	4 min. 20 sec.	1 - 4 slices
4	4 min. 40 sec.	
5	5 min.	

Remove the turntable from the oven.

AT-2 Bagles

Number of Bars	Cooking Time	Recommended Quantity/ Menu
1	4min.	1 half
2	4 min. 15 sec.	
3	4 min. 30 sec.	2 halves
4	4 min. 50 sec.	
5	5 min. 20sec.	

Remove the turntable from the oven.

AT-3 Waffles

Number of Bars	Cooking Time	Recommended Quantity/ Menu
1	5 min.	1 room/frozen temp. waffle
2	5 min. 30 sec.	
3	6 min.	2 room temp. waffles
4	6 min. 30 sec.	
5	7 min.	2 frozen waffles

Remove the turntable from the oven.

AT-4 French Toast

Number of Bars	Cooking Time	Recommended Quantity/ Menu
1	7 min.	3-6 sticks
2	7 min. 20 sec.	
3	8 min.	1-2 slices
4	8 min. 20 sec.	
5	8 min. 40 sec.	

Remove the turntable from the oven.

AT-5 Toaster Pastries

Number of Bars	Cooking Time	Recommended Quantity/ Menu
1	3 min.	
2	3 min. 15 sec.	
3	3 min. 30 sec.	1-2 room temp. pastries
4	4 min.	
5	6 min.	2 frozen pastries

Remove the turntable from the oven.

Special note for AUTOMATIC TOAST:
No turntable for AUTOMATIC TOAST. Place food on the turntable support directly.

AUTOMATIC SNACK CHART

MENU PROCEDURE

AS-1 French Fries

Number of Bars	Cooking Time	Recommended Quantity/ Menu
1	15 min. 30 sec.	
2	16 min. 30 sec.	
3	17 min. 30 sec.	1/2 lb Frech fries
4	18 min.	
5	18 min. 30 sec.	

AS-2 Frozen Pizza

Number of Bars	Cooking Time	Recommended Quantity/ Menu
1	13min.	
2	14 min.	
3	15 min.	5-7 oz frozen pizza
4	16 min.	
5	20 min.	14 oz frozen pizza

AS-3 Hamburgers

Number of Bars	Cooking Time	Recommended Quantity/ Menu
1	15 min.	1 medium
2	16 min.	2 medium
		1 welldone
3	18 min.	3 medium
4	20 min.	4 medium
		3 welldone
5	21 min.	4 welldone

AS-4 Frozen Appetizers

Number of Bars	Cooking Time	Recommended Quantity/ Menu
1	7 min.	
2	7 min. 30 sec.	
3	8 min.	4 - 8 pieces
4	9 min.	
5	10 min.	

AS-5 Frankfurters and Sausage

Number of Bars	Cooking Time	Recommended Quantity/ Menu
1	8 min.	1-2 pieces
2	8 min. 30 sec.	
3	9 min.	3-4 pieces
4	9 min. 30 sec.	
5	10 min.	

AUTOMATIC BAKE CHART

MENU	PROCEDURE

AB-1 Baked Potatoes

Number of Bars	Cooking Time	Recommended Quantity/ Menu
1	14 min.	1 medium
2	16 min.	
3	17 min.	2 medium
4	18 min.	
5	20 min.	

AB-2 Biscuits

Preheat is preprogrammed for this menu.
ADD FOOF AFTER PREHEATING.

Number of Bars	Cooking Time	Recommended Quantity/ Menu
1	8 min.	
2	9 min.	Convenience refrigerated baked at 400 or450°F
3	10 min.	Home made
4	11 min.	Convenience frozen
5	12 min.	

AB-3 Muffins

Preheat is preprogrammed for this menu.
ADD FOOF AFTER PREHEATING.

Number of Bars	Cooking Time	Recommended Quantity/ Menu
1	14 min.	
2	15 min.	
3	16 min.	6-cup pan
4	17 min.	
5	18 min.	

AB-4 Brownies

Preheat is preprogrammed for this menu.
ADD FOOF AFTER PREHEATING.

Number of Bars	Cooking Time	Recommended Quantity/ Menu
1	28 min.	
2	29 min.	
3	30 min.	8-inch pan
4	31 min.	
5	32 min.	

AB-5 Cakes

Preheat is preprogrammed for this menu.
ADD FOOF AFTER PREHEATING.

Number of Bars	Cooking Time	Recommended Quantity/ Menu
1	25 min.	6 cupcakes
2	28 min.	
3	30 min.	8 or 9-inch pan
4	32 min.	
5	34 min.	

INSTANT ACTION

Instant Action allows you to cook or reheat many of your favorite foods by touching just one pad.

・Suppose you want to reheat 1 cup of beverage.

PROCEDURE

1 Select desired setting. Touch **BEVERAGE** 2 times or hold down until the desired quantity appears.

x 2

.

2 Touch **START**.

NOTE:

1. To increase quantity, touch chosen pad until number in display is same as desired quantity to cook. Ex: touch **FRESH VEGETABLES** pad twice for 2 cups of fresh vegetables. More or less food than the quantity listed in the chart should be cooked following the guidelines in any microwave cookbook.
2. Instant Action can be programmed with More or Less Time Adjustment. See page 21.
3. The final cooking result will vary according to the food condition (e.g. initial temperature, shape, quality). Check food for temperature after cooking. If additional time is needed, continue to cook manually.
4. After cooking is complete the cooling fan will continue working for a short time to lower the temperature of the electrical and mechanical parts.

INSTANT ACTION CHART

FOOD	AMOUNT	PROCEDURE
REHEAT: Casserole	1 - 2 cups	Use to reheat refrigerated canned or homemade pasta with sauce or other cooked casserole. For room temperature pasta or casserole, use Less option. For pasta without sauce double the quantity per setting. For example, measure 2 cups of cooked noodles and program for 1 cup. Cover with lid or plastic wrap. After cooking, stir and let stand, covered, 2 to 3 minutes.
REHEAT: Dinner Plate	1 plate	Use to reheat precooked foods from the refrigerator. Place meaty portions and bulky vegetables to outside of plate. Cut large items like baked potatoes in smaller pieces. Flatten foods such as mashed potatoes and other dense foods. Cover with lid or plastic wrap. ONE PLATE ONLY. After cooking, check that food is very hot throughout and that the bottom center of the plate is very hot. If not, continue heating using time and power level. Allow to stand, covered, 1 to 2 minutes.
	1 Small	Touch **REHEAT** once for a smaller amount of food on a dinner plate. [1] will appear in the display.
	1 Regular	Touch **REHEAT** twice for a regular amount of food on a dinner plate. [2] will appear in the display.

INSTANT ACTION CHART (continued)

FOOD	AMOUNT	PROCEDURE
BEVERAGE	.5 - 2 cups	This setting is good for restoring cooled beverage to a better drinking temperature. Stir liquid briskly before and after heating to avoid "eruption". You can reheat .5 cup, 1 cup, 1.5 cups and 2 cups beverage by touching **BEVERAGE**.
Frozen Entrees	3-10 oz.	Use for frozen, convenience foods. It will give satisfactory results for most brands. You may wish to try several and choose your favorite. Remove package from outer wrapping and follow package directions for covering. After cooking, let stand, covered, for 1 to 3 minutes.
	3-6 oz.	Touch **FROZEN ENTREES** once for packages weighing 3-6 oz. [3- 6] will appear in the display.
	7-10 oz.	Touch **FROZEN ENTREES** twice for packages weighing 7-10 oz. [7- 10] will appear in the display.
Fresh Vegetables	1- 2 cups	For beans, carrots, corn and peas, add 1 tablespoon of water per cup. For broccoli, Brussels sprouts, cabbage and cauliflower, cook immediately after washing with no additional water. Cover with a glass lid. If you like tender crisp vegetables, double measured quantity per setting. For example, use 2 cups of zucchini but touch **FRESH VEGETABLES** only once. After cooking, remove from oven, stir, cover and let stand 3 to 5 minutes before serving.

EXPRESS DEFROST

Express Defrost automatically defrosts all the foods shown in the EXPRESS DEFROST CHART below.

You can defrost .5 lb, .7 lb, 1.0 lb, 1.3 lb, 1.5 lb, 1.7 lb and 2.0 lb food by touching **EXPRESS DEFROST**. (Ex: touch twice for .7 lb.)

- Suppose you want to defrost a 2.0 pound steaks.

PROCEDURE	
1 Enter desired weight by touching EXPRESS DEFROST. (Ex: Touch 7 times for 2.0 lb.)	x 4
2 Touch START.	
3 After the 1st stage, open the door, turn steak over and shield any warm portions. Close the door. Touch **START** .	
4 After the 2nd stage, open the door and shield any warm portions. Close the door. Touch **START** .	
5 After defrost cycle ends, cover and let stand as indicated in chart below.	

NOTE:

1. Express Defrost can be programmed with More or Less Time Adjustment.
See page 21.

2. To defrost other foods or foods above or below the weights allowed in the DEFROST CENTER CHART, use time and 30% power. See MANUAL DEFROST on page 19.

EXPRESS DEFROST CHART

FOOD	AMOUNT	PROCEDURE
Ground Meat	.5 - 2.0 lb	Pull apart and remove any thawed pieces after each stage. Let stand, covered, for 5 to 10 minutes.
Steaks/Chops	.5 - 2.0 lb	After each stage, rearrange and if there are warm or thawed portions, shield with small flat pieces of aluminum foil. Remove any meat that is nearly defrosted. Let stand, covered, for 10 to 20 minutes.
Boneless Poultry	.5 - 1.5 lb	Use boneless breast of chicken or turkey. After each stage, if there are warm or thawed portions, rearrange or remove. Let stand, covered, for 10 to 20 minutes.
Bone-in Poultry	.5 - 3.0 lb	Arrange pieces with meatiest portions toward outside of glass dish or microwave safe rack. After each stage, if there are warm or thawed portions, rearrange or remove. Let stand, covered, for 10 to 20 minutes.

NOTE: Check foods when oven signals. After final stage, small sections may still be icy. Let stand to continue thawing. Do not defrost until all ice crystals are thawed.
Shielding prevents cooking from occurring before the center of the food is defrosted. Use small smooth strips of aluminum foil to cover edges and thinner sections of the food.

MANUAL DEFROST

If the food that you wish to defrost is not listed on the EXPRESS DEFROST CHART or is above or below the limits in the “Amount” column on the EXPRESS DEFROST CHART, you need to defrost manually.

You can defrost any frozen food, either raw or previously cooked, by using 30% Power Level. See page 10. Estimate defrosting time and press MICRO 4 times for 30% when you select the power level.

For either raw or previously cooked frozen food the rule of thumb is approximately 5 minutes per pound. For example, defrost 5 minutes for 1 pound of frozen spaghetti sauce.

Always stop the oven periodically to remove or separate the portions that are defrosted. If food is not defrosted at the end of the estimated defrosting time, program the oven in 1 minute increments at 30% until totally defrosted.

When using plastic containers from the freezer, defrost only long enough to remove from the plastic in order to place in a microwave-safe dish.

OTHER CONVENIENT FEATURES

MULTIPLE SEQUENCE COOKING

Your oven can be programmed for up to 3 automatic cooking sequences, switching from one power level setting to another automatically.

Sometimes cooking directions tell you to start on one power level and then change to a different power level. Your oven can do this automatically.

- Suppose you want to cook for 5 minutes at MICRO 70% and then continue to cook for 10 minutes at GRILL1.

PROCEDURE

1 First touch **MICRO** twice for 70% power. Then enter cooking time.

X 2

2 Touch **GRILL** once for GRILL1. Then enter second cooking time.

X 1

3 Touch **START** .

NOTE:

1. You can program BAKE for the first sequence only.

.

2. If you wish to know power level, simply touch **POWER LEVEL** . As long as your finger is touching **POWER LEVEL** , the power level will be displayed.

MINUTE PLUS

Minute Plus allows you to cook for a minute at 100% by simply touching **MINUTE PLUS** . You can also extend cooking time in multiples of 1 minute by repeatedly touching **MINUTE PLUS** during manual cooking.

- Suppose you want to heat a cup of soup for one minute at 100%.

PROCEDURE

1 Touch **MINUTE PLUS** pad.

NOTE:

. To use Minute Plus for 100% cooking, touch pad within 3 minutes after touching **STOP/CLEAR**, or closing the door (appearing the time of day or " : ").

EXTEND THE COOKING TIME

After cooking you can extend the cooking time with the last setting.

The maximum extending time is 10 minutes.

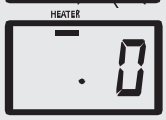
- Suppose you want to extend 5 minutes after the GRILL 1 cooking.

PROCEDURE **DISPLAY**

After cooking, End is flashing in the display.

Open and close the door.

1



Enter desired extending time by rotating the TIME controller.

2

Touch **START**.

NOTE:

1. To use Extend function, rotate the TIME controller within 3 minutes after closing the door.
2. You can extend the cooking time using the MINUTE PLUS, which extends cooking time in multiples of 1 minute. Touch the MINUTE PLUS within 3 minutes after closing the door. After touching the MINUTE PLUS, the cooking starts automatically.
3. Extend function can be used with SPECIAL FEATURES.

TIMER

- Suppose you want to time a 3-minute long distance phone call.

PROCEDURE

1 Enter time.

2 Touch **TIMER** .

MORE OR LESS TIME ADJUSTMENT

Should you discover that you like any of the Instant Action or Express Defrost settings slightly **more** done, rotate the **TIME** controller **clockwise** until desired Time bar appears before touching **START**.

Should you discover that you like any of the Instant Action or Express Defrost settings slightly **less** done, rotate the **TIME** controller **counterclockwise** until desired Time bar appears before touching **START** .

.

CHILD LOCK

The Child Lock prevents unwanted oven operation such as by small children. The oven can be set so that the control panel is deactivated or locked. To set, touch **TIMER/CLOCK**, adjust TIME controller to 1and then touch the **START** and hold for three seconds. Should a button be touched, SAFE will appear in the display.

To cancel, touch **TIMER/CLOCK**, adjust TIME controller to 1 and **STOP/CLEAR** .

AUDIBLE SIGNAL ELIMINATION

If you wish to have the oven operate with no audible signals, touch **TIMER/CLOCK**, adjust TIME controller to 5 and then touch the **START** and hold for three seconds.

To cancel, touch **TIMER/CLOCK**, adjust TIME controller to 5 and **STOP/CLEAR** .

DEMONSTRATION MODE

To demonstrate, touch **TIMER/CLOCK**, adjust TIME controller to 0 and then touch the **START** and hold for 3 seconds.

SHO will appear in the display. Cooking operations and specific special features can now be demonstrated with no power in the oven. For example, touch **MINUTE PLUS** and the display will show 1.00 and count down quickly to End .

To cancel, touch **TIMER/CLOCK**,adjust TIME controller to 0 and **STOP/CLEAR** . If easier, unplug the oven from the electrical outlet and replug.

CLEANING AND CARE

Disconnect the power cord before cleaning or leave the door open to inactivate the oven during cleaning. Ensure the oven is completly cool before cleaning.

Exterior

The outside surface is painted. Clean the outside with mild soap and water; rinse and dry with a soft cloth. Wipe off the dust of the ventilation openings and power supply plug. Do not use any type of household or abrasive cleaner.

Door

Wipe the window on both sides with a damp cloth to remove any spills or spatters. Metal parts will be easier to maintain if wiped frequently with a damp cloth. Avoid the use of spray and other harsh cleaners as they may stain, streak or dull the door surface.

Touch Control Panel

Wipe the panel with a cloth dampened slightly with water only. Dry with a soft cloth. Do not scrub or use any sort of chemical cleaners. Close door and touch **STOP/CLEAR** .

Interior - after microwave cooking.

Cleaning is easy because little heat is generated to the interior surfaces; therefore, there is no baking and setting of spills or spattering. To clean the interior surfaces, wipe with a soft cloth and warm water. DO NOT USE ABRASIVE OR HARSH CLEANERS OR SCOURING PADS. For heavier soil, use baking soda or a mild soap; rinse thoroughly with hot water. NEVER SPRAY OVEN CLEANERS DIRECTLY ONTO ANY PART OF THE OVEN.

Interior - after grill, bake or automatic cookings.

Spatters may occur because of moisture and grease. Wash immediately after use with hot, soapy water. Rinse and polish dry. Harder to remove spatters may occur if oven is not thoroughly cleaned or if there is long time/high temperature cooking. If so, you may wish to purchase an oven cleaner pad with liquid cleaner within it--not a soap filled steel pad--for use on stainless or porcelain surfaces. Follow manufacturer's directions carefully and be especially cautious not to get any of the liquid cleaner in the perforations on the wall or ceiling or any door surfaces.

Rinse thoroughly and polish dry. After cleaning the interior thoroughly, residual grease may be removed from the interior ducts and heater by simply operating the oven on 400°F. for 20 minutes without food. Ventilate the room if necessary.

Waveguide Cover

The waveguide cover is made from mica so requires special care. Keep the waveguide cover clean to assure good oven performance. Carefully wipe with a damp cloth any food spatters from the surface of the cover immediately after they occur. Built-up splashes may overheat and cause smoke or possibly catch fire. Do not remove the waveguide cover.

Odor Removal

Occasionally, a cooking odor may remain in the oven. To remove, combine 1 cup water, grated peel and juice of 1 lemon and several whole cloves in a 2-cup glass measuring cup. Boil for several minutes using 100% power. Allow to set in oven until cool. Wipe interior with a soft cloth.

Turntable/Turntable Support

The turntable and turntable support can be removed for easy cleaning. Remove the turntable support carefully to prevent breaking the top heater. Wash them in mild, sudsy water; for stubborn stains use a mild cleanser and a non-abrasive scouring sponge. They are also dishwasher-proof. Use upper rack of dishwasher. The turntable motor shaft is not sealed, so excess water or spills should be wiped up immediately.

SERVICE CALL CHECK

Please check the following before calling for service:

1. Place one cup of water in a glass measuring cup in the oven and close the door securely. Operate the oven for one minute at MICRO 100%.

   A Does the oven light come on? YES _____ NO _____

   B Does the cooling fan work? YES _____ NO _____
   (Put your hand over the rear ventilating openings.)

   C Does the turntable rotate? YES _____ NO _____
   (It is normal for the turntable to turn in either direction.)

   D Is the water in the oven warm? YES _____ NO _____

2. Remove water from the oven and operate the oven for 5 minutes at BAKE 400°F.
   A Do HEATER and COOK indicators light? YES _____ NO _____
   B After the oven shuts off, is inside of the oven hot? YES _____ NO _____

If "NO" is the answer to any of the above questions, please check electrical outlet, fuse and/or circuit breaker. If they are functioning properly, CONTACT YOUR NEAREST SHARP AUTHORIZED SERVICER. A microwave oven should never be serviced by a "do-it-yourself" repair person.

NOTE: 1. If time appearing in the display is counting down very rapidly, check DEMONSTRATION MODE on page 21 and cancel.

2. If the oven is set for more than 20 minutes at MICRO 100 percent power level, after the first 20 minutes the power level will automatically adjust itself to 70 percent power to avoid overcooking.

SPECIFICATIONS

AC Line Voltage:	Single phase 120V, 60Hz, AC only
AC Power Required: Microwave Grill/Bake	 980 W 8.5A 1300W 10.8 A
Output Power: Microwave Top heater Bottom heater	 650 W* (IEC Test Procedure) 760 W 510 W
Frequency:	2450 MHz
Outside Dimensions:	17-3/4"(W) x 11-1/2"(H) x 15-1/4"(D)
Cavity Dimensions:	11-1/4"(W) x 5-7/8"(H) x 11-5/8"(D)
Oven Capacity	Approx. 0.5 Cu. Ft.
Cooking Uniformity:	Turntable system
Weight:	Approx. 31lb

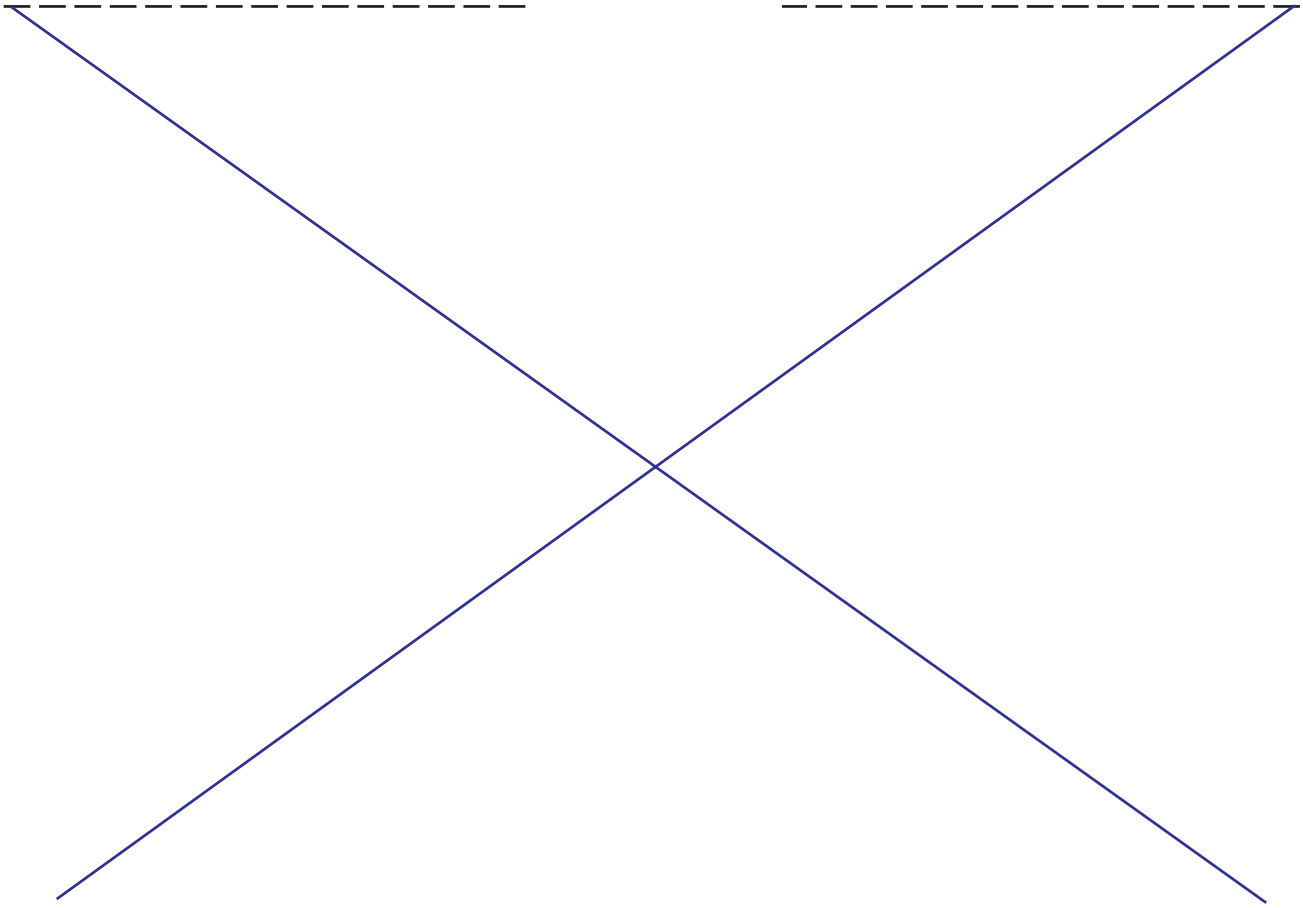
* The International Electrotechnical Commission's standardized method for measuring output wattage. This test method is widely recognized.

In compliance with standards set by:

FCC – Federal Communications Commission Authorized.

DHHS – Complies with Department of Health and Human Services (DHHS) rule, CFR, Title 21, Chapter I, Subchapter J.

– This symbol on the nameplate means the product is listed by Underwriters Laboratories, Inc.



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