

SHARP®

**MODEL
R-830B**

**DRAFT
MAY 21, 2014**

C O N V E C T I O N

M I C R O W A V E O V E N



O P E R A T I O N M A N U A L

Carousel®

Read all instructions carefully before using the oven.

FOR CUSTOMER ASSISTANCE

To aid in reporting this microwave oven 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.

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

ACCESSORIES and COOKBOOK

TO WRITE:

Sharp Electronics Corporation

Attn: Customer Assistance Center

Sharp Plaza Blvd.

Memphis, TN 38193

TO ACCESS INTERNET: www.sharppusa.com

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.

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.

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INFO DISPLAY COOKING SYSTEM

Thank you for buying a Sharp Microwave Oven. Your new oven has an "Information Display System" which offers you step-by-step instructions to easily guide you through each feature. Your oven also has a HELP pad for instructions on using Auto Start, Demo Mode, Child Lock, Info on pads, Help and Automatic Operations. We strongly recommend however that you read this operation manual thoroughly before operating your oven, paying particular attention to the safety warnings and special notes.

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-830B 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.sharppusa.com.
SAVE THE PROOF OF PURCHASE AS IT IS NEEDED SHOULD YOUR OVEN EVER REQUIRE WARRANTY SERVICE.

PRODUCT INFORMATION CARD

The Product information card 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 page 2.
3. This appliance must be grounded. Connect only to properly grounded outlet. See **“ELECTRICAL GROUNDING INSTRUCTIONS”** on page 6.
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 or 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:

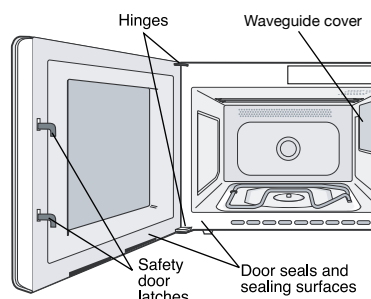
 - a. Do not overheat the liquid.
 - b. Stir the liquid both before and halfway through heating it.
 - c. Do not use straight-sided containers with narrow necks. Use a wide-mouthed container.
 - d. After heating, allow the container to stand in the microwave oven at least for 20 seconds before removing 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.

SAVE THESE INSTRUCTIONS

INSTALLATION INSTRUCTIONS

UNPACKING AND EXAMINING YOUR OVEN

1. Remove all packing materials from inside the oven cavity; however, **DO NOT REMOVE THE WAVEGUIDE COVER**, which is located on the ceiling in the oven cavity. Read enclosures and **SAVE** the Operation Manual.
2. Remove the feature sticker from the outside of the door, if there is one. 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 your 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. Allow at least 2 inches on the sides, top and at the rear of the oven for air circulation. Be sure to position oven so that the rear cannot be touched inadvertently.

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.

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.

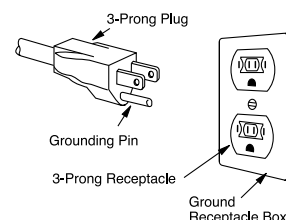
Be careful not to drape the cord over the countertop or table where it can be pulled on by children or tripped over accidentally.

- 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.

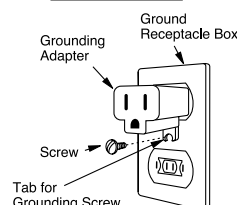
Radio or TV Interference

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.

Permanent and Correct Installation



Temporary Use



INFORMATION YOU NEED TO KNOW

ABOUT YOUR OVEN

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

A good microwave cookbook is a valuable asset. Check it for microwave cooking principles, techniques, hints and recipes.

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. 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.

The fan will automatically start when heat rises from range surface units or burners and when convection, high mix, low mix or the broil settings are used.

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. Ventilation openings must not be blocked.

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

Your oven is rated 900 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 or use special POPCORN pad.	- 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 disposable bottles. - Heat bottles with nipples on. - Heat baby food in original jars.
General	- Cut baked goods with filling after heating to release steam and avoid burns. - Stir liquids briskly before and after heating 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.

INFORMATION YOU NEED TO KNOW

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 it is approved for microwave oven use.

- 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 microwave oven is not a toy. See pages 20 for Child Lock feature.

INFORMATION YOU NEED TO KNOW

ABOUT UTENSILS AND COVERINGS

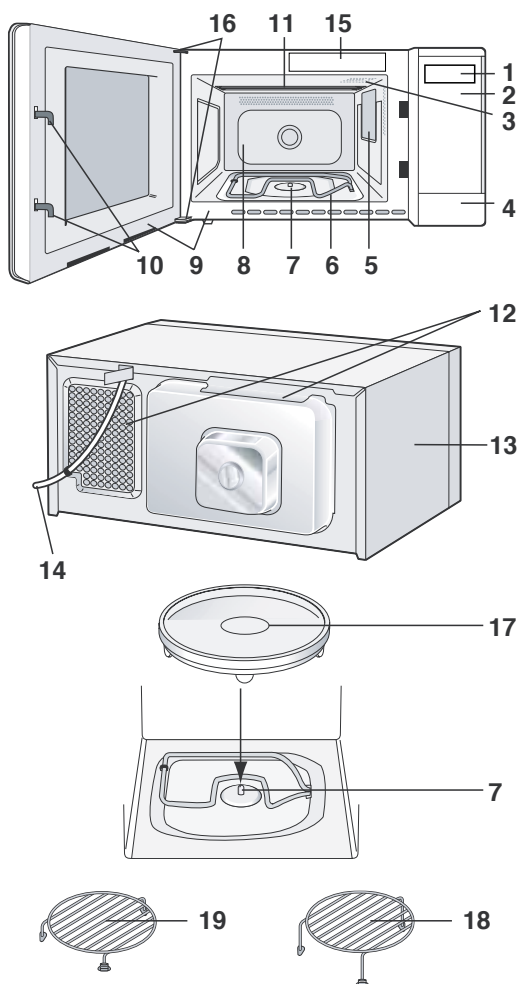
It is not necessary to buy all new cookware. Many pieces already in your kitchen can be used successfully in your new microwave convection oven. The chart below will help you decide what utensils and coverings should be used in each mode.

UTENSILS AND COVERINGS	MICROWAVE ONLY	CONVECTION BROIL, SLOW COOK	HIGH MIX/LOW MIX
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 wall of oven.	Yes For shielding.	Yes For shielding.
Aluminum containers	Yes Can be used if $\frac{3}{4}$ filled with food. Keep 1 inch away from walls and do not cover with lid.	Yes Broil - No cover.	Yes Can be used if $\frac{3}{4}$ filled with food. Keep 1 inch away from walls and do not cover with foil.
Browning dish	Yes Do not exceed recommended preheating time. Follow manufacturer's directions.	No	No
Glass ceramic (Pyroceram®)	Yes Excellent.	Yes Excellent.	Yes Excellent.
Glass, heat-resistant	Yes Excellent.	Yes Excellent.	Yes Excellent.
Glass, non-heat-resistant	No	No	No
Lids, glass	Yes	Yes Broil - No cover.	Yes
Lids, metal	No	Yes Broil - No cover.	No
Metal cookware	No	Yes	Yes Do not use metal coverings.
Metal, misc: dishes with metallic trim, etc. Metal twist-ties.	No	No	No
Oven cooking bags	Yes Good for large meats or foods that need tenderizing. DO NOT use metal twist ties	Yes Broil - No cover.	Yes Do not use metal coverings.
Paper plates	Yes For reheating.	No	No
Paper towels	Yes To cover for reheating and cooking. Do not use recycled paper towels which may contain metal fillings.	No	No
Paper, ovenable	Yes	Yes For temperatures up to 400°F. Do not use for broiling.	Yes For temperatures up to 400°F.
Microwave-safe plastic containers	Yes Use for reheating and defrosting. Follow manufacturer's directions.	No	No
Plastic, Thermoset®	Yes	Yes Are heat resistant up to 425°F. Do not use for broiling.	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	No
Pottery, stoneware, porcelain	Yes Check manufacturer's recommendation for being microwave-safe.	Yes	Yes Must be microwave-safe and ovenable.
Styrofoam	Yes For reheating	No	No
Wax paper	Yes Good covering for cooking and reheating.	No	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	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.

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. Sharp is not responsible for any damage to the oven when accessories are used.

PART NAMES



OVEN:

1. Liquid crystal display
2. Control panel
3. Oven lamp
4. Door opening button
5. Waveguide cover (DO NOT REMOVE)
6. Bottom grill heating element
7. Turntable motor shaft
8. Oven cavity
9. Door seals and sealing surfaces
10. Door latches
11. Top grill heating element
12. Ventilation openings
13. Outer cabinet
14. Power cord
15. Menu label
16. Door hinges

ACCESSORIES:

17. Turntable
18. High rack
19. Low rack

- Place the turntable on to the turntable motor shaft, ensuring it is located firmly.
- To avoid turntable damage, ensure dishes or containers are lifted clear of the turntable rim when removing them from the oven.
- The racks are for Grill, Mix, Convection and recommended automatic operations.

Never touch the grills when they are hot.

NOTES:

- The waveguide cover is fragile. Care should be taken when cleaning inside the oven to ensure that it is not damaged.
- After cooking fatty foods without a cover, always clean the cavity and especially the grill heating elements thoroughly, these must be dry and free from grease. Built-up grease may overheat and begin to smoke or catch fire.
- Always operate the oven with the turntable fitted correctly. This promotes thorough, even cooking.
- A badly fitted turntable may rattle, may not rotate properly and could cause damage to the oven.
- The turntable rotates clockwise or anti-clockwise. The rotary direction may change each time you start the oven. This does not affect cooking performance.

Warning:

The accessories will become very hot whenever the top heater, bottom heater or convection symbols are lighted in the display and use thick oven mittens when inserting/removing the food or turntable from the oven to PREVENT BURNS.

TOUCH CONTROL PANEL

The operation of the oven is controlled by pressing the appropriate pads arranged on the surface of the control panel. An entry signal tone should be heard each time you press the control panel to make a correct entry. In addition the oven will beep for approximately 2 seconds at the end of the cooking cycle, or 4 times when a cooking procedure is required.

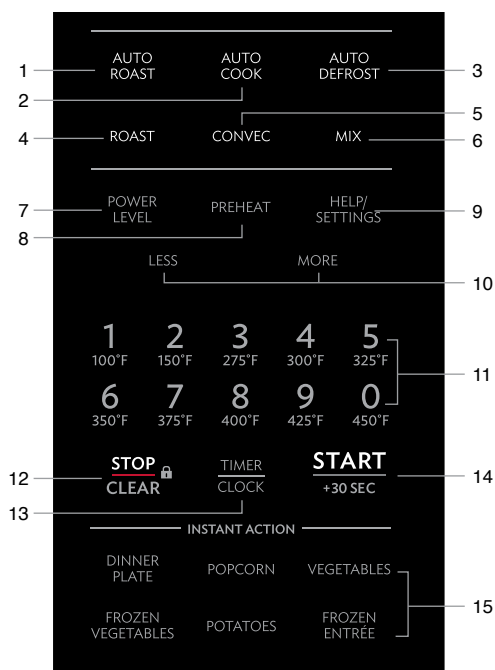
CONTROL PANEL DISPLAY



1. **TOP GRILL SYMBOL** - It will appear when setting a program using the top element, or when the top element is in use.
2. **BOTTOM GRILL SYMBOL** - It will appear when setting a program using the bottom element, or when the bottom element is in use.

3. **CONVECTION SYMBOL** - It will appear when setting a program using the convection mode, or when in a convection cooking.
4. **MICROWAVE SYMBOL** - It will appear when setting a program using the microwave mode, or when in a microwave cooking.
5. **MORE (▲)/LESS (▼) indicators** - They will appear when setting the MORE or LESS function.
6. **HELP indicator** - It will appear when setting the HELP feature or an automatic operation.
7. **COOK indicator** - It will light up when cooking.

TOUCH CONTROL PANEL



1. **AUTO ROAST** - Press to select Auto Roast mode.
2. **AUTO COOK** - Press to select 7 popular menus.
3. **AUTO DEFROST** - Press to defrost meat by entering weight.
4. **ROAST** - Press to select roast cooking.

5. **CONVEC** - Press to select convection cooking.
6. **MIX** - Press to select mix cooking.
7. **POWER LEVEL** - Press to select microwave power setting. If not pressed, 100% is automatically selected.
8. **PREHEAT** - Press to preheat the oven prior to cooking.
9. **HELP/SETTINGS** - Press to select auto start, audible signal elimination, demonstration modes or info on pads. Press to obtain cooking information.
10. **MORE, LESS** - Press to adjust the doneness of food in 30 seconds increments during cooking or to increase/decrease 10% the time whilst programming the automatic operations.
11. **NUMBER AND TEMPERATURE** - Press to enter cooking times, clock time, convection temperature, weight or quantity of food.
12. **STOP/CLEAR** - Press to clear during programming. Press once to stop operation of oven during cooking; press twice to cancel cooking program. Press and hold to set or reset Child Lock
13. **TIMER/CLOCK** - Press to set timer or clock time.
14. **START/+30 SEC** - Press once to cook for 30 seconds at 100% power level or increase by 30 seconds multiples each time this pad is pressed during manual cooking. Press to start oven after setting programs.
15. **INSTANT ACTION** - Press to cook or reheat 6 popular menus.

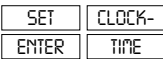
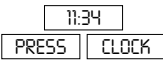
BEFORE OPERATING

GETTING STARTED

- 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 display will show SHARP SIMPLY THE BEST PRESS CLEAR THEN PRESS CLOCK.
 2. Press the STOP/CLEAR pad. : will appear.
 3. Press CLOCK pad.

TO SET THE CLOCK

- Suppose you want to enter the correct time of day 11:34 (A.M. or P.M.).

PROCEDURE	DISPLAY
1. Press TIMER/CLOCK and number 2 pads.	
2. Enter the correct time of day by pressing the numbers in sequence 1 1 3 4 . The dots (:) will flash on and off.	
3. Press TIMER/CLOCK pad again.	

This is a 12 hour clock. If you attempt to enter an incorrect clock time, ERROR PRESS CLEAR THEN REPROGRAM will appear in the display. Press the STOP/CLEAR pad and re-enter the time.

* If the electrical power supply to your microwave oven should be interrupted, the display will intermittently show SHARP SIMPLY THE BEST PRESS CLEAR THEN PRESS CLOCK after the power is reinstated. If this occurs during cooking, the program will be erased. The time of day will also be erased. Simply press STOP/CLEAR pad and reset the clock for the correct time of day.

STOP/CLEAR

Press the STOP/CLEAR pad to:

1. Erase if you make a mistake during programming.
2. Cancel kitchen 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.

MICROWAVE OPERATION

MICROWAVE TIME COOKING

Your oven can be programmed for 99 minutes 99 seconds (99.99). Always enter the seconds after the minutes, even if they are both zeros.

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

PROCEDURE	DISPLAY
1. Enter cooking time 5 0 0 .	5.00
2. Press START/+30 SEC pad.	5.00

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

PROCEDURE	DISPLAY
1. Press POWER LEVEL pad 8 times.	P-30 ENTER COOKING TIME
2. Enter cooking time by pressing the numbers in sequence 5 0 0 .	5.00 PRESS START
3. Press START/+30 SEC pad.	5.00

TO SET POWER LEVEL

There are eleven 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 a microwave cookbook or recipes for specific recommendations.

TOUCH POWER LEVEL PAD NUMBER OF TIMES FOR DESIRED POWER	PERCENTAGE OF POWER	DISPLAY
POWER LEVEL x 1	100%	HIGH
POWER LEVEL x 2	90%	P-90
POWER LEVEL x 3	80%	P-80
POWER LEVEL x 4	70%	P-70
POWER LEVEL x 5	60%	P-60
POWER LEVEL x 6	50%	P-50
POWER LEVEL x 7	40%	P-40
POWER LEVEL x 8	30%	P-30
POWER LEVEL x 9	20%	P-20
POWER LEVEL x 10	10%	P-10
POWER LEVEL x 11	0%	P-0

MICROWAVE OPERATION

AUTO DEFROST

The AUTO DEFROST feature allows you to easily defrost many types of meat simply by entering their weight.

- Suppose you want to defrost 1 pound of ground beef

PROCEDURE	DISPLAY
1. Press AUTO DEFROST pad.	SELECT MENU NUMBER
2. Press number 3 for ground beef.	GROUND BEEF ENTER WEIGHT
3. Press number 1 0 to enter the weight (in pounds and tenths of a pound).	1.0 Lb PRESS START
4. Press START/+30 SEC pad.	5.45

PROCEDURE	DISPLAY
The oven will stop and directions will be displayed. Follow the indicated message.	
5. After the 1st stage, open the door. Turn over and shield any warm portions. Close the door. Press START/+30 SEC pad.	REMOVE DE- FROSTED FOOD TURN OVER AND SHIELD WARM EDGES PRESS START
After defrost cycle ends, cover and let stand as indicated in chart below.	

AUTO DEFROST CHART

FOOD	AMOUNT	PROCEDURE
1. Steak & Chops	0.7 - 2.0 lbs	Halfway through the defrosting process the oven will beep 4 times and stop. Remove defrosted food, turn over and shield warm edges. Press START/+30 SEC to resume defrosting. Let stand covered with foil 5 to 50 minutes.
2. Poultry	0.7 - 2.0 lbs	Halfway through the defrosting process the oven will beep 4 times and stop. Remove defrosted food, turn over and shield warm edges. Press START/+30 SEC to resume defrosting. Let stand covered with foil 5 to 50 minutes.
3. Ground Beef	0.5 - 2.0 lbs	Halfway through the defrosting process the oven will beep 4 times and stop. Remove defrosted food, turn over and shield warm edges. Press START/+30 SEC to resume defrosting. Let stand covered with foil 5 minutes.
4. Chicken Pieces	0.7 - 2.0 lbs	Halfway through the defrosting process the oven will beep 4 times and stop. Remove defrosted food, turn over and shield warm edges. Press START/+30 SEC to resume defrosting. Let stand covered with foil 5 to 50 minutes.
5. Roasts (Beef/Lamb/Pork)	0.7 - 2.0 lbs	Halfway through the defrosting process the oven will beep 4 times and stop. Remove defrosted food, turn over and shield warm edges. Press START/+30 SEC to resume defrosting. Let stand covered with foil 5 to 50 minutes.

INSTANT ACTION

Press once to cook 6 popular menus.

- DINNER PLATE
- POPCORN
- VEGETABLES
- FROZEN VEGETABLES
- POTATOES
- FROZEN ENTRÉE

- Suppose you want to cook 2 cups of soft fresh vegetables like broccoli.

PROCEDURE	DISPLAY
Press VEGETABLES pad twice.	2 CUPS FRESH VEGGIES
The timer begins to count down. When the timer reaches 0, LET STAND COVERED 1 TO 5 MINUTES THEN STIR will be displayed.	

MICROWAVE OPERATION

NOTES

1. **ERROR** will be displayed if: More or less than the quantity or weight of foods suggested in the menu guides are programmed. To clear, press the **STOP/CLEAR** pad and reprogram.
2. Carefully follow the details provided in each **MENU CHART** to achieve the best result. If the details are not followed carefully the food may be overcooked, undercooked or **ERROR** may be displayed.
3. Food weighing more or less than the quantity or weight listed in each **MENU CHART** should not be cooked with the automatic menus or **Instant Action**.
4. When entering the weight of the food, round off the weight to the nearest tenth of a pound. For example 1.34 pounds becomes 1.3 pounds and 1.76 pounds becomes 1.8 pounds.
5. To change the final cooking result from the standard setting, press the **MORE** or **LESS** pad prior to pressing the **START/+30 SEC** pad or within 2 seconds after pressing the **INSTANT ACTION** pad.
6. The final cooking result will vary according to the food condition (e.g. initial temperature, shape, quality). Check the food after cooking and if necessary continue cooking manually.
7. For hard vegetables like carrots, use the **HARD VEGETABLES** option in the **AUTO COOK** menu.

INSTANT ACTION CHART

FOOD	AMOUNT	PROCEDURE
DINNER PLATE	1 serving	Place on the low rack and cover with plastic wrap. Touch DINNER PLATE once. Let stand covered 2 minutes.
POPCORN	1 package	Use only popcorn packaged for microwave oven use. Try several brands to decide which you like the best. Do not try to pop un-popped kernels. Use low rack and microwave safe plate.
	2.7 - 3.3 oz (Regular)	Touch POPCORN once for regular size bags.
	1.1 - 1.6 oz (Mini)	Touch POPCORN twice for mini size bags.
VEGETABLES (Soft)	1 - 4 cups	Place on turntable and cover with a lid or plastic wrap. Let stand 1 to 5 minutes then stir. Touch VEGETABLES once for 1 cup. Touch VEGETABLES twice for 2 cups. Touch VEGETABLES three times for 3 cups. Touch VEGETABLES 4 times for 4 cups.
FROZEN VEGETABLES	1 - 4 cups	Place on low rack and cover with a lid or plastic wrap. Let stand 1 to 5 minutes then stir. Touch FROZEN VEGETABLES once for 1 cup. Touch FROZEN VEGETABLES twice for 2 cups. Touch FROZEN VEGETABLES three times for 3 cups. Touch FROZEN VEGETABLES 4 times for 4 cups.
POTATOES	1 - 4 potatoes	Place on turntable and pierce each potato twice on each side. (Average weight of 7 to 10 ounces). Let potatoes stand covered in foil 3 to 10 minutes. Touch POTATOES once for 1 potato. Touch POTATOES twice for 2 potatoes. Touch POTATOES three times for 3 potatoes. Touch POTATOES four times for 4 potatoes.
FROZEN ENTRÉE	4 size options	Do not cover while cooking, always use the low rack. Touch FROZEN ENTRÉE once for 6 to 8 ounces. Touch FROZEN ENTRÉE twice for 9 to 11 ounces. Touch FROZEN ENTRÉE three times for 12 to 14 ounces. Touch FROZEN ENTRÉE four times for 15 to 17 ounces. Let stand covered 1 to 5 minutes then stir.

CONVECTION/AUTOMATIC MIX OPERATION

CONVECTION COOKING

During convection heating, hot air is circulated throughout the oven cavity to brown and crisp foods quickly and evenly. This oven can be programmed for ten different convection cooking temperatures for up to 99 minutes, 99 seconds.

The oven should not be used without the turntable in place, and it should never be restricted so that it cannot rotate. You may remove the turntable when preheating the oven and when preparing food to be cooked directly on the turntable.

WARNING:

All of the oven parts, including the bottom heater as well as the rack and cooking containers, may become very hot. Use caution when removing any item from the oven. Use heavy potholders or oven mitts to PREVENT BURNS.

TO COOK WITH CONVECTION (NO PREHEAT)

- Suppose you want to convection cook for 10 minutes at 350°F.

PROCEDURE	DISPLAY
1. Press CONVEC pad.	SELECT CONVEC TEMP
2. Press number [6] for 350°F.	350 F ENTER COOKING TIME
3. Enter cooking time by pressing the numbers in sequence [1][0][0][0].	10.00 PRESS START
4. Press START/+30 SEC pad.	10.00

NOTE: If you wish to know the programmed oven temperature, simply touch the CONVEC pad. As long as your finger is touching the CONVEC pad, the programmed oven temperature will be displayed.

TO PREHEAT AND COOK WITH CONVECTION

Your oven can be programmed to combine preheating and convection cooking operations. You can preheat to the same temperature as the convection temperature or change to a higher or lower temperature.

- Suppose you want to preheat to 350°F, and then cook 25 minutes at 375°F. convection.

PROCEDURE	DISPLAY
1. Press PREHEAT pad.	SELECT PREHEAT TEMP
2. Press number [6] for 350°F.	350 F PRESS START OR CONVEC
3. Press CONVEC pad.	SELECT CONVEC TEMP
4. Press number [7] for 375°F.	375 F ENTER COOKING TIME
5. Enter cooking time by pressing the numbers in sequence [2][5][0][0].	25.00 PRESS START
6. Press START/+30 SEC pad.	PREHEAT
PREHEAT will be displayed until the oven reaches the programmed preheat temperature then, a signal will sound 4 times*. The oven will stop, and ADD FOOD will be displayed. Follow the indicated message. Open the door, place food in the oven, close the door.	
7. Press START/+30 SEC pad.	25.00

- * 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:

- To program only PREHEAT, touch the START/+30 SEC pad after step 2. Preheating will start. When the oven reaches the programmed temperature, follow the indicated message.
- To preheat and cook with the same temperature, enter same temperature in steps 2 and 4. Touch START/+30 SEC pad.

CONVECTION / AUTOMATIC MIX OPERATION

AUTOMATIC MIX COOKING

This oven has four pre-programmed settings that make it easy to cook with both convection heat and microwave automatically.

Most foods are well suited to mix microwave cooking

with either the Top Grill or Convection. The marriage of these two cooking methods produces juicy meats, moist and tender cakes and fine textured breads, all with just the right amount of browning and crispness.

MIX COOKING MODE	OVEN	COOKING POWER
High Mix Top Grill	Top Element	30% Top Grill and 70% Microwave
Low Mix Top Grill	Top Element	50% Top Grill and 50% Microwave
High Mix Convection	100° to 450° F	70% Convection and 30% Microwave
Low Mix Convection	100° to 450° F	90% Convection and 10% Microwave

- Suppose you want to cook with microwave power 50% of the time and roast with the top grill the other 50% for a total of 15 minutes.

PROCEDURE	DISPLAY
1. Press MIX pad twice .	LOW MIX TOP GRILL ENTER COOKING TIME
2. Enter cooking time by pressing the numbers in sequence 1 5 0 0 .	15.00 PRESS START
3. Press START/+30 SEC pad.	15.00

- Suppose you want to cook with microwave power 10% of the time and convection cook at 350°F the remainder of the time for a total of 12 minutes and 30 seconds.

PROCEDURE	DISPLAY
1. Press MIX pad 4 times .	LOW MIX CONVEC SELECT CONVEC TEMP
2. Press number 6 for 350°F.	350 F ENTER COOKING TIME
3. Enter cooking time by pressing the numbers in sequence 1 2 3 0 .	12.30 PRESS START
4. Press START/+30 SEC pad.	12.30

ROASTING

This oven has three roasting modes, select the desired roast mode by pressing the ROAST pad.

ROASTING COOKING MODE	ROAST PAD
Top Element Only	Once
Bottom Element Only	Twice
Top and Bottom Elements	Three times

- Suppose you want to roast for 20 minutes using the top and bottom elements.

It is not necessary to preheat for roasting.

PROCEDURE	DISPLAY
1. Press ROAST pad 3 times .	TOP AND BOTTOM ELEMENT ENTER COOKING TIME
2. Enter cooking time by pressing the numbers in sequence 1 5 0 0 .	15.00 PRESS START
3. Press START/+30 SEC pad.	15.00

CONVECTION / AUTOMATIC MIX OPERATION

AUTO ROAST

Press to select from 6 automatic roasting menu items. These are well suited to mix the convenience of microwave cooking with convection and roasting. The marriage of these cooking methods produces juicy meats, with just the right amount of browning and crispness.

- Suppose you want to roast 2.2 pounds of chicken.

PROCEDURE	DISPLAY
1. Press AUTO ROAST pad.	SELECT MENU NUMBER
2. Press number 3 for roast chicken.	ROAST CHICKEN ENTER WEIGHT
3. Press number 2 2 to enter the weight (in pounds and tenths of a pound).	2.2Lb PRESS START
4. Press START/+30 SEC pad.	36.12
5. Halfway the oven will beep 4 times and stop cooking, open the door. Turn chicken over. Close the door. Press START/+30 SEC pad.	PRESS START
6. Press START/+30 SEC pad.	18.06

HELPFUL HINT:

You can get a cooking hint whenever HELP is lit in the display.

WARNING:

The oven cavity, door, turntable, racks, dishes and especially bottom heater will become very hot, use

thick oven mittens when inserting/removing the food or turntable from the oven to PREVENT BURNS.

NOTES

1. After cooking completion and removing food, there is a case that the cooling fan remains on and NOW COOLING is displayed until the oven cavity has cooled.
2. ERROR will be displayed if: More or less than the quantity or weight of foods suggested in the menu guides are programmed. To clear, press the STOP/CLEAR pad and reprogram.
3. Carefully follow the details provided in each MENU GUIDE to achieve the best result. If the details are not followed carefully the food may be overcooked, undercooked or ERROR may be displayed.
4. Food weighing more or less than the quantity or weight listed in each MENU CHART should not be cooked with the automatic menus or Instant Action.
5. When entering the weight of the food, round off the weight to the nearest tenth of a pound. For example 1.34 pounds becomes 1.3 pounds and 1.76 pounds becomes 1.8 pounds.
6. To change the final cooking result from the standard setting, press the MORE or LESS pad prior to pressing the START/+30 SEC pad.
7. The final cooking result will vary according to the food condition (e.g. initial temperature, shape, quality). Check the food after cooking and if necessary continue cooking manually.

AUTO ROAST CHART

FOOD	AMOUNT	PROCEDURE
1. Roast Beef	1.1 - 3.3 lbs	Place on low rack. Let stand covered with foil 5 to 15 minutes.
2. Fried Chicken	0.7 - 2.2 lbs	Place on low rack. Let stand covered with foil 5 minutes.
3. Roast Chicken	2.2 - 4.4 lbs	Place on low rack. Let stand covered with foil 5 to 15 minutes.
4. Roast Pork	1.1 - 3.3 lbs	Place on low rack. Let stand covered with foil 5 to 15 minutes.
5. Grilled Steak & Chops	0.4 - 2.2 lbs	Place on turntable. Drain juices when turning.
6. Grilled Chicken Pieces	0.4 - 2.2 lbs	Place on high rack. Butterfly thick pieces. Let stand covered with foil 5 minutes.

CONVECTION / AUTOMATIC MIX OPERATION

AUTO COOK

Press to select from 7 automatic convenience food menu items. These menu items provide for the ideal mix of microwave cooking with roasting sure to be one of your favorites.

- Suppose you want to cook 1.2 pounds of frozen pasta.

PROCEDURE	DISPLAY
1. Press AUTO COOK pad.	SELECT MENU NUMBER
2. Press number 4 for frozen pasta.	FROZEN PASTA ENTER WEIGHT
3. Press number 1 2 to enter the weight.	1.2Lb PRESS START
4. Press START/+30 SEC pad.	7.18

HELPFUL HINT:

You can get a cooking hint whenever HELP is lit in the display.

WARNING:

The oven cavity, door, turntable, racks, dishes and especially bottom heater will become very hot, use thick oven mittens when inserting/removing the food or turntable from the oven to PREVENT BURNS.

NOTES

1. After cooking completion and removing food, there is a case that the cooling fan remains on and NOW COOLING is displayed until the oven cavity has cooled.
2. ERROR will be displayed if: More or less than the quantity or weight of foods suggested in the menu guides are programmed. To clear, press the STOP/CLEAR pad and reprogram.
3. Carefully follow the details provided in each MENU GUIDE to achieve the best result. If the details are not followed carefully the food may be overcooked, undercooked or ERROR may be displayed.
4. Food weighing more or less than the quantity or weight listed in each MENU GUIDE should not be cooked with the automatic menus or Instant Action.
5. When entering the weight of the food, round off the weight to the nearest tenth of a pound. For example 1.34 pounds becomes 1.3 pounds and 1.76 pounds becomes 1.7 pounds.
6. To change the final cooking result from the standard setting, press the MORE or LESS pad prior to pressing the START/+30 SEC pad.
7. The final cooking result will vary according to the food condition (e.g. initial temperature, shape, quality). Check the food after cooking and if necessary continue cooking manually.

AUTO COOK CHART

FOOD	AMOUNT	PROCEDURE
1. Frozen Pizza	6 - 20 oz	Place on turntable. Enter the weight in ounces rounded to the nearest tenth.
2. Reheat Pizza	1 - 3 slices	Place on turntable. Enter the amount of slices.
3. Fries	0.4 - 1.1 lbs	Place on turntable. Enter the weight in pounds rounded to the nearest tenth.
4. Frozen Pasta	0.4 - 1.8 lbs	Remove from tray and place in heat resistant dish. Do not cover, place on the turntable.
5. Fish Sticks & Cakes	0.2 - 1.1 lbs	Place on turntable. Enter the weight in pounds rounded to the nearest tenth.
6. Finger Foods	0.4 - 1.1 lbs	Place on turntable. Enter the weight in pounds rounded to the nearest tenth.
7. Hard Vegetables	1 - 4 cups	Cover with lid or plastic wrap. Let stand 1 to 5 minutes then stir.

OTHER CONVENIENT FEATURES

MULTI SEQUENCE COOKING

Preheating, Microwave Cooking, Convection Cooking, Roasting or Mix Cooking can be programmed up to 4 automatic cooking sequences, switching from one variable power setting.

Note that POWER LEVEL must be entered first when programming sequence cooking.

MULTI SEQUENCE COMBINATIONS EXAMPLES	
PREHEAT + CONVEC + MIX	3 Stages
Micro + Micro + Micro + Micro	4 Stages
PREHEAT + ROAST + Micro	3 Stages
Micro + CONVEC + Micro	3 Stages

- Suppose you want to cook for 10 minutes at 30% power level, cook 5 minutes at 100% power level and cook with Top Grill for 20 minutes.

PROCEDURE	DISPLAY
1. Press POWER LEVEL pad 8 times.	P-30 ENTER COOKING TIME
2. Enter cooking time by pressing the numbers in sequence 1 0 0 0.	10:00 PRESS START
3. Press POWER LEVEL once.	HIGH ENTER COOKING TIME
4. Enter time by pressing the numbers in sequence 5 0 0.	5:00 PRESS START
5. Press ROAST once.	TOP ELEMENT ENTER COOKING TIME
6. Enter time by pressing the numbers in sequence 2 0 0 0.	20:00 PRESS START
7. Press START/+30 SEC pad.	10:00

CHILD LOCK

The child lock feature prevents unwanted operation such as by small children. The microwave can be set so that the control panel is deactivated or locked.

TO LOCK

Touch STOP/CLEAR pad and hold for 3 seconds. The display shows LOCK then the time of day.

TO UNLOCK

Touch STOP/CLEAR pad and hold for 3 seconds. The display shows LOCK OFF then the time of day.

The child lock is canceled when the electrical power supply to your oven is interrupted. Set the child lock again when power to the oven is restored.

HELP

INFORMATION ON PADS

Each pad carries useful guide.

- To get the guide for CONVEC pad.

PROCEDURE	DISPLAY
1. Press HELP/SETTINGS pad.	AUTO START PRESS 1
2. Press CONVEC pad.	PRESS FOR CONVEC- TION COOKING 100 F TO 450 F

SETTINGS

Settings provides 3 features which makes using your oven easy.

1. AUTO START

If you wish to program the microwave to begin cooking automatically at a designated time of day.

- To program the oven to start cooking at 70% power automatically at 4:30 for 40 minutes

PROCEDURE	DISPLAY
1. Press HELP/SETTINGS pad.	AUTO START PRESS 1
2. Press number 1.	ENTER AUTO START TIME
3. Enter start time by pressing the numbers in sequence 4 3 0.	4:30 PRESS CLOCK
4. Press CLOCK pad.	4:30 SELECT POWER LEVEL
5. Press POWER LEVEL pad 4 times.	P-70 ENTER COOKING TIME
6. Enter cooking time by pressing the numbers in sequence 4 0 0 0.	40:00 PRESS START
7. Press START/+30 SEC pad.	AUTO START 4:30 ON

2. AUDIBLE SIGNAL ELIMINATION

If you wish to have the oven operate with no audible signal, touch HELP/SETTINGS, the number 2 and STOP/CLEAR.

OTHER CONVENIENT FEATURES

To cancel and restore the audible signal, touch HELP/SETTINGS, the number **2** and START/+30 SEC.

3. DEMO MODE

Cooking operations and specific features can be demonstrated with no power in the oven.

To demonstrate, touch HELP/SETTINGS, the number **3** and START/+30 SEC. Cooking operations and special features can now be demonstrated with no power in the oven. For example, touch +30 SEC, and the display will show **.30** and count down quickly to 0 and the **END**.

To cancel, touch HELP/SETTINGS, the number **3** and STOP/CLEAR.

HELP (ON DISPLAY)

Each setting of Automatic Operations has a cooking hint.

If you wish to check, press the HELP pad whenever HELP is lit in the display.

KITCHEN TIMER

The clock can be used as a kitchen timer.

- Suppose you want to set the timer for 12 minutes and 30 seconds.

PROCEDURE	DISPLAY
1. Press TIMER/CLOCK pad and 1 .	KITCHEN TIMER ENTER TIME
2. Enter time by pressing the numbers in sequence 1 2 3 0 .	12.30 PRESS START
3. Press START/+30 SEC pad.	12.30

+30 SEC

+30 SEC function has 2 operation methods; 1. Easily cook for 30 seconds (or more) at 100% power level and 2. While cooking, each time the START/+30 SEC pad is pressed the cooking time is increased by 30 seconds.

- Suppose you want to cook 1 minute at 100% power level.

PROCEDURE	DISPLAY
1. Press START/+30 SEC pad.	.30
2. To add an additional 30 seconds press START/+30 Sec pad again.	1.00

LESS AND MORE

The cooking times programmed into Automatic Operations are tailored to the most popular tastes. To adjust the cooking time to your individual preference use the "MORE" or "LESS" feature to either add (more) or reduce (less) cooking time.

The LESS and MORE pads can be used to adjust the cooking time 10% of the following features:

- INSTANT ACTION
- AUTO ROAST
- AUTO COOK
- AUTO DEFROST

To adjust cooking time, press the LESS or MORE pad prior to pressing the START/+30 SEC pad at step 4 in AUTO ROAST, AUTO COOK, AUTO DEFROST or before pressing the desired INSTANT ACTION pad or within 2 seconds after pressing the desired INSTANT ACTION pad.

- Suppose you want to cook a snack size bag of POPCORN for more time than the standard setting.

PROCEDURE	DISPLAY
1. Press MORE pad.	+10 PERCENT SELECT MENU
2. Press POPCORN pad twice.	MINI BAG 1.10 1.60Z

The LESS and MORE pads can also be used to adjust the cooking time, while cooking, 30 seconds for any manual cooking operation such as:

- Convection
- Roasting
- Microwave manual setting
- Mix
- Suppose you want to add 1 minute and 30 seconds cooking time to a convection program underway.

PROCEDURE	DISPLAY
1. Press CONVEC pad.	SELECT CONVEC TEMP
2. Press number 6 for 350°F.	350 F ENTER COOKING TIME
3. Enter cooking time by pressing the numbers in sequence 1 0 0 0 .	10.00 PRESS START
4. Press START/+30 SEC pad.	10.00
With 3 minutes remaining you decide to add 90 seconds cooking time.	
5. Press MORE pad 3 times.	4.30

CLEANING AND CARE

It is recommended to disconnect the power cord before cleaning.

EXTERIOR

Clean the outside with mild soap and water; rinse and dry with a soft cloth. Do not use any type of household or abrasive cleaner.

DOOR

Wipe the window on both sides with a soft damp cloth to remove any spills or splatters. Metal parts will be easier to maintain if wiped frequently with a damp cloth. Avoid the use of harsh abrasives.

TOUCH CONTROL PANEL

Care should be taken in cleaning the touch control panel. If the control panel becomes soiled, open the oven door to inactivate the control panel before cleaning. 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. Avoid the use of excess water. Close door and touch Stop/Clear.

INTERIOR - AFTER MICROWAVE COOKING

The oven walls, ceiling and floor are stainless steel. Cleaning after microwave cooking is easy because no 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 mild soap; rinse thoroughly with hot water.

INTERIOR - AFTER CONVECTION, MIX OR ROAST COOKING

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.

WAVEGUIDE COVER

The waveguide cover is located on the right of oven cavity. It 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 splatters 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

The ceramic turntable can be removed for easy cleaning. Wash them in mild, sudsy water; for stubborn stains use a mild cleanser and scouring sponge as described above. They are also dishwasher-safe using top rack.

OVEN RACKS

The high and low baking racks can be removed for easy cleaning and stored away from the microwave oven when racks are not needed. After each use, wash them in mild, sudsy water. For any stubborn stains, use a mild kitchen cleanser and scouring sponge as described above. They are dishwasher-proof.

SERVICE CALL CHECK

Please check the following before calling for service:

	YES	NO
1. Does the display light?		
2. When the door is opened, does the oven lamp come on?		
3. Place one cup of water (approx. 250 ml) in a glass measure in the oven and close the door securely. Press the INSTANT COOK / START.		
A. Does the oven lamp light?		
B. Does the cooling fan work? (Put your hand over the rear ventilation openings.)		
C. Does the turntable rotate? (The turntable can rotate clockwise or counterclockwise. This is quite normal.)		
D. Does the COOK indicator light?		
E. After one minute, did an audible signal sound?		
F. Is the water inside the oven hot?		
4. Remove water from the oven and program the oven for 3 minutes on ROAST mode using top and bottom heaters.		
A. Do the top and bottom heater symbols and COOK indicator light?		
B. After 3 minutes, do the both heaters become red? (Pay special attention to prevent burns when checking the bottom heater.)		

If "NO" is the answer to any of the above questions, please check electrical outlet, fuse and/or circuit breaker. If either or both are not 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 in the display is counting down very rapidly, check Demo Mode. (Please see page 21 for detail.)
2. The following thing is not trouble;

If you operate the oven longer than the maximum time, the power will automatically be reduced. The table below shows the maximum time for microwave mode.

	MAXIMUM COOKING TIME
Microwave 100%, 90% or 80% cooking	20 min.

SPECIFICATIONS

AC Line Voltage	Single phase 120V, 60Hz, AC only
AC Power Required	
Microwave	1.56kW $\pm$ 10%
Roast	1.62kW $\pm$ 10% (top and bottom roast)
Convection	1.64kW $\pm$ 10%
Output Power	
Microwave	900W* (IEC Test Procedure)
Roast Heater	1050W $\pm$ 10% (Top heater) 550W $\pm$ 10% (Bottom heater) 1600W $\pm$ 10% (Top and Bottom heater) 1600W $\pm$ 10% (Convection)
Microwave Frequency	2450 MHz
Outside Dimensions	20 1/2" (W) x 12 3/16" (H) x 19 1/8" (D)
Cooking Uniformity	Turntable (12 3/4" in diameter) system
Weight	Approx. 42 lbs

* 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. for use in USA or Canada.

COOKING GUIDES



INTRODUCTION

The Convection Microwave oven is the ultimate cooking team. This state-of-the-art system brings together the best of all worlds. Enjoy the browning and crisping capabilities of convection plus the speed of microwave cooking. Microwaving brings out the natural flavor of foods and keeps them moist and juicy. Convection and roast cooking add the advantage of browning and crisping food beautifully. Auto Roast is a combination setting which uses convection heat to seal and brown the outside while using microwave energy to make sure the interior is cooked.

WHAT IS CONVECTION COOKING?

With convection cooking, a high speed fan circulates air past the heat source and around the food. The superheated air browns and crisps the food beautifully.

- Use the CONVEC settings for baking most items.
- The Interactive Display provides specific directions for using all of the settings.

WHAT IS ROAST COOKING?

When using ROAST, most food is elevated on the rack, allowing cooking to occur on all sides simultaneously. It is usually not necessary to turn foods over during grilling. Fats drip away from the food, providing for great flavor without all the fat.

- Use the ROAST setting for everything you'd broil in a conventional oven—steaks, chops, burgers, chicken and fish.
- Place rack on the turntable to allow juices to drain away from food.
- Use the ROAST top only setting to brown and crisp just the tops of such foods as casseroles.

WHAT IS AUTO ROAST?

AUTO ROAST combines convection heat with microwave power to provide crisp brown exteriors and superior juiciness for meats and poultry.

- Use AUTO ROAST for meats, poultry and casseroles.
- Place foods on the rack so that the air passes all around the food sealing in the juices.
- Place a shallow oven-glass dish or disposable pizza pan below the rack to catch juices if gravy is desired. Also helps speed cleaning.
- NO PREHEATING IS NECESSARY.

CONVECTION MICROWAVE UTENSILS

A wide variety of utensils may be used in convection and roast cooking. Remember that there is heat when cooking with convection, grill or roast; therefore utensils must be able to withstand the cooking temperature you are using.

You may use:

- the Carousel turntable as a baking sheet for cookies
- the rack for either convection or roast cooking
- traditional metal bakeware
- round pizza pans. Choose those that do not have extended handles.
- oven-glass baking dishes
- plastics if indicated for use with heat; usually states temperature limit on the bottom. CHECK.

AUTO ROAST

The AUTO ROAST setting roasts perfectly. Preheating the oven is not necessary for roasting meat and poultry. Place foods on the rack which holds meat out of its juices. Never cover the rack with aluminum foil. You don't need a pan because the turntable will catch the drippings.

HELPFUL TIPS:

- Shield thin or bony areas of roasts or breast, wing tips and legs of poultry to prevent overbrowning. Use small smooth strips of aluminum foil.
- Should you wish to have gravy, place a shallow oven-glass baking dish below the meat on the rack

to collect any juices. When food is done, simply make gravy in the baking dish and cook using HIGH power.

- Roast less-tender cuts of beef in heat-resistant and microwave-safe covered casserole or in oven cooking bag set in baking dish. Covering helps tenderize meat.
- Check doneness after minimum time using a meat thermometer. Add additional time, if necessary.
- After cooking, cover roasts with "tent" of foil and let stand 5 to 10 minutes before carving.

MAIN DISH RECIPES

Pot Roast with Vegetables

- 4 to 5-pound round or chuck pot roast
- 1/2 teaspoon salt
- 1/2 teaspoon garlic powder
- 1/2 teaspoon dried thyme leaves
- 1/8 teaspoon pepper
- 4 potatoes, peeled and quartered
- 3 onions, quartered
- 2 carrots, sliced
- 3/4 cup water
- 2 tablespoons brown bouquet sauce

Makes 8 servings

Place meat in 4-quart casserole. Pat seasonings into meat. Add vegetables. Combine water and browning sauce; pour into casserole dish. Cover with lid.

Cook 21 to 23 minutes per pound on HIGH MIX CONVECTION (325°F) or until meat is fork-tender. Allow to stand 5 minutes.

Nutrition facts per serving:

Calories: 325	Fat: 11 g
Protein: 36 g.	Cholesterol: 102 mg.
Carbohydrate: 21 g.	Sodium: 227 mg.

Meat Loaf Cordon Bleu

- 1 1/2 pounds ground beef
- 1 egg
- 1 small onion, chopped
- 1 carrot, grated
- 1 stalk celery, finely chopped
- 1/2 cup seasoned bread crumbs
- 1/4 cup catsup
- 1/2 teaspoon dried thyme leaves
- 1/4 teaspoon garlic powder
- 1/8 teaspoon pepper
- 1/4 pound boiled ham, sliced
- 1/4 pound Swiss cheese, sliced

Makes 6 servings

Thoroughly combine all ingredients except ham and cheese. On a sheet of wax paper, press mixture into a 9 x 12-inch rectangle.

Layer sliced ham on meat, then cheese. Roll up, starting at narrow end. Seal ends to form loaf. Place seam side down in loaf pan, 9 x 5 inches. Cook 35 to 40 minutes on HIGH MIX CONVECTION (325°F) or until internal temperature reaches 155°F. Cover and allow to stand 5 to 10 minutes.

Nutrition facts per serving:

Calories: 384	Fat: 23 g
Protein: 30 g.	Cholesterol: 145 mg.
Carbohydrate: 12 g.	Sodium: 525 mg.

MAIN DISH RECIPES

Steak Roulade

- 1/4 cup red wine
- 1/4 cup soy sauce
- 1/4 cup vegetable oil
- 1 1/2 pounds flank steak
- 1 medium onion, diced
- 1 stalk celery, diced
- 1 1/2 green pepper, diced
- 1/2 cup sliced mushrooms
- 2 tablespoons margarine or butter
- 1/2 cup seasoned bread crumbs

Makes 4 servings

Combine wine, soy sauce and oil in large dish. Add steak and marinate several hours.

Combine remaining ingredients, except bread crumbs, in small bowl. Microwave at HIGH (100%) until vegetables are tender, 4 to 5 minutes. Stir in crumbs.

Remove meat from marinade. Spread filling evenly over meat. Roll meat up, starting at narrow end. Tie securely with string. Place in glass pie plate and on rack. Cook 30 minutes on HIGH MIX CONVECTION (325°F) or until internal temperature reaches 130°F.

Nutrition facts per serving:

Calories: 461	Fat: 29 g
Protein: 35 g.	Cholesterol: 90 mg.
Carbohydrate: 13 g.	Sodium: 536 mg.

Stuffed Pork Chops

- 4 pork chops, 1 1/4 inches thick
- 1 cup chopped apple
- 1/2 cup soft bread crumbs
- 1/2 cup chopped walnuts
- 1/4 cup chopped onion
- 1/4 cup raisins
- 1 egg
- 1 teaspoon dried parsley flakes
- 1/2 teaspoon dried thyme leaves
- 1/4 teaspoon ground sage
- 1/8 teaspoon pepper

Makes 4 servings

Make pocket in each chop. Combine remaining ingredients; mix well. Stuff each chop with one-fourth of the mixture. Place chops directly on turntable or round baking pan.

Cook 30 minutes on HIGH MIX CONVECTION (325°F) or until meat next to bone is no longer pink.

Nutrition facts per serving:

Calories: 451	Fat: 26 g
Protein: 36 g.	Cholesterol: 156 mg.
Carbohydrate: 19 g.	Sodium: 100 mg.

Hawaiian Pork Roast

- 1 cup pineapple preserves
- 1/4 cup prepared mustard
- 1 tablespoon prepared horseradish
- 1 tablespoon soy sauce
- 3 pound boneless pork loin

Makes 6 servings

Combine all ingredients except pork roast in small bowl. Place roast on rack.

Follow directions in AUTO ROAST #4.

Cover roast with sauce during last 10 minutes of cooking. Internal temperature should be at least 160°F. Cover and let stand 10 minutes before serving. Extra sauce may be heated and served with roast.

Nutrition facts per serving:

Calories: 394	Fat: 15 g
Protein: 29 g.	Cholesterol: 93 mg.
Carbohydrate: 36 g.	Sodium: 376 mg.

Ultimate Sesame Oven-Fried Chicken

- 1 egg
- 1/2 cup milk
- 1/2 cup all-purpose flour
- 2 tablespoons sesame seeds
- 1 teaspoon baking powder
- 2 teaspoons paprika
- 1 teaspoon garlic powder
- 1/2 teaspoon salt
- 2 1/2 to 3 1/2-pound broiler-fryer chicken, cut up
- 1/2 cup margarine or butter, melted

Makes 5 servings

Beat egg and milk in medium bowl. Combine flour, sesame seeds, baking powder, paprika, garlic powder and salt in plastic or paper bag. Dip chicken pieces in egg mixture, then shake in bag to coat. Arrange chicken pieces skin side up on turntable. Pour margarine evenly over chicken. Bake 40 to 45 minutes on HIGH MIX CONVECTION (325°F). Chicken next to bone should no longer be pink at end.

Nutrition facts per serving:

Calories: 399	Fat: 27 g
Protein: 26 g.	Cholesterol: 122 mg.
Carbohydrate: 12 g.	Sodium: 578 mg.

Adrienne's Mustard and Mayonnaise Chicken

- 2 1/2 to 3-pound broiler-fryer chicken, cut up
- 1/4 cup spicy prepared mustard
- 1/4 cup mayonnaise

Makes 5 servings

Arrange chicken pieces skin side up on rack. Combine mustard and mayonnaise; spread on chicken pieces.

Follow directions in AUTO ROAST #3. Chicken next to bone should no longer be pink at end.

Nutrition facts per serving:

Calories: 233	Fat: 15 g
Protein: 21 g.	Cholesterol: 72 mg.
Carbohydrate: 0 g.	Sodium: 479 mg.

Glazed Stuffed Cornish Hens

- 1 cup chopped pecans
- 3/4 cup apricot preserves
- 1/4 cup margarine or butter, melted
- 3 tablespoons orange juice concentrate
- 1 tablespoon lemon juice
- 1 cup seasoned stuffing cubes
- 1/2 cup water
- 2 Cornish hens (1 1/2 pounds each)

Makes 4 servings

Combine pecans, preserves, melted margarine, orange juice concentrate and lemon juice. Combine half the sauce mixture with stuffing cubes and water. Stuff cavity of each bird. Truss birds.

Pour half of the remaining sauce over hens. Brush with remaining sauce halfway through cooking time.

Follow directions in AUTO ROAST #3. Meat next to bone should no longer be pink. Internal temperature of stuffing should register 165°F.

Nutrition facts per serving:

Calories: 743	Fat: 36 g
Protein: 34 g.	Cholesterol: 74 mg.
Carbohydrate: 75 g.	Sodium: 670 mg.

Herb Roasted Chicken

- 3 tablespoons margarine or butter, softened
- 1 clove garlic, minced
- 3 tablespoons grated Parmesan cheese
- 1/2 teaspoon ground sage
- 3/4 teaspoon thyme leaves
- 3/4 teaspoon basil leaves
- 4 pound roasting chicken

Makes 6 servings

Cream together margarine, garlic, Parmesan cheese, sage, thyme and basil.

Turn chicken breast side up and work your fingers under the skin at the openings on each side of the breast. Continue into thigh and leg and make the skin as smooth as possible. Using fingers, spread herb mixture evenly under skin. Place chicken, breast side up on rack. Follow directions in AUTO ROAST #3. Chicken next to bone should no longer be pink at end.

Nutrition facts per serving:

Calories: 270	Fat: 15 g
Protein: 32 g.	Cholesterol: 94 mg.
Carbohydrate: 1 g.	Sodium: 216 mg.

MAIN DISH RECIPES

Hearty Pizza

- 1 pound ground beef or 4 to 6 ounces sliced pepperoni
- 2 medium onions, chopped
- 2 cloves garlic, finely chopped
- 2 tablespoons olive oil
- 1 can (28 oz.) crushed tomatoes in puree
- 1 tablespoon dried oregano leaves
- 1 teaspoon dried basil leaves
- 1/2 teaspoon salt
- 1/8 teaspoon pepper
- 1/4 cup water (105°F - 115°F)
- 1 package active dry yeast
- 1/2 teaspoon salt
- 3/4 cup milk
- 2 tablespoons vegetable oil
- 3 cups all-purpose flour
- 2 cups shredded mozzarella cheese (about 8 ounces)
- Yellow cornmeal

Makes two 12-inch pizzas, 16 servings

If using ground beef, place in a medium-sized bowl. Microwave at HIGH (100%) until beef loses pink color, 4 to 6 minutes, stirring to break up beef after half the cooking time. Drain and set aside.

Combine onion, garlic and olive oil in medium bowl. Microwave at HIGH (100%) until vegetables are tender, 4 to 6 minutes. Stir in crushed tomatoes in puree, spices, 1/2 teaspoon salt and the pepper.

Microwave at HIGH (100%) until bubbly, about 3 minutes. Stir. Reduce power to MEDIUM (50%). Microwave until thickened, 6 to 8 minutes.

Sprinkle yeast on water in large bowl. Stir to dissolve. Add 1/2 teaspoon salt, milk, oil and flour to make a pliable dough. Knead until smooth, about 2 minutes. Place in well-greased large bowl; turn greased side up. Cover with clean, moist towel. Place in oven at 100°F. until double in size, about 40 minutes. (Dough is ready if an indentation remains when touched.)

Remove dough and turntable from oven. Preheat oven to 425°F. Punch dough down. Divide dough in half. With well-greased fingers, pat dough onto 2 greased 12 x 3/8-inch metal pizza pans, which have been sprinkled with cornmeal. Pinch dough to form edge. Prick crust. Place one pan on turntable and return to oven. Bake 14 to 16 minutes or until crust is golden brown. Top crust with pizza sauce, 1/2 of ground beef or pepperoni and 1/2 cheese. Bake at 425°F. 6 to 10 minutes or until cheese is melted and beginning to brown. Repeat baking procedure for second pizza.

Nutrition facts per serving:

Calories: 245	Fat: 11 g
Protein: 12 g.	Cholesterol: 26 mg.
Carbohydrate: 24 g.	Sodium: 333 mg.

Tamale Casserole

- 1 pound lean ground beef
- 1 medium onion, chopped
- 1 small green pepper, chopped
- 2 cans (8 ounces each) tomato sauce
- 1 clove garlic, minced
- 1 teaspoon chili powder
- 1 teaspoon taco seasoning mix
- 1/2 teaspoon sugar
- 1/4 teaspoon salt
- 1/4 teaspoon pepper

Corn Bread:

- 1/2 cup yellow cornmeal
- 1/2 cup all-purpose flour
- 2 teaspoons baking powder
- 1 tablespoon sugar
- 1/4 teaspoon salt
- 1/2 cup milk
- 1 egg
- 2 tablespoons melted shortening

Topping:

- 1/2 cup shredded Cheddar cheese (about 2 ounces)
- 1/4 cup sliced pitted black olives

Makes 6 servings

Mix ground beef, onion and green pepper in 2-quart casserole. Microwave at HIGH (100%) 5 minutes, stirring to break up beef after half the cooking time. Stir in tomato sauce, garlic, chili powder, taco seasoning mix, sugar, salt and pepper. Microwave at HIGH (100%) 5 minutes. Reduce power to MEDIUM-HIGH (70%). Microwave 5 minutes.

Combine cornmeal, flour, baking powder, sugar and salt in medium bowl. Stir in milk, egg and shortening. Beat mixture until almost smooth. Pour over beef mixture. Preheat oven to 400°F. After preheat, place casserole in oven and bake for 15 to 20 minutes at 400°F. or until corn bread is golden. Sprinkle with topping ingredients. Cool 5 minutes before serving.

Nutrition facts per serving:

Calories: 341	Fat: 16 g
Protein: 22 g.	Cholesterol: 108 mg.
Carbohydrate: 27 g.	Sodium: 909 mg.

MAIN DISH RECIPES

Honey Mustard Chicken

- 1/2 cup coarse ground mustard
- 1/4 cup Dijon-style mustard
- 1/4 cup honey
- 2 to 3 pounds boneless chicken breasts and thighs, skin removed

Makes 4 servings

Combine coarse mustard, Dijon mustard and honey. Set aside.

Place chicken in 9-inch oven-safe dish. Put dish on rack. Follow directions in AUTO ROAST #6. When chicken is about half cooked, pour off any liquid and brush with sauce to cover chicken pieces completely. Chicken next to bone should no longer be pink at end.

Nutrition facts per serving:

Calories: 368	Fat: 8 g
Protein: 50 g.	Cholesterol: 133 mg.
Carbohydrate: 19 g.	Sodium: 950 mg.

Grilled Basil Salmon

- 2 tablespoons olive oil
- 1 clove garlic, minced
- 1/4 cup white wine
- 2 tablespoons lemon juice
- 1 cup fresh basil*
- 1/4 cup grated Parmesan cheese
- 1/2 teaspoon Dijon-style mustard
- 4 salmon steaks (1 1/4 to 1 1/2 pounds) or haddock, halibut, swordfish
- Cayenne pepper

Makes 4 servings

Combine oil, garlic, white wine and lemon juice in blender. Add basil, Parmesan cheese and mustard and blend until smooth.

Put one-fourth of basil sauce in bottom of 9-inch oven safe dish. Arrange steaks on sauce and pour remaining sauce over tops of steaks. Sprinkle with cayenne.

Place dish on turntable. Follow directions in AUTO COOK #5. Fish flakes easily when tested with fork at end.

* If not available, substitute 1/2 cup fresh parsley and 2 tablespoons dried basil.

Nutrition facts per serving:

Calories: 357	Fat: 21 g
Protein: 35 g.	Cholesterol: 97 mg.
Carbohydrate: 2 g.	Sodium: 209 mg.

ROASTING

Your oven grills giving tender, juicy results.

Preheating is not necessary so put food on rack, program the oven and touch START/+30 SEC . It is wise to remove excess fat, slash edges and season, if desired. The rack should NOT BE COVERED BY FOIL. Food may be turned half way through the grilling time.

HELPFUL TIPS:

- Spray rack and turntable with nonstick vegetable cooking spray for easier cleanup.

- Grill food in advance, if desired, then slice. Individual servings may be reheated as needed by microwaving at MEDIUM (50%).
- Clean by turning rack over onto the turntable. Place cup of water in the turntable and heat for 2 minutes on HIGH power. Remove to finish cleaning. Wipe out oven interior.

ROASTING RECIPES

Ginger Pork Kabobs

- 1 egg, beaten
- 1/2 cup crushed chow mein noodles
- 1/4 cup apple juice
- 2 tablespoons soy sauce
- 1 tablespoon grated ginger root
- 1 pound ground pork
- 1 can (8 ounces) pineapple chunks (juice pack), drained
- 1 large red pepper, cut into 3/4-inch chunks
- 1/2 cup apple juice
- 2 tablespoons cider vinegar
- 1 teaspoon cornstarch

Makes 4 servings

Mix egg, crushed noodles, 1/4 cup apple juice, soy sauce and gingerroot. Crumble ground pork into mixture; blend thoroughly, shape into 1-inch balls. Set aside.

For glaze, mix 1/2 cup apple juice, vinegar and cornstarch in small bowl. Microwave at HIGH (100%) until thickened, 1 1/2 to 3 minutes, stirring every 30 seconds.

Thread pork balls alternately with pineapple and red pepper chunks on 4 wooden or metal skewers. Place on rack.

Brush kabobs with glaze. Cook for 15 to 20 minutes on ROAST (top & bottom elements). Turn over half way through roast time and brush with glaze. Brush with remaining glaze before serving.

Nutrition facts per serving:

Calories: 256	Fat: 7 g
Protein: 29 g.	Cholesterol: 153 mg.
Carbohydrate: 18 g.	Sodium: 652 mg.

Marinated Steak Kabobs

- 1/4 cup sugar
- 1/4 cup soy sauce
- 1/4 cup white wine
- 1 tablespoon vegetable oil
- 1 teaspoon ground ginger
- 1/4 teaspoon salt
- 2 pounds lean top beef round steak, cut into 1-inch cubes
- 2 large green peppers, cut into chunks
- 8 cherry tomatoes, cut into halves
- 1 can (8 ounces) pineapple chunks (juice pack), drained

Makes 4 servings

Mix sugar, soy sauce, wine, oil, ginger and salt in medium bowl. Stir in steak cubes; cover. Marinate at room temperature 1 hour or at least 4 hours in refrigerator.

Remove steak cubes from marinade; reserve marinade. Thread steak cubes alternately with remaining ingredients on 8 wooden or metal skewers. Place on rack. Cook for 8 to 12 minutes on ROAST (top & bottom elements). Turn and brush with marinade. Continue to cook for 8 to 12 minutes on ROAST or until desired doneness.

Note: Skewers up to 10 inches can be used.

Nutrition facts per serving:

Calories: 432	Fat: 17 g
Protein: 52 g.	Cholesterol: 153 mg.
Carbohydrate: 15 g.	Sodium: 381 mg.

Asian Flank Steak

- 1/4 cup sherry
- 2 tablespoons packed brown sugar
- 3/4 teaspoon salt
- 3 tablespoons soy sauce
- 3 tablespoons Hoisin sauce
- 3 tablespoons catsup
- 1 tablespoon minced fresh ginger
- 2 green onions, thinly sliced
- 1 to 1 1/2-pound flank steak

Makes 4 servings

Combine all ingredients except flank steak in medium bowl. Pour over steak. Marinate at least 2 hours or overnight.

Place flank steak on rack. Cook for 12 to 15 minutes on ROAST (top & bottom elements).

Nutrition facts per serving:

Calories: 226	Fat: 13 g
Protein: 22 g.	Cholesterol: 60 mg.
Carbohydrate: 4 g.	Sodium: 421 mg.

Grilled Herbed Vegetables

- 2 pounds fresh vegetables of your choice (red onion, peppers, zucchini, portobello mushrooms, eggplant, etc.)
- 1/3 cup olive oil
- 2 tablespoons chopped fresh herbs or
- 2 teaspoons of dried herbs (thyme, rosemary, oregano, tarragon, etc.)

Makes 8 servings

Coat prepared vegetables with seasoned olive oil. Allow to stand for 30 minutes. Drain and pat dry. Preheat turntable on ROAST for 3 minutes. Cook for 20 to 30 minutes on ROAST (top & bottom elements), turning frequently until vegetables are tender when pierced with a fork and browned. Serve hot or at room temperature.

Nutrition facts per serving:

Calories: 60	Fat: 6 g
Protein: 1 g.	Cholesterol: 0 mg.
Carbohydrate: 2 g.	Sodium: 0 mg.

Crunchy Crab Boats

- 1 can (6 ounces) fancy white crabmeat, drained
- 1 package (3 ounces) cream cheese, softened
- 1/2 cup chopped almonds
- 2 tablespoons green onions, chopped
- 1 tablespoon dry white wine
- 1 teaspoon lemon juice
- 1 teaspoon prepared horseradish
- 1/4 teaspoon garlic powder
- 1/4 teaspoon salt
- Dash of white pepper
- Dash of cayenne pepper
- 2 hard rolls, cut in half
- 1/4 cup shredded Swiss cheese

Makes 4 servings

Remove any bits of shell or cartilage from crab. Combine with next 10 ingredients. Mix well. Set aside. Toast rolls on ROAST-TOP ONLY for 3 minutes. Spread one-fourth of crab filling on each roll half. Place Swiss cheese on top of each. Place on rack. Cook for 14 to 16 minutes on ROAST (top & bottom elements) or until cheese is melted and crab is hot. Sprinkle with paprika and serve.

Nutrition facts per serving:

Calories: 292	Fat: 19 g
Protein: 15 g.	Cholesterol: 57 mg.
Carbohydrate: 15 g.	Sodium: 416 mg.

BAKING

In a convection oven, the moving evenly heated air bakes and browns foods beautifully. Preheating the oven is necessary for convection cooking and baking.

HELPFUL TIPS:

- Metal pizza pans are ideal for baking of cookies, biscuits and frozen convenience foods.
- Use the turntable for shaping and baking yeast braids or other special shapes.

AUTO COOK CHART

FOOD		PROCEDURE
Appetizers/snacks:	Brown and serve, pastry	Follow recipe or package for CONVEC temperature and time.
Biscuits:	Your recipe, mix or refrigerator	Follow recipe or package for CONVEC temperature and time.
Breads	Quick:	Your recipe or mix Follow recipe or package for CONVEC temperature and time.
	Yeast:	Your recipe or mix Use CONVEC #5 Yeast Bread setting and follow recipe or package for time.
Cakes	Angel food:	Your recipe or mix Use CONVEC #4 Angel Food Cake setting and follow recipe or package for time.
	Bundt:	Your recipe or mix Use CONVEC #3 Cake setting and follow recipe or package for time.
	Cheesecake:	Your recipe or mix Follow recipe or package for CONVEC temperature and time.
	Snack:	Your recipe or mix Follow recipe or package for CONVEC temperature and time.
	Tube/pound:	Your recipe or mix Use CONVEC #3 Cake setting and follow recipe or package for time.
Cookies:	All kinds	Follow recipe or package for CONVEC temperature and time. Use round baking/pizza pans.
Crisps/cobblers:	Your recipe or mix	Decrease recipe or package temperature 25 degrees and follow recipe or package times.
Muffins:	All kinds	Follow recipe or package for CONVEC temperature and time. Use 6-cup muffins pans.
Pie	Crust:	Your recipe, mix or refrigerator (No filling) Follow recipe or package for CONVEC temperature and time.
	Double crust:	Your recipe Follow recipe for CONVEC temperature and time.
	Frozen prepared custard or fruit	Decrease package temperature 25 degrees and follow package time.
	Single crust:	Your recipe Bake crust first until set but not browned. Place filling in prebaked crust and follow recipe for CONVEC temperature and time.
Pizza	Frozen:	Regular or rising crust Bake using AUTO COOK #1.
	Home made:	Your recipe Follow recipe for CONVEC temperature and time.
	Refrigerated	Bake using AUTO COOK #2.

BAKING RECIPES

Cheesy Onion Bread

- 1/2 cup chopped onion (about 1 medium)
- 1 tablespoon margarine or butter
- 1 1/2 cups buttermilk baking mix
- 1/2 cup milk 1 egg, well beaten
- 1/2 cup shredded sharp Cheddar cheese
- 2 tablespoons snipped parsley or 1 tablespoon dried parsley flakes
- 2 tablespoons margarine or butter
- 1/2 cup shredded sharp Cheddar cheese

Makes 8 servings

Combine onion and 1 tablespoon margarine in small bowl. Microwave at HIGH (100%) until onion is tender, about 2 minutes. Set onion aside.

Preheat oven to 400°F. Mix baking mix, milk and egg until just moistened in medium bowl. Stir in onion, 1/2 cup cheese and the parsley. Spread in greased square baking pan, 8 x 8 inches. Dot with 2 tablespoons margarine; sprinkle with 1/2 cup cheese. Bake at 400°F. until wooden pick inserted in center comes out clean, about 20 minutes.

Nutrition facts per serving:

Calories: 210	Fat: 14 g
Protein: 7 g.	Cholesterol: 50 mg.
Carbohydrate: 15 g.	Sodium: 422 mg.

Zucchini Muffins

- 1 1/2 cups all-purpose flour
- 1/2 cup sugar
- 1 teaspoon baking powder
- 1/2 teaspoon ground cinnamon
- 1/2 teaspoon salt
- 1 cup grated zucchini
- 1/2 cup chopped walnuts
- 1/2 cup raisins
- 1 egg
- 1/3 cup vegetable oil

Makes 1 dozen

Preheat oven to 400°F.

Combine dry ingredients in medium bowl. Mix in remaining ingredients until just moistened. Spoon batter into 2 greased 6-cup medium muffin pans.

Bake each pan 25 to 35 minutes at 400°F or until tops spring back when touched lightly with finger.

Nutrition facts per serving:

Calories: 204	Fat: 10 g
Protein: 3 g.	Cholesterol: 23 mg.
Carbohydrate: 26 g.	Sodium: 125 mg.

No-Knead Cheddar Dill Bread

- 2 1/2 to 3 cups all-purpose flour
- 1 tablespoon sugar
- 2 teaspoons dill weed 1 teaspoon dill seeds
- 1 teaspoon salt
- 1/4 teaspoon baking soda
- 1 package active dry yeast
- 1 cup small-curd cottage cheese
- 1/4 cup water
- 1 tablespoon margarine or butter
- 1 egg
- 2 cups shredded sharp Cheddar cheese
- 1 egg, slightly beaten
- Poppy seeds

Makes one 8-inch round loaf, 16 servings

Combine 1 cup of flour, sugar, dill weed, dill seeds, salt, baking soda and dry yeast in large mixing bowl.

Combine cottage cheese, water and margarine in 2-cup glass measure. Microwave at HIGH (100%) 2 minutes. Add cottage cheese mixture, egg and Cheddar cheese to dry ingredients. Stir well. Add enough flour to make a stiff dough.

Soak a cloth with hot water, wring it out and place it over mixing bowl. Let dough rise in oven at 100°F. until double in size, about 1 hour.

Grease well an 8-inch round cake pan. Place in pan bottom a wax paper, circle cut to fit. Place a strip of wax paper, 2 1/2 x 25 inches, around pan edge. Grease both wax paper circle and strip. Stir dough down and put in prepared pan, patting the dough to smooth it. Let dough rise in 100°F. oven until double in size, 35 to 45 minutes.

Preheat oven using CONVEC 325°F.

Brush bread lightly with beaten egg and sprinkle top with poppy seeds. Bake 30 to 40 minutes on CONVEC 325°F. Remove from pan. Cool on wire rack.

Nutrition facts per serving:

Calories: 168	Fat: 7 g
Protein: 8 g.	Cholesterol: 51 mg.
Carbohydrate: 17 g.	Sodium: 319 mg.

Colossal Chocolate Chip Cookie

- 1 cup all-purpose flour
- 1/8 teaspoon baking soda
- 1/2 teaspoon baking powder
- 1/8 teaspoon salt
- 1/4 cup granulated sugar
- 3/4 cup packed brown sugar
- 1/2 cup margarine or butter
- 1/2 teaspoon vanilla
- 1 egg
- 1 package (6 ounces) chocolate chips
- 1/2 cup chopped nuts (optional)

Makes one 11"-12" cookie

Preheat oven to 350°F.

Combine flour, baking soda, baking powder and salt; set aside. Cream together sugars, margarine and vanilla. Beat until creamy. Beat in egg. Gradually add flour mixture; mix well. Stir in chocolate chips and nuts.

Spread mixture into 1 ungreased 11 to 12 inch round pizza pan. Bake 22 to 24 minutes at 350°F or until wooden pick inserted in center comes out clean. Let cool in pan. Cut into 16 wedges.

Nutrition facts per serving:

Calories: 208	Fat: 13 g
Protein: 2 g.	Cholesterol: 17 mg.
Carbohydrate: 23 g.	Sodium: 108 mg.

Coconut Oatmeal Pie

- 3 eggs, well beaten
- 1 cup packed brown sugar
- 2/3 cup granulated sugar
- 2/3 cup quick-cooking oats
- 2/3 cup shredded coconut
- 1/2 cup milk
- 2 tablespoons margarine or butter, melted
- 1 teaspoon vanilla
- 1/2 cup broken pecans
- 1 9-inch unbaked pie shell

Makes 8 servings

Preheat oven to 375°F. Combine all ingredients except pecans in large bowl. Add pecans; mix well. Pour into pie shell. Bake 35 to 45 minutes at 375°F. or until set.

Nutrition facts per serving:

Calories: 504	Fat: 25 g
Protein: 7 g.	Cholesterol: 104 mg.
Carbohydrate: 66 g.	Sodium: 215 mg.

Easy Cranberry Tea Cake

- 3/4 cup margarine or butter, softened
- 1 1/2 cups sugar
- 3 eggs
- 2 1/2 teaspoons almond extract
- 3 cups all-purpose flour
- 1 1/2 teaspoons baking powder
- 1 1/2 teaspoons baking soda
- 3/4 teaspoon salt
- 1 1/2 cups sour cream
- 3/4 cup canned whole berry cranberry sauce

Makes 16 servings

Preheat oven to 275°F.

Thoroughly grease and flour 12-cup fluted bundt cake pan. With an electric mixer, beat margarine. Gradually add sugar and beat until fluffy. Add eggs, one at a time, beating well after each addition. Add extract.

Sift dry ingredients together and add alternately with the sour cream. Fold in cranberries.

Pour into prepared pan and bake 50 to 60 minutes on CONVEC 275°F or until wooden pick inserted in center comes out clean. Allow to cool on counter 30 minutes. Turn out onto plate and allow to finish cooling before glazing.

Glaze:

- 3/4 cup powdered sugar
- 1/2 teaspoon almond extract
- 2 teaspoons warm water
- 1/4 cup toasted sliced almonds

Combine first 3 ingredients. Drizzle on cake and top with almonds.

Nutrition facts per serving:

Calories: 350	Fat: 16 g
Protein: 5 g.	Cholesterol: 62 mg.
Carbohydrate: 48 g.	Sodium: 360 mg.

Chocolate Chip Banana Crumb Loaf

- 1 package (14 ounces) banana bread mix or banana muffin mix
- $\frac{3}{4}$ cup semisweet chocolate mini morsels ingredients to complete mix

Crumb Topping:

- $\frac{1}{2}$ cup chopped walnuts
- $\frac{1}{2}$ cup all-purpose flour
- 2 tablespoons granulated sugar
- 2 tablespoons packed brown sugar
- $\frac{1}{4}$ cup margarine or butter

Makes 12 servings

Preheat oven to 350°F.

Grease and flour 9 x 5-inch loaf pan. For easy removal of finished loaf, place a 2 $\frac{1}{2}$ x 16-inch strip of wax paper lengthwise in pan with both ends extending above top of pan.

Combine mix and morsels. Prepare bread mix according to package directions or muffin mix according to loaf pan directions. Pour into prepared pan. Combine remaining dry ingredients in small bowl. Cut in margarine until mixture resembles coarse crumbs. Top batter with this mixture.

Bake 55 to 65 minutes at 350°F. If wooden pick inserted in center does not come out clean, let stand in oven a few minutes to complete cooking. Cool 5 minutes; remove from pan by lifting both ends of wax paper. Cool completely on wire rack.

Nutrition facts per serving:

Calories: 338	Fat: 19 g
Protein: 4 g.	Cholesterol: 46 mg.
Carbohydrate: 40 g.	Sodium: 245 mg.

Chocolate Nut Crackles

- $\frac{1}{2}$ cup semisweet chocolate chips
- $\frac{1}{2}$ cup packed brown sugar
- 3 tablespoons vegetable oil
- 1 egg
- $\frac{1}{2}$ teaspoon vanilla
- $\frac{1}{2}$ cup all-purpose flour
- $\frac{1}{2}$ teaspoon baking powder
- $\frac{1}{4}$ teaspoon salt
- $\frac{1}{4}$ cup finely chopped walnuts
- $\frac{1}{4}$ cup powdered sugar

Makes 2 dozen

Place chocolate chips in large mixing bowl. Microwave at HIGH (100%) until melted, about 2 minutes. Blend in brown sugar and oil. Add egg and beat well. Stir in vanilla. Combine flour, baking powder and salt; stir into chocolate mixture. Mix in nuts. Chill dough at least 1 hour.

Preheat oven to 350°F. Drop dough by rounded teaspoonfuls into powdered sugar; roll to coat. Place 2 inches apart on greased round baking pans. Bake 12 to 14 minutes at 350°F. Cool on wire racks.

Nutrition facts per serving:

Calories: 72	Fat: 4 g
Protein: 1 g.	Cholesterol: 6 mg.
Carbohydrate: 10 g.	Sodium: 20 mg.

Sour Cream Pound Cake

- 4 cups all-purpose flour
- 2 teaspoons baking powder
- 1 teaspoon baking soda
- 1/2 teaspoon salt
- 2 cups sugar
- 1 cup margarine or butter, softened
- 4 eggs
- 1 teaspoon vanilla
- 2 cups dairy sour cream
- 1/2 cup sugar
- 1/4 cup finely chopped walnuts
- 2 tablespoons ground cinnamon

Makes 12 servings

Preheat oven to 275°F.

Mix flour, baking powder, baking soda and salt in medium bowl. Set aside. Beat 2 cups sugar and the margarine until light and fluffy. Add eggs, one at a time, beating well after each. Mix in vanilla. Stir in flour mixture alternately with sour cream, beating after each addition until smooth. Set aside.

Combine 1/2 cup sugar, the nuts and cinnamon. Pour half the batter into well-greased 10-inch tube pan; sprinkle with half of filling. Repeat with remaining batter and filling.

Bake 60 minutes on CONVEC 275°F. If wooden pick inserted in center does not come out clean, let stand in oven a few minutes to complete cooking. Cool 10 minutes; remove from pan. Cool completely on wire rack.

Nutrition facts per serving:

Calories: 586	Fat: 28 g
Protein: 8 g.	Cholesterol: 109 mg.
Carbohydrate: 77 g.	Sodium: 456 mg.

Fudge Brownie Pie

- 1/4 cup margarine or butter
- 3/4 cup packed brown sugar
- 1 tablespoon instant espresso coffee
- 3 eggs
- 1 bag (12 ounces) semisweet chocolate chips
- 1/4 cup all-purpose flour 1 cup chopped pecans
- 1 9-inch unbaked pie shell
- 1 1/2 teaspoons rum extract
- 1 cup whipping cream, whipped stiffly
- Chocolate sprinkles

Makes 12 servings

Preheat oven to 350°F.

Cream margarine and brown sugar until light and fluffy. Stir in espresso. Add eggs, one at a time, beating well after each.

Place chips in 4-cup measure or small bowl. Microwave at MEDIUM (50%) until melted, 1 to 2 minutes, stirring 2 or 3 times. Stir chocolate, flour and pecans into butter, sugar, egg mixture. Pour into pie shell.

Bake 35 to 45 minutes at 350°F. Cool. Fold rum extract into whipped cream. Spread on top of pie and decorate with sprinkles.

Nutrition facts per serving:

Calories: 480	Fat: 35 g
Protein: 5 g.	Cholesterol: 96 mg.
Carbohydrate: 42 g.	Sodium: 168 mg.

Harvest Fruit Pie

- 2 cups all-purpose flour
- 1 teaspoon salt
- 1 teaspoon ground cinnamon
- 2/3 cup plus 2 tablespoons vegetable shortening
- 4 to 5 tablespoons cold water
- 3/4 cup sugar
- 1/4 cup all-purpose flour
- 1/2 teaspoon ground cinnamon
- 1/2 teaspoon ground nutmeg
- 6 cups sliced, peeled apples and pears
- 2 tablespoons margarine or butter
- 1 tablespoon milk
- 1 tablespoon sugar

Makes 8 servings

Preheat oven to 400°F.

Combine 2 cups flour, the salt and 1 teaspoon cinnamon in medium bowl. Cut in shortening. Sprinkle in water, 1 tablespoon at a time, until flour is moistened. Gather dough into ball; divide in half. Roll each half into 9-inch circle. Ease 1 circle into 9-inch pie pan.

Combine 3/4 cup sugar, 1/4 cup flour, 1/2 teaspoon cinnamon and the nutmeg; mix with apples and pears. Turn into pastry-lined pan; dot with margarine. Cover with top crust. Brush crust with milk; sprinkle with 1 tablespoon sugar. Trim, seal and flute. Cut small slits in top crust.

Bake 50 to 55 minutes at 400°F. or until juices begin to bubble.

Nutrition facts per serving:

Calories: 469	Fat: 23 g
Protein: 4 g.	Cholesterol: —
Carbohydrate: 63 g.	Sodium: 302 mg.

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