



Panasonic®

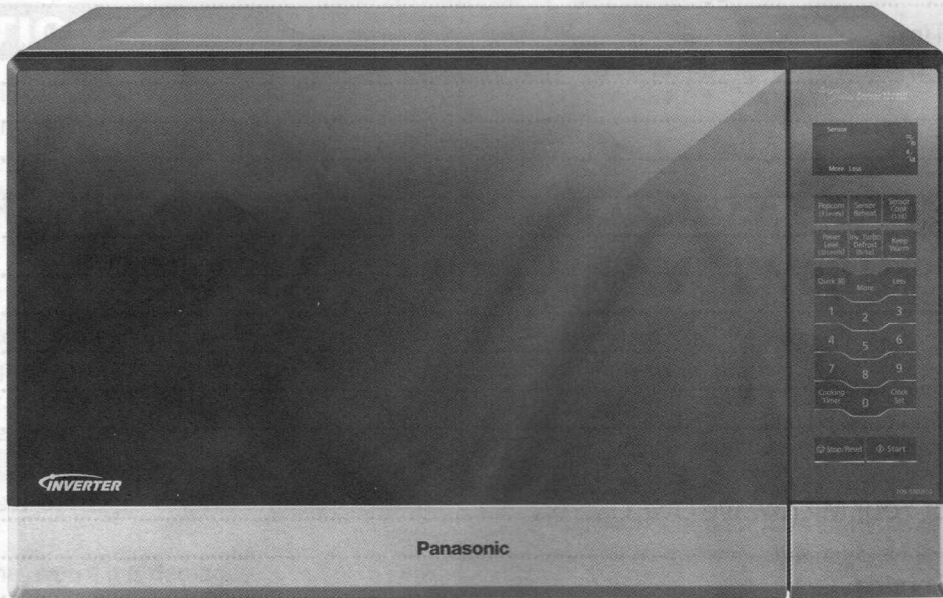
Owner's Manual

Microwave Oven

Household Use Only

Model No. NN-SN686S

NN-SN67HS



Scan this code for special instructions and features.

READ ALL INSTRUCTIONS CAREFULLY BEFORE USING THE OVEN.

For assistance, please contact us via the web at:
<http://shop.panasonic.com/support> (U.S.A Only)

For microwave oven safety reference, please visit the FDA's web page at:
<http://www.fda.gov/radiation-emittingproducts/resourcesforyourradiationemittingproducts/ucm252762.htm>

Para obtener instrucciones en español, por favor visite la página web en:
<http://shop.panasonic.com/support>

F0003BT33AP
PA0216-30817
Printed in China

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Food Preparation (continued)

3) DEEP FAT FRYING

- **DO NOT** deep fat fry in your microwave oven. Cooking oils may burst into flames and may cause damage to the oven and may result in burns. Microwave utensils may not withstand the temperature of the hot oil, and can shatter or melt.

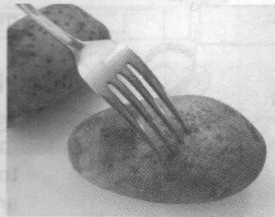
4) FOODS WITH NONPOROUS SKINS

- **DO NOT COOK / REHEAT WHOLE EGGS, WITH OR WITHOUT THE SHELL.**

Steam buildup in whole eggs may cause them to explode, and possibly damage the oven or cause injury. Reheating SLICED hard-boiled eggs and cooking SCRAMBLED eggs is safe.



- **Potatoes, apples, whole squash and sausages** are examples of foods with nonporous skins. These types of foods must be pierced before microwave cooking to prevent them from exploding.



CAUTION: Cooking dry or old potatoes can cause fire.

5) GLASS TRAY / COOKING CONTAINERS / FOIL

- Cooking containers get hot during microwaving. Heat is transferred from the HOT food to the container and the Glass Tray. Use pot holders when removing containers from the oven or when removing lids or plastic wrap covers from cooking containers, to avoid burns.
- The Glass Tray will get hot during cooking. It should be allowed to cool before handling or before paper products, such as paper plates or microwave popcorn bags, are placed in the oven for microwave cooking.
- When using foil in the oven, allow at least 1-inch (2.5 cm) of space between foil and interior oven walls or door.
- Dishes with metallic trim should not be used, as arcing may occur.

6) PAPER TOWELS / CLOTHS

- **DO NOT** use paper towels or cloths that contain a synthetic fiber woven into them. The synthetic fiber may cause the towel to ignite. Use paper toweling under supervision.

7) BROWNING DISHES / OVEN COOKING BAGS

- Browning dishes or grills are designed for microwave cooking only. Always follow instructions provided by the manufacturer. **DO NOT** preheat browning dish more than six minutes.
- If an oven cooking bag is used for microwave cooking, prepare according to package directions. **DO NOT** use a wire twist-tie to close bag. Instead use plastic ties, cotton string or a strip cut from the open end of the bag.



8) THERMOMETERS

- **DO NOT** use a conventional meat thermometer in your oven. Arcing may occur. Microwave safe thermometers are available for both meat and candy.



9) BABY FORMULA / BABY FOOD

- **DO NOT** heat baby formula or baby food in the microwave oven. The glass jar or surface of the food may appear warm while the interior can be so hot as to burn the infant's mouth and esophagus.

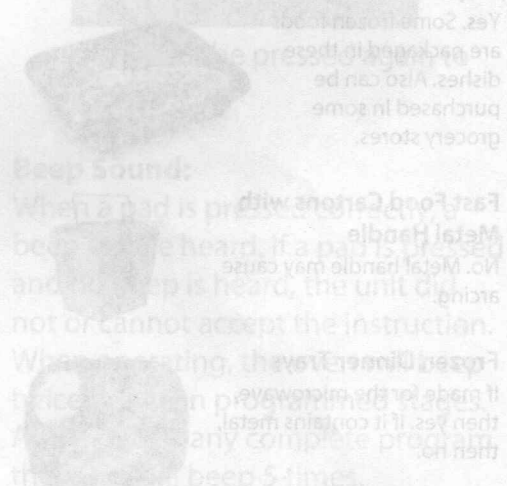


10) REHEATING PASTRY PRODUCTS

- When reheating pastry products, check temperatures of any fillings before eating. Some foods have fillings, which heat faster and can be extremely hot, while the surface remains warm to the touch (for example, jelly donuts).

11) GENERAL OVEN USAGE GUIDELINES

- **DO NOT** use the oven for any purpose other than the preparation of food.



NOTE:
If no operation after cooking program setting, 6 minutes later, the oven will automatically cancel the cooking program.
CONTAINER TEST
TO TEST A CONTAINER FOR SAFE MICROWAVE OVEN USE: Fill a microwave safe container with water. Heat the water in the microwave oven for 1 minute. Carefully touch the water with your hand. If the water is hot to the touch, the container is safe for microwave use. If the water is not hot, the container is not safe for microwave use.

Cookware Guide

This section answers the question, "Can I use in the Microwave?"

Aluminum Foil

It is not recommended to use. Arcing can occur if foil is too close to oven wall or door and cause damage to your oven.



Browning Dish

Yes. Only use browning dishes that are designed for microwave cooking. Check browning dish information for instructions/heating chart. Do not preheat for more than six minutes.

Brown Paper Bags

No. They may cause a fire in the oven.



Microwave Safe

Yes. If labeled Microwave Safe, check manufacturers' directions for use in microwave heating. Some dinnerware may state on the back of the dish, "Oven-Microwave Safe".



Dinnerware

If unlabeled, use CONTAINER TEST below.

Disposable Polyester Paperboard Dishes

Yes. Some frozen foods are packaged in these dishes. Also can be purchased in some grocery stores.



Fast Food Cartons with Metal Handle

No. Metal handle may cause arcing.



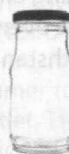
Frozen Dinner Trays

If made for the microwave, then yes. If it contains metal, then no.



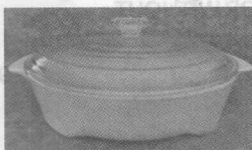
Glass Jars

No. Most glass jars are not heat resistant.



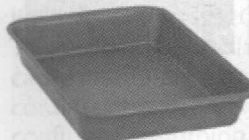
Heat Resistant Oven Glassware/Ceramic

Yes, but only ones for microwave cooking and browning. (See CONTAINER TEST below.)



Metal Bakeware

No. Metal can cause arcing and damage to your oven.



Metal Twist-Ties

No. May cause arcing which could cause a fire in the oven.



Oven Cooking Bag

Yes. Follow manufacturers' directions. Close bag with the nylon tie provided, a strip cut from the end of the bag, or a piece of cotton string. Do not close with metal twist-tie. Make six 1/2-inch slits near the closure.

Paper Plates/Cups

Yes. Use to warm cooked foods, and to cook foods that require short cooking time, such as hot dogs. **Do not microwave paper cups; they may overheat and ignite.**



Towels & Napkins

Yes, only paper napkins/towels. Use to warm rolls and sandwiches, only if labeled safe for microwave use. Do NOT use recycled paper towels.



Parchment Paper

Yes. Use as a cover to prevent splattering.

Plastic Cookware

Yes, with caution. Should be labeled, "Suitable for Microwave Heating."



Check Microwave Safe manufacturers' directions for recommended uses. Some microwave safe plastic containers are not suitable for cooking foods with high fat or sugar content. The heat from hot food may cause warping.

Plastic, Melamine

No. This material absorbs microwave energy. Dishes get HOT!

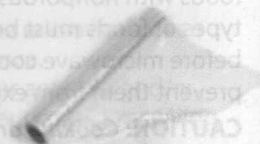
Plastic Foam Cups

Yes, with caution. Plastic foam will melt if foods reach a high temperature. Use short term only to reheat foods to a low serving temperature. **Do not microwave paper cups; they may overheat and ignite.**



Plastic Wrap

Yes. Use to cover food during cooking to retain moisture and prevent splattering. Should be labeled "Suitable for Microwave Heating". Check package directions.



Straw, Wicker, Wood

Yes, short term only. Use only for short term reheating and to bring food to a low serving temperature. Wood may dry out, split or crack.



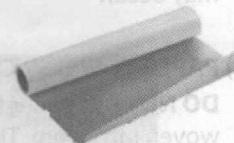
Thermometers

Only microwave safe thermometers can be used, NOT conventional thermometers.



Wax Paper

Yes. Use as a cover to prevent splattering and to retain moisture.

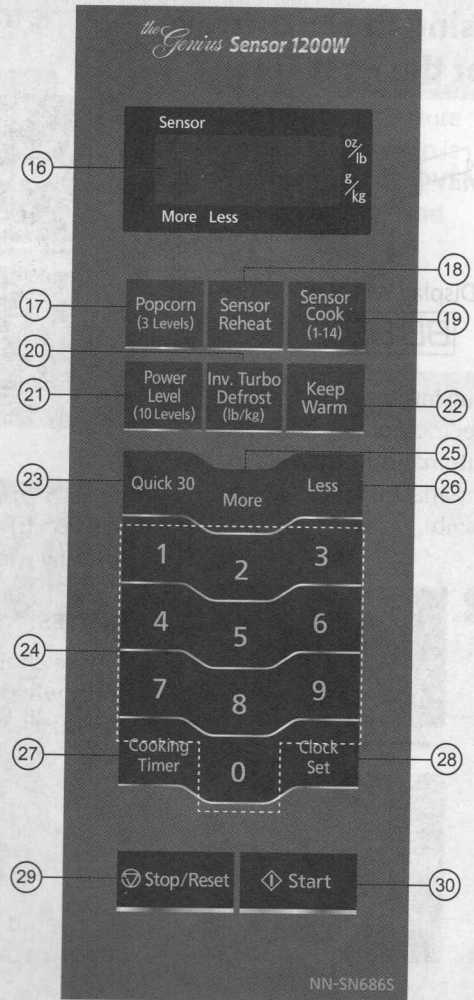
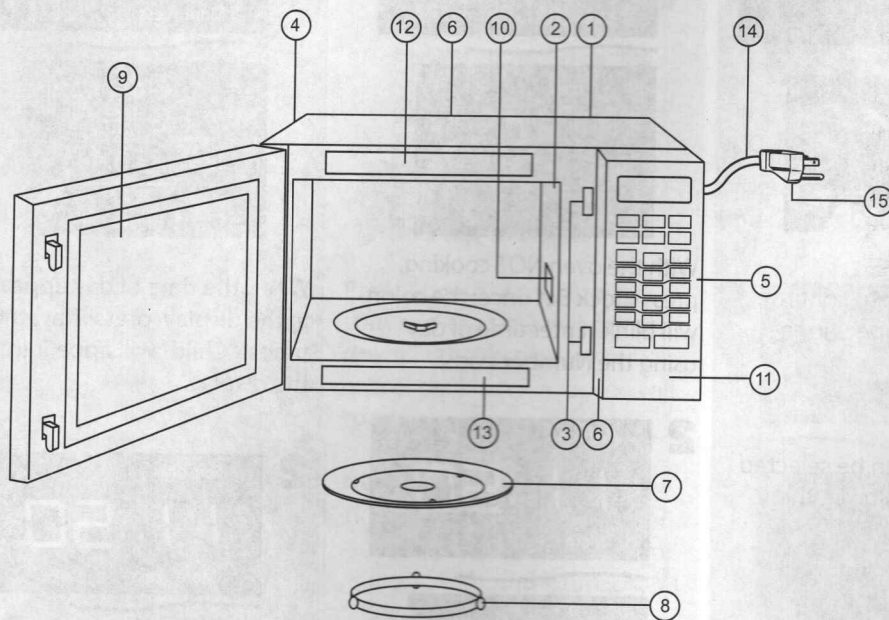


CONTAINER TEST

TO TEST A CONTAINER FOR SAFE MICROWAVE OVEN USE: Fill a microwave safe cup with cool water and place it in the microwave oven along side the empty container to be tested; **heat one (1) minute at P10 (HIGH)**. If the container is microwave oven safe (transparent to microwave energy), the empty container should remain comfortably cool and the water should be hot. If the container is hot, it has absorbed some microwave energy and should NOT be used. This test cannot be used for plastic containers.



Location of Controls



* The control panels of NN-SN686S/NN-SN67HS have same key layout and function, even the different key name.

- | | |
|---|--|
| 1 External Air Vent | 21 Power level Pad (See page 9) |
| 2 Internal Air Vent | 22 Keep Warm Pad (See page 11) |
| 3 Door Safety Lock System | 23 Quick 30 Pad (See page 11) |
| 4 Exhaust Air Vent | 24 Number Pads |
| 5 Control Panel | 25 More Pad (See page 11, 13) |
| 6 Identification Plate | 26 Less Pad (See page 11, 13) |
| 7 Glass Tray | 27 Cooking Timer Pad (See page 8, 9, 10) |
| 8 Roller Ring | 28 Clock Set Pad (See page 8) |
| 9 Heat/Vapor Barrier Film (do not remove) | 29 Stop/Reset Pad |
| 10 Waveguide Cover (do not remove) | 30 Start Pad |
| 11 Door Release Button | |
| 12 Warning label | |
| 13 Menu label | |
| 14 Power Supply Cord | |
| 15 Power Supply Plug | |
| 16 Display Window | |
| 17 Popcorn Pad (See page 11) | |
| 18 Sensor Reheat Pad (See page 13) | |
| 19 Sensor Cook Pad (See page 13) | |
| 20 Inverter Turbo Defrost Pad (See page 12) | |

Before cooking: One tap clears all your instructions. **During cooking:** one tap temporarily stops the cooking process. Another tap cancels all your instructions, and time of day or colon appears in the display window.

After cooking program setting, one tap allows oven to begin functioning. If door is opened or **Stop/Reset** Pad is pressed once during oven operation, **Start**

Pad must be pressed again to restart oven.

Beep Sound:

When a pad is pressed correctly, a beep will be heard. If a pad is pressed and no beep is heard, the unit did not or cannot accept the instruction. When operating, the oven will beep twice between programmed stages. At the end of any complete program, the oven will beep 5 times.

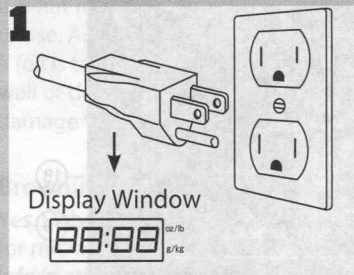
NOTE:

If no operation after cooking program setting, 6 minutes later, the oven will automatically cancel the cooking program. The display will return to clock or colon display.

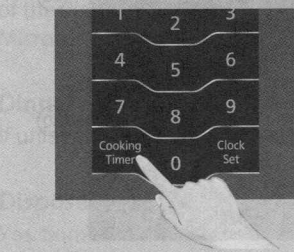
NOTE:

The illustration is for reference only.

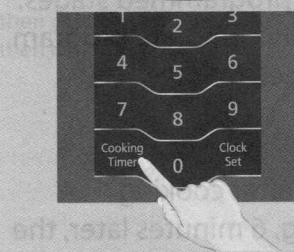
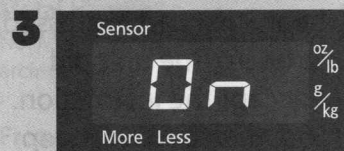
Using the Microwave for the First Time



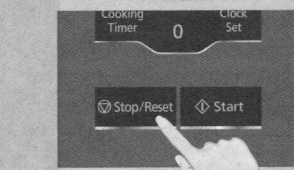
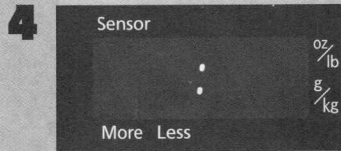
Plug into a properly grounded electrical outlet. The oven automatically defaults to the imperial measure system (oz/lb).



Press **Start** once, then Press **Cooking Timer** to cycle between the weight system, Metric (g/kg) or Imperial (oz/lb).



Press **Start** once, then Press **Cooking Timer** to cycle between the Beep on or Beep off.

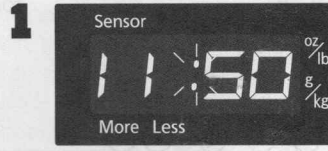


Press **Stop/Reset** to confirm; a colon (:) will appear in the display window.

NOTES:

These choices can be selected only when you plug-in the oven.

Setting the Clock



With the oven NOT cooking, press **Clock Set** once; the colon will blink. Enter time of day using the **Number** pads.

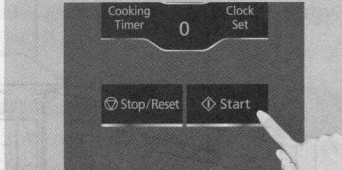


Press **Clock Set** to finish setting and the colon (:) will stop blinking.

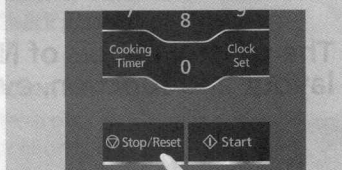
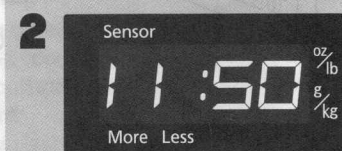
NOTES:

- To reset the clock, repeat steps.
- The clock will retain the time of day as long as the oven is plugged in and electricity is supplied.
- The clock is a 12-hour display.
- Oven will not operate while colon (:) is flashing.

Setting the Child Safety Lock



When the time of day appears in the display, press **Start** three times; "Child" will appear in the display.

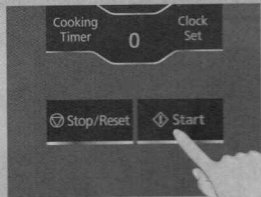
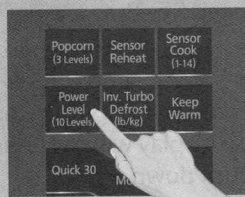


Press **Stop/Reset** three times; the display will return to the time of the day and Child Lock will be cancelled.

NOTES:

- This feature prevents the electronic operation of the oven until cancelled. It does not lock the door.
- To set or cancel child safety lock, **Start** or **Stop/Reset** pad must be pressed 3 times within 10 seconds.
- You can set Child Lock feature when the display shows a colon or time of day.

Cooking



If cooking at high power (10), skip to step 2. Press **Power Level** until the desired power level appears in the display. P10 is the highest and P1 is the lowest.

Press **Start**; the cooking will start and the time will count down in the display. At the end of cooking, five beeps will sound.

Press	Power Level
once	P10 (HIGH)
twice	P9
3 times	P8
4 times	P7 (MED-HIGH)
5 times	P6 (MEDIUM)
6 times	P5
7 times	P4
8 times	P3 (MED-LOW)/ DEFROST
9 times	P2
10 times	P1 (LOW)

NOTES:

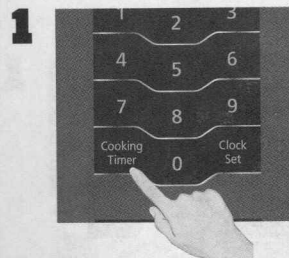
- For reheating, use P10 (HIGH) for liquids, P7 (MED-HIGH) for most foods, and P6 (MEDIUM) for dense foods.
- For defrosting, use P3 (MED-LOW).

DO NOT OVERCOOK: This oven requires less time to cook than older units. Overcooking will cause food to dry out and may cause a fire. A microwave oven's cooking power tells you the amount of microwave power available for cooking.

Stage Cooking:

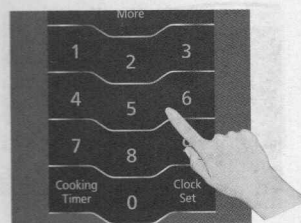
For more than one stage of cooking, repeat steps 1 and 2 for each stage of cooking before pressing **Start**. The maximum number of stages for cooking is three. When operating, two beeps will sound between each stage. Five beeps will sound at the end of the entire sequence. Automatic function (such as sensor cook/reheat, popcorn and inverter turbo defrost) can not be used with 3 stage cooking.

Setting the Timer

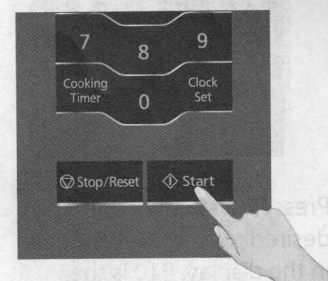


Caution: If oven lamp is lit while using the timer feature with door closed, the oven is **NOT** set properly; **STOP OVEN IMMEDIATELY** and re-read instructions.

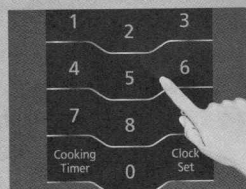
This feature allows you to program the oven as a kitchen timer. Press **Cooking Timer** once.



Set desired amount of time using **Number** pads (up to 99 minutes, 99 seconds).

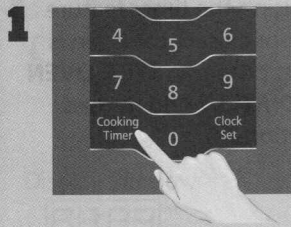


Press **Start**. The timer will count down without cooking and beep five times when done.

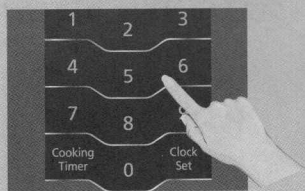


Set Cooking Time using the **Number** pads. P10 (HIGH) has max. cooking time of 30 minutes. For other power levels, the max. time is 99 minutes, 99 seconds.

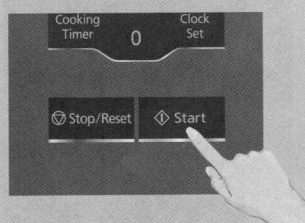
Setting a Standing Time



Some recipes call for a standing time after cooking. To do this, repeat steps 1 and 2 in the **Cooking** section on previous page. Then press **Cooking Timer**.

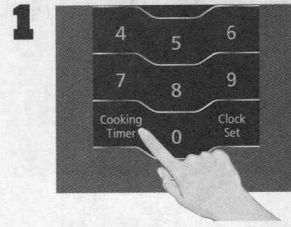


Set desired amount of stand time using **Number** pads (up to 99 minutes, 99 seconds).

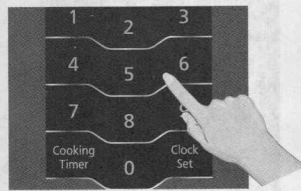


Press **Start**. The timer will start and then beep twice at the end of cooking time (the beginning of standing time). Five beeps will sound when standing time is done.

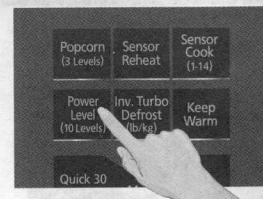
Setting a Delayed Start



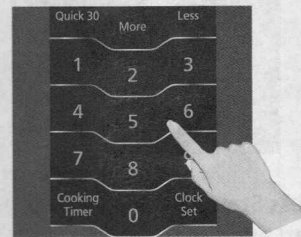
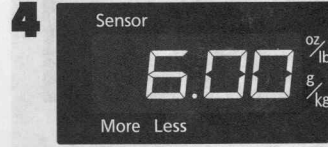
The start time can be delayed to start cooking at a later time. To do this, first press **Cooking Timer**.



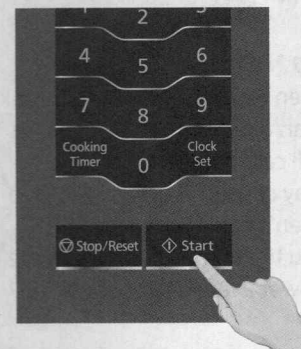
Enter the desired delay time (up to 99 minutes, 99 seconds) using the **Number** pads.



Press **Power Level** until the desired power level appears in the display. P10 is the highest and P1 is the lowest.



Set Cooking Time using the **Number** pads (see previous page for maximum times).



Press **Start**; the delay time will count down, then cooking will begin. At the end of cooking, five beeps will sound.

NOTES:

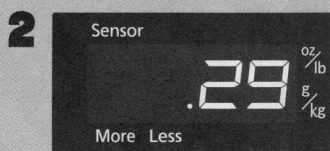
1. When each stage finishes, the oven will beep twice. At the end of the program, the oven will beep five times.
2. If the oven door is opened during Stand Time, Kitchen Timer or Delay Time, the time on the display will continue to count down.
3. Stand Time and Delay start cannot be programmed before any automatic function (such as sensor cook/reheat, popcorn and inverter turbo defrost). This is to prevent the starting temperature of food from rising.
4. When using Standing time or Delay Start, it's up to 2 power stages.

Quick 30

(Set or add cooking time in 30 seconds increments)



Press **Quick 30** until the desired cooking time (up to 5 minutes) appears in the display. Power Level is pre-set at P10.



Press **Start**; the cooking will start and the time will count down in the display. At the end of cooking, five beeps will sound.

NOTES:

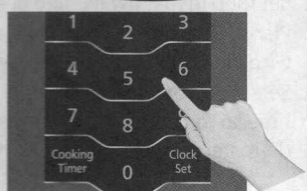
1. If desired, you can use other power levels. Select desired power level before pressing **Quick 30**.
2. After setting the time by **Quick 30** pad, you cannot use the **Number Pads**.
3. **Quick 30** pad can also be used to add more time during manual cooking.

Keep Warm

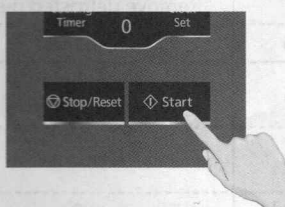
(Will keep food warm for up to 30 minutes after cooking)



Press **Keep Warm**.



Set warming time using **Number pads**, up to 30 minutes. This example shows two minutes.



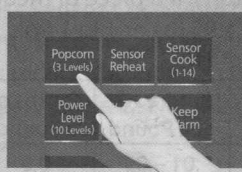
Press **Start**; the cooking will start and the time will count down in the display. At the end of cooking, five beeps will sound.

NOTES:

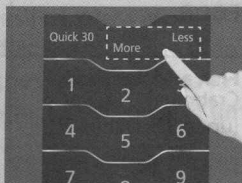
Keep Warm can be set as the final stage after cook time has been manually entered. It cannot be used with sensor or auto features.

Popcorn

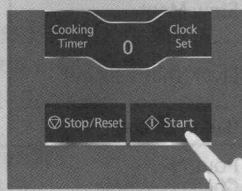
(Example: To pop 3.5 oz (99 g) of popcorn)



Press **Popcorn** until the desired size appears in the display. Once for 3.5 oz (99 g), twice for 3.0 oz (85 g), or three times for 1.75 oz (50 g).



If desired, press **More** once to add 10 seconds or twice to add 20 seconds. Press **Less** once to subtract 10 seconds or twice to subtract 20 seconds.

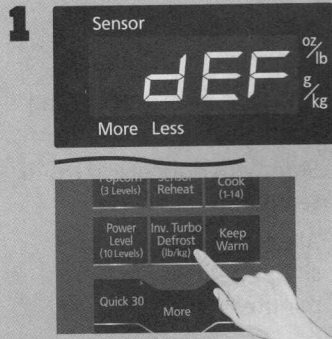


Press **Start**; After several seconds, cooking time appears in the display window and begins to count down.

NOTES:

1. Pop one bag at a time.
2. Place bag in oven according to manufacturers' directions.
3. Start with popcorn at room temperature.
4. Allow popped corn to sit unopened for a few minutes.
5. Open bag carefully to prevent burns, because steam will escape.
6. Do not reheat unpopped kernels or reuse bag.
7. If popcorn is of a different weight than listed, follow instructions on popcorn package.
8. **Never leave the oven unattended.**
9. **If popping slows to 2 to 3 seconds between pops, stop oven. Overcooking can burn popcorn or cause fire.**
10. When popping multiple bags one right after the other, the cooking time may vary slightly. This does not affect the popcorn results.

Inverter Turbo Defrost



This feature allows you to defrost foods such as meat, poultry and seafood, simply by entering the weight. Press **Inverter Turbo Defrost**.



"dEF" will appear briefly in the display, then a dash will appear next to the weight units. Enter weight of the food using the **Number** pads.



Press **Start**. Defrosting will start. Larger weight foods will cause a signal midway through defrosting. If two beeps sound, turn over and/or rearrange foods.

NOTE:

The maximum weight for Inverter Turbo Defrost is 6 lbs. (3 kg).

Conversion

Follow the chart to convert ounces or hundredths of a pound into tenths of a pound. To use Inverter Turbo Defrost, enter the weight of the food in pounds (1.0) and tenths of a pound (0.1). If a piece of meat weighs 1.95 lbs or 1 lb 14 oz, enter 1.9 lbs.

Ounces	Hundredths of a Pound	Tenths of a Pound
0	.01 - .05	0.0
1 - 2	.06 - .15	0.1
3 - 4	.16 - .25	0.2
5	.26 - .35	0.3
6 - 7	.36 - .45	0.4
8	.46 - .55	0.5
9 - 10	.56 - .65	0.6
11 - 12	.66 - .75	0.7
13	.76 - .85	0.8
14 - 15	.86 - .95	0.9

Defrosting Tips & Techniques

Preparation For Freezing:

- Freeze meats, poultry, and fish in packages with only one or two layers of food. Place wax paper between layers.
- Package in heavy-duty plastic wraps, bags (labeled "For Freezer"), or freezer paper.
- Remove as much air as possible.
- Seal securely, date, and label.

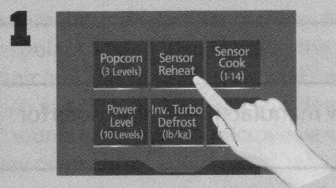
- Drain liquids during defrosting.
- Turn over (invert) items during defrosting.

After Defrosting:

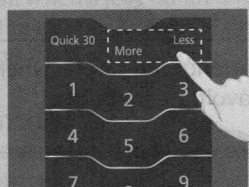
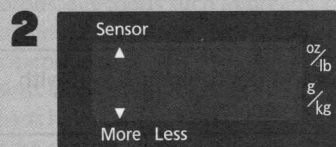
- Large items may be icy in the center. Defrosting will complete during Standing Time.
 - Let stand, covered, following stand time directions on page 10.
 - Rinse foods indicated in the chart.
 - Items which have been layered should be rinsed separately or have a longer stand time.
- Remove wrapper. This helps moisture to evaporate. Juices from food can get hot and cook the food.
 - Set food in microwave safe dish.
 - Place roasts fat-side down. Place whole poultry breast-side down.
 - Select power and minimum time so that items will be under-defrosted.

FOOD	DEFROST TIME at P3 mins (per lb)	DURING DEFROSTING	AFTER DEFROSTING	
			Stand Time	Rinse
Fish and Seafood				
Crabmeat [up to 3 lbs. (1.4 kg)]	6	Break apart/Rearrange		
Fish Steaks	4 to 6	Turn over	5 min.	YES
Fish Fillets	4 to 6	Turn over/Rearrange		
Sea Scallops	4 to 6	Break apart/ Remove defrosted pieces		
Whole fish	4 to 6	Turn over		
Meat				
Ground Meat	4 to 5	Turn over/ Remove defrosted portion	10 min.	
Roasts [2½-4 lbs. (1.1-1.8 kg)]	4 to 8	Turn over	30 min. in fridge.	
Chops/Steak	6 to 8	Turn over/Rearrange	5 min.	NO
Ribs/T-bone	6 to 8	Turn over/Rearrange		
Stew Meat	4 to 8	Break apart/ Remove defrosted pieces		
Liver (thinly sliced)	4 to 6	Drain liquid/Turn over/ Separate pieces		
Bacon (sliced)	4	Turn over	----	
Poultry				
Chicken, Whole [up to 3 lbs. (1.4 kg)]	4 to 6	Turn over	20 min. in fridge	
Cutlets	4 to 6	Break apart/Turn over/ Remove defrosted Pieces	5 min.	YES
Pieces	4 to 6	Break apart/Turn over	10 min.	
Cornish hens	6 to 8	Turn over		
Turkey Breast [5-6 lbs. (2.3-2.7 kg)]	6	Turn over	20 min. in fridge	

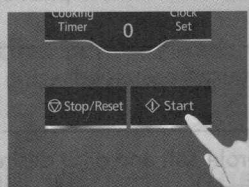
Sensor Reheat



Press **Sensor Reheat**.



If desired, press **More** to add 20% more time than suggested. Press **Less** to subtract 20% cooking time.



Press **Start**. Reheating is complete when five beeps sound.

NOTES:

1. After having used the Sensor Reheat feature a few times, you may decide you would prefer your food cooked to a different doneness – that is why you would utilize the **More/Less** pads.

2. When steam is detected by the Genius Sensor and two beeps sound, the remaining cooking time will appear in the display.

Casseroles: Add three to four tablespoons of liquid, cover with lid or vented plastic wrap. Stir when time appears in the display window.

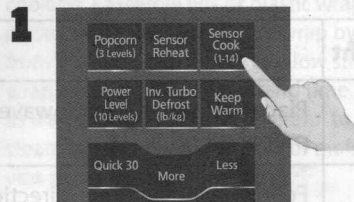
Canned foods: Empty contents into casserole dish or serving bowl, cover dish with lid or vented plastic wrap. After reheating, let stand for a few minutes.

Plate of food: Arrange food on plate; top with butter, gravy, etc. Cover with lid or vented plastic wrap. After reheating, let stand for a few minutes.

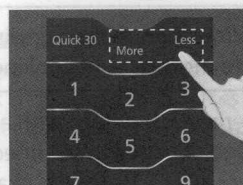
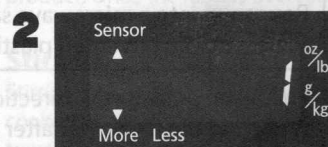
DO NOT USE SENSOR REHEAT:

- To reheat bread and pastry products. Use manual power and time for these foods.
- For raw or uncooked foods.
- If oven cavity is warm.
- For beverages.
- For frozen foods.

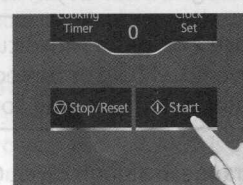
Sensor Cook



Press **Sensor Cook** until the number corresponding to the desired food appears in the display (*see chart on the next page*).



If desired, press **More** to add 20% more time than suggested. Press **Less** to subtract 20% cooking time.



Press **Start**. Cooking is complete when five beeps sound.

NOTES:

1. After having used the Sensor Cook feature a few times, you may decide you would prefer your food cooked to a different doneness – that is why you would utilize the **More/Less** pads.

- When steam is detected by the Genius Sensor and two beeps sound, the remaining cooking time will appear in the display.
- Automatic features are provided for your convenience. If results are not suitable to your individual preference, or if serving size is other than what is listed on page 14, please refer to manual cooking on page 9.

For the best results with the GENIUS SENSOR, follow these recommendations:

BEFORE Reheating/Cooking:

- The room temperature surrounding the oven should be below 95° F (35° C).
- Food weight should exceed 4 oz. (110 g).
- Be sure the glass tray, the outside of the cooking containers and the inside of the microwave oven are dry before placing food in the oven. Residual beads of moisture turning into steam can mislead the sensor.
- Cover food with lid, or with vented plastic wrap. Never use tightly sealed plastic containers—they can prevent steam from escaping and cause food to overcook.

DURING Reheating/Cooking:

DO NOT open the oven door until two beeps sound and cooking time appears in the display. Doing so will cause inaccurate cooking since the steam from food is no longer contained within the oven cavity. Once the cooking time begins to count down, the oven door may be opened to stir, turn or rearrange foods.

AFTER Reheating/Cooking:

All foods should have a standing time.

Operation (continued)

Sensor Cook Chart

See the chart below for Sensor Cook categories.

Recipe	Serving/Weight	Hints
1. Oatmeal	½ - 1 cup (40 - 80 g)	Place oatmeal in a microwave safe serving bowl with no cover. Follow manufacturers' directions for preparation.
2. Breakfast Sausage	2 - 8 links	Follow manufacturers' directions for preparation of pre-cooked breakfast sausage. Place in a radial pattern.
3. Omelet	2 - 4 eggs	Follow basic Omelet recipe on this page.
4. Quinoa	¼ - 1 cups (45 - 180 g)	Place quinoa in a microwave safe 3 qt casserole dish. Add 2 parts water to 1 part quinoa. Cover with lid or vented plastic wrap. After 2 beeps, stir. Let stand 14 minutes before serving.
5. Soup	1 - 2 cups (250 - 500 ml)	Pour soup into a microwave safe serving bowl. Cover with lid or vented plastic wrap. Stir after cooking.
6. Frozen Entrées	8 - 28 oz. (220 - 800 g)	Follow manufacturers' directions for preparation. After 2 beeps, stir or rearrange. Be careful when removing the film cover after cooking. Remove facing away from you to avoid steam burns. If additional time is needed, continue to cook manually.
7. Frozen Pizza (single)	8 oz. (220 g)	Follow manufacturers' directions for preparation. Add more time of cooking if needed.
8. Potatoes	1 - 4 potatoes (6 - 8 oz. each) (170 - 220 g)	Pierce each potato with a fork 6 times spacing around surface. Place potato or potatoes around the edge of paper-towel-lined glass tray (Turntable), at least 1 inch (2.5 cm) apart. Do not cover. Turn over after 2 beeps. Let stand 5 minutes to complete cooking.
9. Fresh Vegetables	4 - 16 oz. (110 - 450 g)	All pieces should be the same size. Wash thoroughly, add 1 tbsp. of water per ½ cup of vegetables, and cover with lid or vented plastic wrap. Do not salt/butter until after cooking.
10. Frozen Vegetables	6 - 16 oz. (170 - 450 g)	Wash thoroughly, add 1 tbsp. of water per ½ cup of vegetables, and cover with lid or vented plastic wrap. Do not salt/butter until after cooking. (Not suitable for vegetables in butter or sauce.)
11. Rice	½ - 1½ cups (110 - 335 g)	Place rice with hot tap water in a microwave safe cas-serole dish. Cover with lid or vented plastic wrap. Let stand 5 to 10 minutes before serving.
12. Frozen Dinners	11 - 16 oz. (300 - 450 g)	Follow manufacturers' directions for covering or removing covers. Do not use frozen foods packaged in foil trays. After 2 beeps, stir or rearrange.
13. Pasta	2 - 8 oz. (55 - 220 g)	Place 2 oz. pasta with 3 cups hot tap water in a microwave safe 2 qt casserole, salt and oil, if desired, covered with lid or vented plastic wrap. For 4 oz. pasta use 4 cups water, for 6 oz. pasta use 6 cups water in 3 qt casserole, for 8 oz. pasta use 7 cups water.
14. Fish Fillets	4 - 16 oz. (110 - 450 g)	Arrange in a single layer. Cover with lid or vented plastic wrap.

OMELET

Basic Omelet Recipe

1 Tablespoon butter or margarine

2 Eggs

2 Tablespoons milk

Salt and ground black pepper, if desired

Heat butter in a microwave safe 9-inch pie plate, 20 seconds at P10, or until melted.

Turn the plate to coat the bottom with butter. Meanwhile, combine the remaining ingredients in a separate bowl, beat together and pour into the pie plate. Cook, covered with vented plastic wrap, using OMELET selection. Let stand 2 minutes. With a spatula, loosen the edges of the omelet from the plate, fold into thirds to serve. **Always beat the eggs before making the omelet.**

Yield: 1 Serving

Approx. cooking time: 4 minutes.

NOTE: Double ingredients for a 4-egg Omelet.

Food Characteristics

Food Characteristics

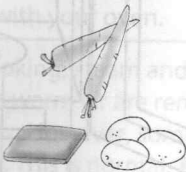
Bone and Fat

Both bone and fat affect cooking. Bones may cause irregular cooking. Meat next to the tips of bones may overcook while meat positioned under a large bone, such as a ham bone, may be undercooked. Large amounts of fat absorb microwave energy and the meat next to these areas may overcook.



Density

Porous, airy foods such as breads, cakes or rolls take less time to cook than heavy, dense foods such as potatoes and roasts. When reheating donuts or other foods with different centers be very careful. Certain foods have centers made with sugar, water, or fat and these centers attract microwaves (for example, jelly donuts). When a jelly donut is heated, the jelly can become extremely hot while the exterior remains warm to the touch. This could result in a burn if the food is not allowed to cool properly in the center.



Quantity

Two potatoes take longer to cook than one potato. As the quantity of the food decreases so does the cooking time. Overcooking will cause the moisture content in the food to decrease and a fire could result. Never leave microwave unattended while in use.



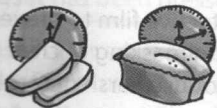
Shape

Uniform sizes heat more evenly. The thin end of a drumstick will cook more quickly than the meaty end. To compensate for irregular shapes, place thin parts toward the center of the dish and thick pieces toward the edge.



Size

Thin pieces cook more quickly than thick pieces.



Starting Temperature

Foods that are at room temperature take less time to cook than if they are chilled, refrigerated or frozen.



Cooking Techniques

Piercing

Foods with skins or membranes must be pierced, scored or have a strip of skin peeled before cooking to allow steam to escape. Pierce clams, oysters, chicken livers, whole potatoes and whole vegetables. Whole apples or new potatoes should have a 1-inch strip of skin peeled before cooking. Score sausages and frankfurters. Do not Cook/Reheat whole eggs, with or without the shell. Steam buildup in whole eggs may cause them to explode, and possibly damage the oven or cause injury. Reheating SLICED hard-boiled eggs and cooking SCRAMBLED eggs is safe.

Browning

Foods will not have the same brown appearance as conventionally cooked foods or those foods which are cooked utilizing a browning feature. Meats and poultry may be coated with browning sauce, Worcestershire sauce, barbecue sauce or shake-on browning sauce. To use, combine browning sauce with melted butter or margarine and brush on before cooking. For quick breads or muffins, brown sugar can be used in the recipe in place of granulated sugar, or the surface can be sprinkled with dark spices before baking.

Spacing

Individual foods, such as baked potatoes, cupcakes and appetizers, will cook more evenly if placed in the oven equal distances apart. When possible, arrange foods in a circular pattern.

Covering

As with conventional cooking, moisture evaporates during microwave cooking. Casserole lids or plastic wrap are used for a tighter seal. When using plastic wrap, vent the plastic wrap by folding back part of the plastic wrap from the edge of the dish to allow steam to escape. Loosen or remove plastic wrap as recipe directs for stand time. When removing plastic wrap covers, as well as any glass lids, be careful to remove them away from you to avoid steam burns. Various degrees of moisture retention are also obtained by using wax paper or paper towels.

Cooking Time

Cooking times will vary because of food shape variations, starting temperature, and regional preferences. Always cook food for the minimum cooking time given in a recipe and check for doneness. If the food is undercooked, continue cooking. It is easier to add time to an undercooked product. Once the food is overcooked, nothing can be done.

Stirring

Stirring is usually necessary during microwave cooking. Always bring the cooked outside edges toward the center and the less cooked center portions toward the outside of the dish.

Rearranging

Rearrange small items such as chicken pieces, shrimp, hamburger patties or pork chops. Rearrange pieces from the edge to the center and pieces from the center to the edge of the dish.

Turning

It is not possible to stir some foods to distribute the heat evenly. At times, microwave energy will concentrate in one area of the food. To help ensure even cooking, these foods need to be turned. Turn over large foods, such as roasts or turkeys, halfway through cooking.

Standing Time

Most foods will continue to cook by conduction after the microwave oven is turned off. After cooking meat, the internal temperature will rise 5 °F to 15 °F (3 °C to 8 °C), if allowed to stand, tented with foil, for 10 to 15 minutes. Casseroles and vegetables need a shorter amount of standing time, but this standing time is necessary to allow foods to complete cooking to the center without overcooking on the edges.

Test for Doneness

The same tests for doneness used in conventional cooking may be used for microwave cooking. Meat is done when fork-tender or splits at fibers. Chicken is done when juices are clear yellow and drumstick moves freely. Fish is done when it flakes and is opaque. Cake is done when a toothpick or cake tester is inserted and comes out clean.

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

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.

Temp

Food

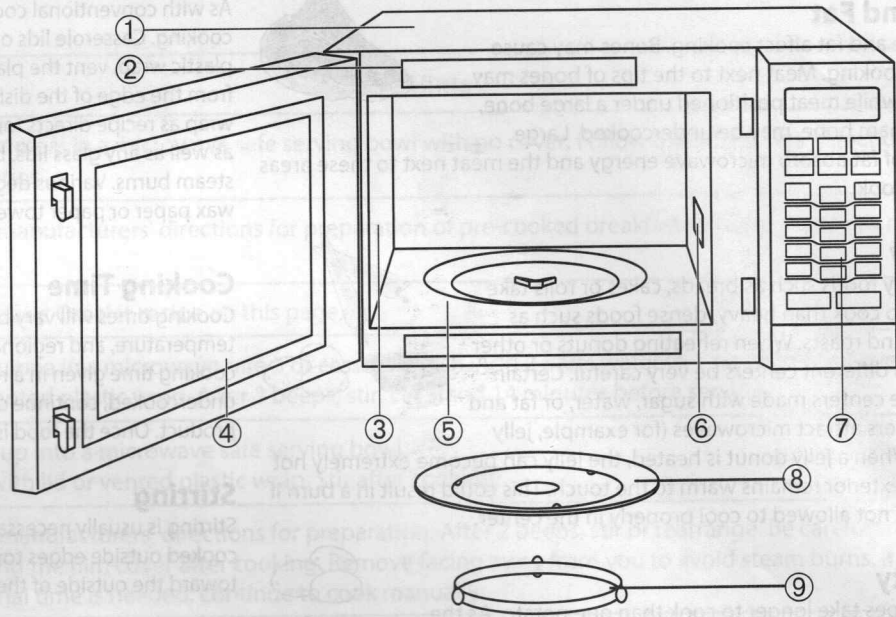
160 °F	For fresh pork, ground meat, boneless white poultry, fish, seafood, egg dishes and frozen prepared food.
165 °F	For leftover, ready-to-reheat refrigerated, and deli and carryout "fresh" food.
170 °F	For white meat poultry.
180 °F	For dark meat poultry.

Care and Cleaning of Your Microwave Oven

Please see below and the following page for particular cleaning instructions for each section of the oven.

BEFORE CLEANING: Unplug oven at wall outlet. If outlet is inaccessible, leave oven door open while cleaning.

AFTER CLEANING: Be sure to place the Roller Ring and the Glass Tray in the proper position and press **Stop/Reset** Pad to clear the Display.



1. **Outside oven surfaces:** Clean with a damp cloth. To prevent damage to the operating parts inside the oven, water should not be allowed to seep into ventilation openings.
2. **Label:** Do not remove. Wipe with a damp cloth.
3. **Inside the Oven:** Wipe with a damp cloth after using. Mild detergent may be used if needed. Do not use harsh detergents or abrasives.
4. **Oven Door:** Wipe with a soft dry cloth when steam accumulates inside or around the outside of the oven door. During cooking, especially under high humidity conditions, steam is given off from the food. (Some steam will condense on cooler surfaces, such as the oven door. This is normal.) Inside surface is covered with a heat and vapor barrier film. **Do not remove.**
5. **Oven Cavity Floor:** Clean the bottom surface of the oven with mild detergent, water or window cleaner, and dry.
6. **Wave Guide Cover:** Do not remove Wave Guide Cover. It is important to keep cover clean in the same manner as the inside of the oven.
7. **Control Panel:** The Control Panel is covered with a removable protective film to prevent scratches during shipping. Small bubbles may appear under this film, so if this is the case, remove by applying masking or clear tape to an exposed corner and pull gently. If the Control Panel becomes wet, clean it with a soft dry cloth. Do not use harsh detergents or abrasives.
8. **Glass Tray:** Remove and wash in warm soapy water or in a dishwasher.
9. **Roller Ring:** Roller Ring may be washed in mild soapy water or dishwasher. These areas should be kept clean to avoid excessive noise.

IT IS IMPORTANT TO KEEP THE OVEN CLEAN AND DRY. FOOD RESIDUE AND CONDENSATION MAY CAUSE RUSTING OR ARCING AND DAMAGE TO THE OVEN. AFTER USE, WIPE DRY ALL SURFACES, INCLUDING VENT OPENINGS, OVEN SEAMS, AND UNDER GLASS TRAY.

Shop Accessories

Purchase Parts, Accessories and Instruction Books online for all Panasonic Products by visiting our Web Site at:

shop.panasonic.com/support

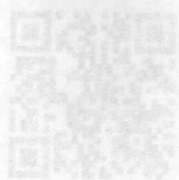
Parts Available to Order:

Instructions/Operating Manual (this book)	F0003BT30AP
Glass Tray	F06015Q00AP
Roller Ring Assembly	F290D6W50XP

Before Requesting Service

See below before calling for service, as most problems can easily be remedied by following these simple solutions:

Problem	Solution
The oven causes TV interference.	Some radio, TV, Wi-Fi, cordless telephone, baby monitor, blue tooth or other wireless equipment interference might occur when you cook with the microwave oven. This interference is similar to the interference caused by small appliances such as mixers, vacuums, blow dryers, etc. It does not indicate a problem with your oven.
Steam accumulates on oven door and warm air comes from the oven vents.	During cooking, steam and warm air are given off from the food. Most of the steam and warm air are removed from the oven by the air which circulates in the oven cavity. However, some steam will condense on cooler surfaces such as the oven door. This is normal. After use, the oven should be wiped dry (see page 16).
Oven will not turn on.	<p>The oven is not plugged in securely or needs to be reset; remove plug from outlet, wait ten seconds and re-insert.</p> <p>Main circuit breaker or main fuse is tripped; reset main circuit breaker or replace main fuse.</p> <p>There is a problem with the outlet; plug another appliance into the outlet to check if it is working.</p>
Oven will not start cooking.	<p>The door is not completely closed; close the oven door securely.</p> <p>Start was not pressed after programming; press Start.</p> <p>Another program is already entered into the oven; press Stop/Reset to cancel the previous program and enter new program.</p> <p>The program is not correct; program again according to the Operating Instructions.</p> <p>Stop/Reset has been pressed accidentally; program oven again.</p>
The Glass Tray wobbles.	The Glass Tray is not positioned properly on the Roller Ring or there is food under the Roller Ring; take out Glass Tray and Roller Ring. Wipe with a damp cloth and reset Roller Ring and Glass Tray properly.
When the oven is operating, there is noise coming from the Glass Tray.	The Roller Ring and oven bottom are dirty; clean these parts according to Care and Cleaning of Your Microwave Oven (see page 16).
The word "Child" appears in the display.	The CHILD SAFETY LOCK was activated by pressing Start three times; Deactivate CHILD SAFETY LOCK by pressing Stop/Reset three times.
The oven stops cooking and "H00", "H97" or "H98" appears in the display.	The oven's power supply has failed; please contact an authorized Service Center (see next page).



Scan this code for special instructions and features

Limited Warranty (Only for U.S.A.)

Panasonic Products Limited Warranty

Limited Warranty Coverage (For USA Only)

If your product does not work properly because of a defect in materials or workmanship, Panasonic Consumer Electronics Corporation (referred to as "the warrantor") will, for the length of the period indicated on the chart below, which starts with the date of original purchase ("warranty period"), at its option either (a) repair your product with new or refurbished parts, (b) replace it with a new or a refurbished equivalent value product, or (c) refund your purchase price. The decision to repair, replace or refund will be made by the warrantor.

Product or Part Name	Labor	Parts
ALL PARTS (EXCEPT MAGNETRON TUBE)	1 yr.	1 yr.
MAGNETRON TUBE	1 yr.	5 yr.

During the "Labor" warranty period there will be no charge for labor. During the "Parts" warranty period, there will be no charge for parts. This warranty only applies to products purchased and serviced in the United States. This warranty is extended only to the original purchaser of a new product which was not sold "as is".

Carry-In or Mail in Service:

To find a service center please visit: <http://shop.panasonic.com/support>
When shipping the unit, carefully pack and send it in the original (or supplied) carton. Include a letter detailing the complaint along with the bill of sales and provide a daytime phone number where you can be reached. A valid registered receipt is required under the Limited Warranty.
When shipping Lithium Ion batteries please visit our web site at <http://shop.panasonic.com/support> as Panasonic is committed to providing the most up to date information.

IF REPAIR IS NEEDED DURING THE WARRANTY PERIOD, THE PURCHASER WILL BE REQUIRED TO FURNISH A SALES RECEIPT/PROOF OF PURCHASE INDICATING DATE OF PURCHASE, AMOUNT PAID AND PLACE OF PURCHASE. CUSTOMER WILL BE CHARGED FOR THE REPAIR OF ANY UNIT RECEIVED WITHOUT SUCH PROOF OF PURCHASE.

Limited Warranty Limits And Exclusions

This warranty ONLY COVERS failures due to defects in materials or workmanship, and DOES NOT COVER glass, plastic parts, temperature probes (if included) and normal wear and tear or cosmetic damage. The warranty ALSO DOES NOT COVER damages which occurred in shipment, or failures which are caused by products not supplied by the warrantor, or failures which result from accidents, misuse, abuse, neglect, bug infestation, mishandling, misapplication, alteration, faulty installation, set-up adjustments, maladjustment of consumer controls, improper maintenance, power line surge, lightning damage, modification, or commercial use (such as in a hotel, office, restaurant, or other business), rental use of the product, service by anyone other than a Factory Service center or other Authorized Servicer, or damage that is attributable to acts of God.

THERE ARE NO EXPRESS WARRANTIES EXCEPT AS LISTED UNDER "LIMITED WARRANTY COVERAGE".

THE WARRANTOR IS NOT LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OF THIS PRODUCT, OR ARISING OUT OF ANY BREACH OF THIS WARRANTY.

(As examples, this excludes damages for lost time, travel to and from the servicer, loss of or damage to media or images, data or other memory or recorded content. The items listed are not exclusive, but for illustration only.)

ALL EXPRESS AND IMPLIED WARRANTIES, INCLUDING THE WARRANTY OF MERCHANTABILITY, ARE LIMITED TO THE PERIOD OF THE LIMITED WARRANTY.

Some states do not allow the exclusion or limitation of incidental or consequential damages, or limitations on how long an implied warranty lasts, so the exclusions may not apply to you.

This warranty gives you specific legal rights and you may also have other rights which vary from state to state. If a problem with this product develops during or after the warranty period, you may contact your dealer or Service Center. If the problem is not handled to your satisfaction, then write to:

Consumer Affairs Department
Panasonic Corporation of North America
661 Independence Pkwy
Chesapeake, VA23320

PARTS AND SERVICE, WHICH ARE NOT COVERED BY THIS LIMITED WARRANTY, ARE YOUR RESPONSIBILITY.

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Customer Services Directory

For Product Information, Operating Assistance, Parts, Owner's Manuals, Dealer and Service info go to <http://shop.panasonic.com/support>

For the hearing or speech impaired TTY: 1-877-833-8855

As of June 2015

Specifications

Power Source.....	120 V, 60 Hz
Power Consumption.....	12.4 Amps, 1,480 W
Cooking Power*.....	1,200 W
Outside Dimensions (W x H x D).....	20 1/8" x 12 1/4" x 15 1/8" (525 mm x 310 mm x 401 mm)
Oven Cavity Dimensions (W x H x D).....	13 1/8" x 9 1/8" x 14 3/8" (355 mm x 251 mm x 365 mm)
Operating Frequency.....	2,450 MHz
Net Weight.....	Approx. 25.5 lbs (11.5 kg)

*IEC Test procedure

Specifications subject to change without notice.

Trim Kit Information

Trim Kit Cabinet

Model Number.....	NN-TK621S
Outside Dimensions (W x H).....	27" x 16 1/2" (684 mm x 419 mm)
Cabinet Opening (W x H x D).....	25 1/2" x 15 5/8" x 21" (648 mm x 389 mm x 533 mm)

User's Record

The serial number of this product may be found on the back side of the oven or on the left side of the control panel. You should note the model number and the serial number of this oven in the space provided and retain this book as a permanent record of your purchase for future reference.

Model No. _____

Serial No. _____

Date of Purchase _____



Scan this code for special instructions and features