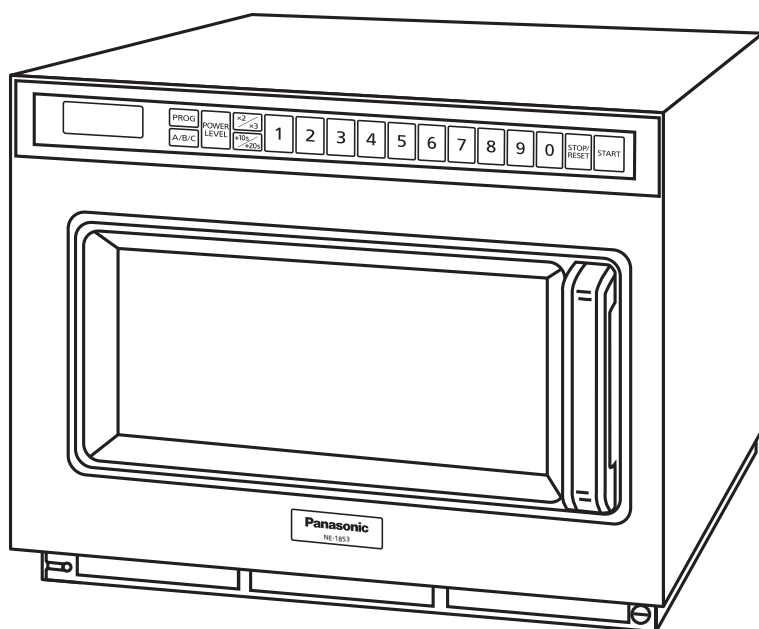


# Panasonic®

## Operating Instructions

For Commercial Use

Model No. **NE-1853**  
Microwave Oven



Please read these instructions completely before operating this oven and keep for future reference.

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# Safety Information

## Installation

### Earthing

IMPORTANT: FOR PERSONAL SAFETY, THIS APPLIANCE MUST BE PROPERLY EARTHED.

When an outlet is not earthed, it is the personal responsibility and obligation of the customer to have it replaced with a properly earthed outlet.

### Voltage and power warning

The voltage used must be the same as specified on the Microwave Oven. Using a higher voltage than that which is specified is dangerous, and may result in a fire or other type of accident causing damage.

### Placement of the oven

Locate the oven on a surface which is flat and stable. Do not place the oven in a hot or damp place;

example—near a gas or electric range. Do not operate the oven when the room temperature is higher than 40°C (104°F) and/or the humidity is more than 85%. Free airflow around the oven is important.

There is a possibility of a small amount of interference with weak broadcast signals if the Microwave Oven is too close to a radio or TV. When installing the microwave oven, if there will be a ceiling above the microwave oven, please keep minimum 20 cm free space between the ceiling and microwave oven.

Do not install the microwave oven into the cabinet.

## Caution

### Removal of protective film

A protective film is used to prevent scratching of the outer case during transportation. Peel this film off before installation or use.

### Do not turn on the oven when it is empty.

In order to maintain the high quality of the magnetron tubes and other components, you are requested not to turn the oven on with no food inside.

### Do not open the cabinet.

High voltages are present inside the cabinet. Repairs and adjustments should be done only by qualified service personnel.

### Do not block the air vents.

This Microwave Oven requires free airflow in the back for maximum cooling efficiency. You should keep the air vents clear while cooking.

### Do not dry clothes in the oven.

Do not dry clothes in the Microwave Oven since there is a possibility of the clothes burning if left in the oven for too long of a time.

## WARNING

1. The door seals and door seal areas should be cleaned with a damp cloth.
2. The appliance should be inspected for damage to the door seals and door seal areas and if these areas are damaged the appliance should not be operated until it has been repaired by service technician trained by the manufacturer.
3. It is hazardous for anyone other than a competent person to carry out any service or repair operation that involves the removal of a cover which gives protection against exposure to microwave energy.
4. The appliance should not be operated without food in the oven, operation in this manner being likely to damage the appliance.
5. If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.
6. Before use, the user should check that utensils are suitable for use in microwave ovens.
7. Liquid or other food must not be heated in sealed containers since they are liable to explode.
8. The children can use the unit without the adult only the children having sufficient safety knowledge, and completely know about the danger if do not operate in a safe way.
9. Microwave heating of beverages can result in delayed eruptive boiling, therefore care must be taken when handling the container.
10. The contents of feeding bottles and baby food jars shall be stirred or shaken and the temperature checked before consumption, in order to avoid burns.
11. When heating food in plastic or paper containers, keep an eye on the oven due to the possibility of ignition.
12. If smoke is observed, switch off or unplug the appliance and keep the door closed in order to stifle any flames.
13. Eggs in their shell and whole hard-boiled eggs should not be heated in microwave ovens since they may explode, even after microwave heating has ended.
14. The oven should be cleaned regularly and any food deposits removed.
15. Failure to maintain the oven in a clean condition could lead deterioration of the surface that could adversely affect the life of the appliance and possibly result in a hazardous situation.
16. The appliance should not be cleaned with a water jet.

## Important Instructions

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

1. Read all instructions before using microwave oven.
2. Some products such as whole eggs and sealed containers—(for example, closed glass jars **and sealed baby bottles with teat**)—may explode and should not be heated in microwave oven.
3. Use this microwave oven only for its intended use as described in this manual.
4. Do not operate this microwave oven, if it is not working properly, or if it has been damaged or dropped.
5. Do not use outdoors.
6. Do not immerse cord or plug in water.
7. Keep cord away from heated surfaces.
8. Do not let cord hang over edge of table or counter.
9. To reduce the risk of fire in the oven cavity:
  - a) Do not overcook food. Carefully attend microwave oven if paper, plastic, or other combustible materials are placed inside the oven to facilitate cooking.
  - b) Remove wire twist-ties from bags before placing bag in oven.
10. Do not dry clothes, newspapers or other materials in oven. They may catch on fire.
11. Do not use recycled paper products, as they may contain impurities which may cause sparks and/or fires when used.
12. Do not store flammable materials next to, on top of, or in the oven. It could be a fire hazard.
13. Do NOT use this oven to heat chemicals or other non-food products. Do NOT clean this oven with any product that is labeled as containing corrosive chemicals. The heating of corrosive chemicals in this oven may cause microwave radiation leaks.

## Food

1. Do not use your oven for home canning or the heating of any closed jar. Pressure will build up and the jar may explode. In addition, the microwave oven cannot maintain the food at the correct canning temperature. Improperly canned food may spoil and be dangerous to consume.
2. Do not attempt to deep fat fry in your microwave oven.
3. Potatoes, apples, egg yolks, whole squash and sausages are examples of foods with nonporous skins. This type of food must be pierced before cooking, to prevent bursting.
4. When heating liquids, e.g. soup, sauces and beverages in your microwave oven, overheating the liquid beyond boiling point can occur without evidence of bubbling. This could result in a sudden boil over the hot liquid. To prevent this possibility the following steps should be taken:
  - a) Avoid using straight-sided containers with narrow necks.
  - b) Do not overheat.
  - c) Stir the liquid before placing the container in the oven and again halfway through cooking time.
  - d) After heating, allow to stand in the oven for a short time, stirring again before carefully removing the container.
5. **DO NOT USE A CONVENTIONAL MEAT THERMOMETER IN THE MICROWAVE OVEN.** To check the degree of cooking of roasts and poultry use a **MICROWAVE THERMOMETER**. Alternatively, a conventional meat thermometer may be used after the food is removed from the oven. If undercooked, return meat or poultry to the oven and cook for a few more minutes at the recommended power level. It is important to ensure that meat and poultry are thoroughly cooked.
6. Extreme care should be taken when cooking popcorn in a microwave oven. Cook for minimum time as recommended by manufacturer. Use the directions suitable for the wattage of your microwave oven. **NEVER** leave oven unattended when popping popcorn.

# Before Use

## Cookware

1. Heat-proof glassware, such as Pyroceram and Pyrex, is best suited for use in the Microwave Oven.
2. Do not use metal ware, ceramics trimmed with gold or silver, or any container with a metal content.
3. If “arcing” should occur, check the cookware carefully again for metal.
4. You may use ordinary glassware, chinaware, plastic-ware and paper-ware, when cooking food that requires a low temperature. Using this type of cookware for high temperature cooking may cause cracking or warping.
5. You can cook steamed vegetables in special “see-through” wrapping film, such as Saran Wrap, or wax paper.  
Do not cook in a plastic bag.

### CAUTION

Do not use METAL UTENSILS in this oven.

## Defrosting Frozen Food

1. If you try to completely defrost frozen food in the Microwave Oven, uneven defrosting may occur due to the differences in the thickness and shape of the food. Drippings may also result, and sometimes a part of the food cooks although other parts still remain frozen. In actual usage of frozen food, you should not normally defrost them 100%, 70% defrosting in the Microwave Oven is ideal and helpful for the next cooking operation.
2. To defrost evenly, turn the food 180°, or turn it over during defrosting.
3. To defrost fatty meat, heat it in the Microwave Oven for a short time and leave it to stand at room temperature, or heat it intermittently until defrosted.
4. When you defrost a whole chicken, or any frozen food of irregular shape, wrap legs or thin parts with aluminum foil. Otherwise thin parts will be defrosted faster and sometimes cooked before other parts have properly defrosted. For big pieces of meat, wrap the sides with aluminum foil so that they will be uniformly thawed by vertical microwaves only.
5. Ice should be removed at times during defrosting.

## Other Helpful Instructions

### For best results

1. When determining time for particular food, always figure minimum time and check occasionally during cooking for progress. The Microwave Oven cooks so quickly, therefore it is easy to overcook your food.
2. Be careful of the cooking time for small quantities of food, or food with low water content. They may burn if cooked too long.
3. Do not use the oven for drying kitchen towels or napkins. They may burn if heated too long.
4. Do not try to boil eggs in the oven.
5. When you cook an egg be sure to pierce the yolk membrane prior to placing into the oven to prevent the egg bursting.

### How to get browned finish

Generally food does not brown when cooked by a Microwave Oven. This is one of the features of the equipment. To brown chicken, brush sauce on the surface before or during cooking. You can also brown meat in a conventional frying pan before cooking in the oven. A browning skillet for the Microwave Oven can obtain the same result.

### For even finished cooking

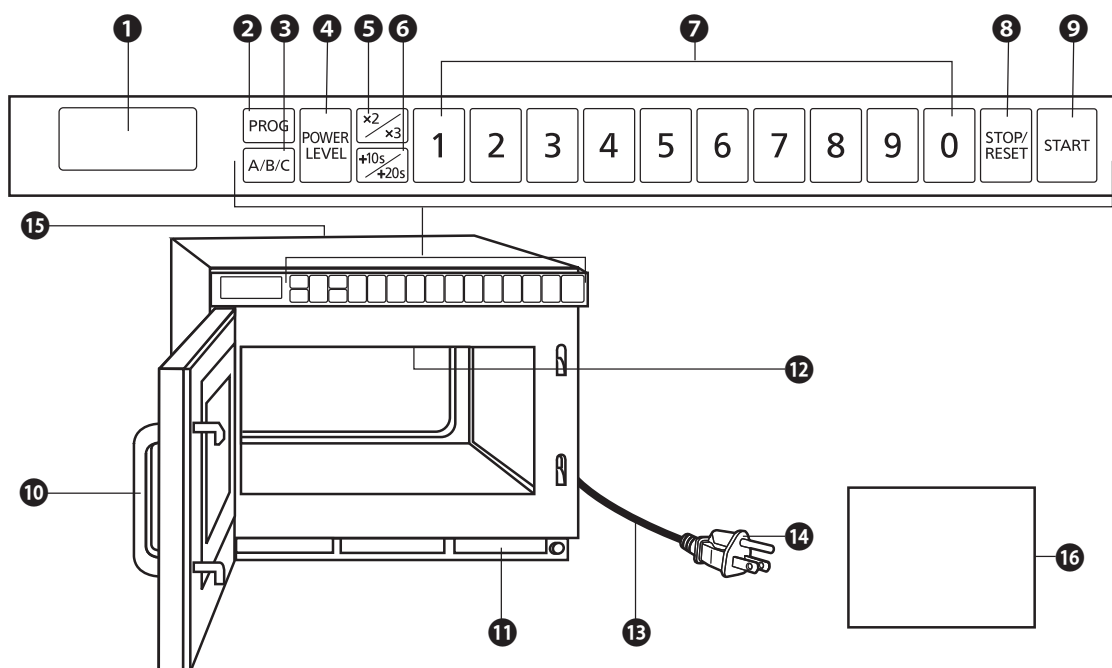
Open the door and give the dish a half turn, or turn the food over during cooking. This helps to achieve more even cooking. When you cook chicken the legs cook faster than other parts. Wrap the legs with aluminum foil during cooking to reflect the microwave energy in order to create even cooking.

# Definitions and Feature Explanations

This oven has many features not typically found on other commercial Microwave Ovens.

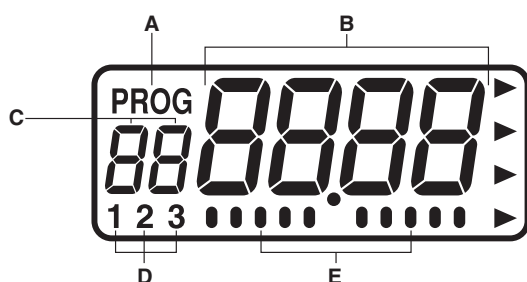
FEATURE	EXPLANATION
Manual Heating	Gives the user maximum flexibility to set the oven to desired heating time and power level. Ideal for menus that require variations in heating.
Single Stage Heating	Allows the oven to run at the selected power level for the selected heating time.
2 to 5 Stage Heating	Allows the oven to be set to begin heating at one power level then shift automatically to a different power level after designated amount of heating time (i.e. HIGH to MED or DEF to HIGH).
Interrupt Function	Allows opening of the oven door to check on the food in the cavity. Closing the door and touching Start Pad resumes heating. Cooking time does not countdown while you check on your food. <b>Note:</b> Interrupt Feature is deactivated in "Program Lock".
Repeat Function (For Manual Heating Only)	After you remove your food from the oven, the timer is automatically preset to repeat the last heating time and power level. This is especially convenient for daily specials that you do not want to program into Memory Pads.
Two Step Operation (In "Program Unlock" Only)	Gives you time to confirm and or revise the selected heating program before starting the heat cycle. (Select heating program either manually or by Pad number, and then touch Start Pad.)
One Touch Start (In "Program Lock" Only)	One touch of the desired programmed number pads starts heating. Great for Fast Food, Convenience store and Vending applications.
Cycle Counter	The oven can display the total number of times the oven has been operated by pad number, by manual operation and cumulatively. Great for analyzing usage of the oven and traffic flow at the location.
Program Lock	<ol style="list-style-type: none"> <li>1. "Locks" the control panel number pads into their programmed heating times and power levels.</li> <li>2. Converts the oven to "One Touch Start" operation.</li> <li>3. Deactivates Program, Power Level Selector and Start Pad.</li> <li>4. Deactivates manual operation.</li> </ol> Prevents unwanted erasing of Memory Pads. Simplifies operation—Great for Fast Food, Convenience Store and Vending applications.
Program Unlock	Deactivates "Program Lock" and activates all other features.
Self Diagnostics	The oven constantly monitors its operation. When an operational problem develops, the Digital Display Window displays a Failure code. By checking the code number against the list in this manual you will know the nature of the problem, whether you can solve the problem yourself, or need to call a service agent or need to call an electrician. If a service agent is required the Failure code number will let him know which parts to bring on the Service call.
Tone Loudness Control	Allows you to set the loudness of the beep tone to one of 4 different levels.
Tone Length Control	Allows you to set the length of the end of heating cycle beep tone to one of 3 different lengths.
Tone Pitch Control	Allows you to set the pitch of the end of heating cycle beep tone to one of 3 different pitches.
Program List	Allows you to review all currently programmed Pad numbers, heating times and Power levels for each stage.
Filter Clean Function	The word "FILT" will appear in the display after 500 hours of use, to remind you to remove and clean the Air Filter. This time can be reprogrammed to your own needs.
Double/Triple Quantity Pad	This Pad has a preset magnification of 1.6 times the original cooking time for double quantity and 2.2 times for the triple quantity, to cook two or three portions at once.
+10s/+20s Pad	This Pad has preset heating times of 10 seconds and 20 seconds. The heating at HIGH power for 10 seconds will start by touching this Pad once, and the heating at HIGH power for 20 seconds will start by touching this Pad twice.

# Outline Diagram



- ① Digital Display Window (see below)
- ② Prog (Program) Pad
- ③ Shift (A/B/C) Pad
- ④ Power Level Selector Pad
- ⑤ Double/Triple Quantity Pad
- ⑥ +10s/+20s Pad
- ⑦ •Number/Memory Pads
- Time Input
- ⑧ Stop/Reset Pad

- ⑨ Start Pad
- ⑩ Door Handle
- ⑪ Air Filter
- ⑫ Splatter Shield (top of inner cavity)
- ⑬ Power Cord
- ⑭ Power Plug
- ⑮ Caution Label (Not shown)
- ⑯ OPERATING GUIDE



- A—Program Display
- B—Heating Time Display  
("min. sec." or "hour min.")
- C—•Memory Pad Number Display
- Heating Stage Indicator
- D—Pattern of Buzzer Sound Setting
- E—•Calling Programmed Heating:  
Stage Number Indicator
- Programmed Heating in Progress:  
Operation Indicator
- Beep Tone Setting: Scale Indicator

## This oven is preset at the factory for the following:

1. Manual operation
2. Number Pads preset to HIGH power at the indicated heating times for single stage heating.  
A1=10 sec.    A2=20 sec.    A3=30 sec.    A4=40 sec.    A5=50 sec.  
A6=1 min.    A7=1 min. 15 sec.    A8=1 min. 30 sec.    A9=1 min. 45 sec.    A0=2 min.
3. Program unlock
4. Double Quantity=1.6 times    Triple Quantity= 2.2 times
5. Cycle counter set to "0" on all pads.
6. Oven Lamp    When the door is open = ON    Blinking at the end of heating cycle = OFF  
Decrease brightness during cooking = OFF
7. The default filter cleaning time is set to "500".

If you wish to change these times, please consult the operating instructions to find how to program them.

# How to Operate

## POWER LEVEL SELECTOR PAD

Each time the pad is touched, the Power Level switches as the illustration below.



<b>HIGH</b>	P10: 1800 W*	<b>LOW</b>	P3: 30% P2: 25%
<b>MEDIUM HIGH</b>	P9: 90% P8: 80% P7: 70% P6: 60%	<b>DEFROST</b>	P1: 340 W
		<b>OFF</b>	P0: 0%
		<b>HEAT FROM TOP DOWN</b>	PU1: 50% PU2: 25%
<b>MEDIUM</b>	P5: 50% P4: 40%	<b>HEAT FROM BOTTOM UP</b>	PL1: 50% PL2: 25%

\*IEC Test Procedure

## A. Manual Single Stage Heating



1. Make sure the oven is plugged into a properly earthed electrical outlet.



2. Open the door.  
The oven lamp will turn on. "0" will appear in the Digital Display Window.
3. Put the food into a suitable container, place it in the center of the oven and then close the door securely.  
The oven lamp will turn off.  
**Note:** While "0" appears, operation is available. 1 minute after the door is closed, "0" will disappear.



4. Select the desired Power Level by touching Power Level Selector Pad.  
The selected Power Level will be displayed in the Digital Display Window and the single stage heating indicator "1" will start to blink.  
[Example]: Touch Power Level Selector Pad once for HIGH power.  
**Note:** Each time Power Level Selector Pad is touched, the Power Level switches as the above Power Level Selector illustrates.



5. Set the desired heating time by touching the appropriate Number Pads.  
**Note:** The maximum set time for "DEFROST" and "P0" is 30 minutes, and 15 minutes for all others.  
[Example]: Touch Number Pads "2", "0" and "0" for 2 minutes.



6. Touch Start Pad.  
A. The oven lamp will turn on.  
B. Heating will start.  
C. During operation, the indicator appears from the left.  
D. The heating time on digital display will count down.



7. When all time expires, the end of cycle beep tone will sound and all heating will stop. The oven lamp will turn off. The display will blink "0000" until the door is opened. 1 minute later cooling fan will stop.

(Continued on next page.)





8. Open the door and take the food out.  
The oven lamp will turn on. The digital display will show the originally selected time and heating stage number.
9. Close the door.  
The oven lamp will turn off and 1 minute later the Digital Display Window will go blank.

**SPECIAL NOTE: For both single and 4 stage heating.**

1. While heating, one touch on Stop/Reset Pad stops the oven. You can restart it by touching Start Pad or a second touch on Stop/Reset Pad will cancel the selected program.
2. While not in a heating cycle, one touch on Stop/Reset Pad cancels the selected program.

**REPEAT FEATURE**

1. You can repeat exactly the same manually selected heating time by touching only Start Pad, if you use the oven again within 1 minute.
2. After 1 minute of non-use with the door closed, the repeat feature will be cancelled.

## B. Manual 2 to 5 Stage Heating



1. Follow Steps 1–5 on page 8.
2. Select the desired Power Level for the second stage heating by touching Power Level Selector Pad the appropriate number of times.  
The Power Level will be displayed in the Digital Display Window and the second stage indicator “2” will start to blink.  
[Example]: Touch Power Level Selector Pad 8 times for LOW power.



3. Set the desired heating time for the second stage by touching the appropriate Number Pads.  
**Note:** The maximum set time for “DEFROST” and “P0” is 30 minutes, and 15 minutes for all others.  
However, the TOTAL TIME can be set up to 25 minutes for continuous heating (1 to 5 stage heating) that excludes “DEFROST” and “P0”.  
[Example]: Touch Number Pads “1”, “0” and “0” for 1 minute.



4. Touch Start Pad.
  - A. The total time for both stages will be displayed.
  - B. The oven lamp will turn on.
  - C. During operation, the indicator appears in order from the left.
  - D. The heating time for the first stage will count down.



5. After the first stage heating time expires, a single beep tone will sound, the second stage heating indicator “2” will start to blink, and the heating time will continue to count down.

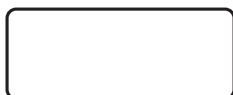


6. When all time expires, the end of cycle beep tone will sound. All heating will stop. The oven lamp will turn off. The time display will blink “0000” until the door is opened. 1 minute later cooling fan will stop.

(Continued on next page.)



7. Open the door and take the food out.  
The oven lamp will turn on. The digital display will show the originally selected time and heating stage number.



8. Close the door.  
The oven lamp will turn off and 1 minute later the Digital Display Window will go blank.

**Note:** For the heating cycle of the third and later stages, select Power Level once again after Step 3 on page 9 and set a heating time.

See Special Note of “Manual Single Stage Heating” on page 9.

## C. Programming Memory Pads for Single Stage Heating

The oven can not be programmed until the program lock feature is deactivated.

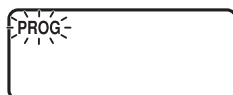
(See page 14, J. To Activate Program Lock.)



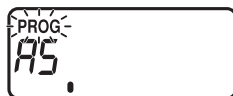
1. Make sure the oven is plugged into a properly earthed electrical outlet.



2. Open the door and leave it open.



3. Touch Prog Pad.  
“PROG” sign will start to blink in the Digital Display Window.



4. Touch Memory Pad you desire to program.  
The pad number and the previously programmed information will appear in the Digital Display Window.  
[Example]: Touch Memory Pad “5”.



5. Select the desired Power Level by touching Power Level Selector Pad.  
The selected power level will be displayed in the window and the single stage heating indicator “1” will start to blink.  
[Example]: Touch Power Level Selector Pad 10 times for DEFROST power.



6. Set the desired heating time by touching the appropriate Number Pad.  
**Note:** The maximum set time for “DEFROST” and “P0” is 30 minutes, and 15 minutes for all others.  
[Example]: Touch Number Pads “1”, “0” and “0” for 1 minute.



7. Touch Prog Pad again.  
The “PROG” sign and the single stage heating indicator “1” will stop blinking. This means that you have completed programming the selected Memory Pad for the single stage heating.



8. 3 seconds after programming is completed, “0” will appear.
9. Program the remaining Memory Pads as desired by repeating Steps 3–7 above.

**Note:** ●When the “PROG” Display is blinking, the program can be cancelled and/or one touch on Stop/Reset Pad erased the programmed Number/Memory Pad number.  
●When you want to program B or C side, touch Shift (A/B/C) Pad before touching Program Number Pad.

## D. Programming Memory Pads for 2 to 5 Stage Heating



1. Complete Steps 1–6 above.



2. Select Power Level for the second stage by touching Power Level Selector Pad. The selected Power Level will be displayed in the window and the second stage heating indicator “2” will start to blink.

[Example]: Touch Power Level Selector Pad once for HIGH power.



3. Set the desired heating time by touching appropriate Number Pads.

**Note:** The maximum set time for “DEFROST” and “P0” is 30 minutes, and 15 minutes for all others.

However, the TOTAL TIME can be set up to 25 minutes, and 15 minutes for continuous heating (1 to 5 stage heating) that excludes “DEFROST” and “P0”.

[Example]: Touch Number Pads “2”, “0” and “0” for 2 minutes.



4. Touch Prog Pad again and the “PROG” sign and the second stage heating indicator “2” will stop blinking. The total time for both stages will be displayed. This means that you have completed programming the desired Memory Pad for the second stage heating.



5. 3 seconds after programming is completed, “0” will appear.

6. Program the remaining pads as desired by repeating the Steps above.

**Note:** ●When you want to program B or C side, touch Shift (A/B/C) Pad before touching Program Number Pad.

●Repeat the above procedure to set Heating for the third stage and later stages.

## E. Memory Pad Heating



1. Make sure the oven is plugged into a properly earthed electrical outlet.



2. Open the door.

The oven lamp will turn on. “0” will appear in the Digital Display Window.

**Note:** While “0” will appear, operation is available. 1 minute after the door is closed, “0” will disappear.

3. Put the food into a suitable container, place it in the center of the oven and then close the door securely.

The oven lamp will turn off.



4. Touch the desired Memory Pad.

A. The currently programmed information will be indicated.

[Example]: Memory Pad “5” (Program No. A-5)

The heating program (at DEFROST power for 1 minute, at HIGH power for 2 minutes) as programmed on pages 10–11 is set.



5. Touch Start Pad.

A. The oven lamp will turn on.

B. During operation, the indicator appears in order from the left.

C. The heating time will count down.

(Continued on next page.)



6. When all the time expires, the end of the cycle beep tone will sound. All heating will stop. The oven lamp will turn off. The time display will blink "0000" until the door is opened. 1 minute later, cooling fan will stop.



7. Open the door and take the food out.  
The oven lamp will turn on.
8. Close the door.  
The oven lamp will turn off and 1 minute later the Digital Display Window will go blank.

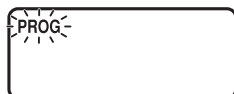
**Note:** To use B or C side Program, touch Shift (A/B/C) Pad before touching Program Number Pad.

## F. Programming Double/Triple Quantity Pad

(The oven can not be programmed until the program lock feature is deactivated.)



1. Open the door and leave it open.  
The oven lamp will turn on, and "0" will appear.



2. Touch Prog Pad.  
"PROG" will blink in the Digital Display Window.



3. Touch Memory Pad for the desired program.  
The pad number and the previously programmed information will appear in the display. "PROG" will start to blink.



4. Touch Double/Triple Quantity Pad once.  
The previously selected magnification number will appear in the display.  
[Example]: 1.6 times is 16. (Double quantity) 2.2 times is 22. (Triple quantity)



5. Set the desired magnification by touching the appropriate Number Pad.  
[Example]: 1.5 times; Touch Number Pads "1" and "5".



6. Touch Prog Pad again.  
The "PROG" will stop blinking. This means that you have completed programming the selected Memory Pad for appropriate double quantity.



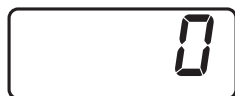
7. After 3 seconds later, "0" will appear.

**Note:** If you want to change appropriate time for triple quantity, you touch Double/Triple Quantity Pad twice as in Step 4 above. The magnification is preset. Each magnification must be programmed separately for alterations.

**N.B.** Please test for correct times when setting the program to achieve correct temperatures.

## G. Memory Pad Heating for Double/Triple Quantity Heating

[Make sure the unit is properly programmed. (See page 12.)]



1. Follow Steps 1–3 in “E. Memory Pad Heating”.



2. Touch Double/Triple Quantity Pad once.

**Note:** When you want triple quantity heating, touch Double/Triple Quantity Pad twice.



3. Touch the desired Memory Pad.

[Example]: Memory Pad 5 (Program No. A-5)



4. Touch Start Pad.

A. The oven lamp will turn on.

B. During operation, the indicator appears in order from the left.

C. The heating time will count down.

**Note:** If program lock is activated, the heating program starts immediately, i.e. there is no need to touch Start Pad. (See page 14.)



5. When all time has expired, the end of the cycle beep tone will sound. All heating will stop. The oven lamp will turn off. The time display will blink “0000” until the door is opened.

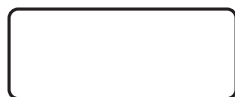


6. Open the door and remove the food. Close the door.

1 minute later the Digital Display Window will go blank.

**Note:** To use B or C side Program, touch Shift (A/B/C) Pad before touching Program Number Pad.

## H. +10s/+20s Pad Heating



1. Make sure the oven is plugged into a properly earthed electrical outlet.



2. Open the door.

The oven lamp will turn on. “0” will appear in the Digital Display Window.

**Note:** While “0” will appear, operation is available. 1 minute after the door is closed, “0” will disappear.

3. Put the food into a suitable container, place it in the center of the oven and then close the door securely.

The oven lamp will turn off.



4. Touch +10s/+20s Pad once.

A. The oven lamp will turn on.

B. During operation, the indicator appears in order from the left.

C. Heating will start on HIGH power for 10 seconds.

[Example]: Touch +10s/+20s Pad once for 10 seconds.

Touch +10s/+20s Pad twice for 20 seconds.



5. When all the time expires, the end of cycle beep tone will sound. All heating will stop. The oven lamp will turn off. The time display will blink “0000” until the door is opened. 1 minute later, cooling fan will stop.

(Continued on next page.)



6. Open the door and take the food out.  
The oven lamp will turn on.
7. Close the door.  
The oven lamp will turn off and 1 minute later the Digital Display Window will go blank.

**Note:** While heating, one touch on Stop/Reset Pad or opening the door will cancel the heating program.

## I. To Read the Cycle Counter

### •To display all cooking times ever used



1. Open the door and leave it open.  
The oven lamp will turn on. "0" will appear in the display.



2. While touching Start Pad, touch Number Pad "3".  
All the cooking times that were ever used will appear.

### •To display the cumulative number of times the oven was used



1. Open the door and leave it open.  
The oven lamp will turn on. "0" will appear in the display.

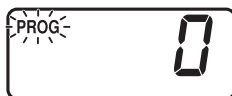


2. While touching Start Pad, touch Power Level Selector Pad.  
The Number of cycles that the oven has been used will appear.  
**Note:** The last two digits are dropped from the cumulative number of times the oven was used, which is displayed in units of 100 when used over 100 times.

## J. To Activate Program Lock



1. Make sure the oven is plugged into a properly earthed electrical outlet.



2. Open the door and leave it open.  
The oven lamp will turn on. "0" will appear in the display. While touching Start Pad, touch Prog Pad until the display show "PROG", "P" and "L" (for more than 2 seconds).



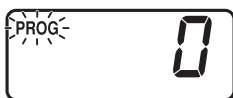
3. Program Lock feature is now activated.  
**Note:** In "Program Lock"
  - a. The oven is started by touching the desired Memory Pad. There is no need to touch Start Pad.
  - b. The Interrupt feature is deactivated—opening the door cancels the remaining time on the program.
  - c. The oven can not be programmed or run manually until the Program Lock feature is deactivated.

## K. To Deactivate Program Lock



1. Make sure the oven is plugged into a properly earthed electrical outlet.

(Continued on next page.)



2. Open the door and leave it open.

The oven lamp will turn on. "0" will appear in the display. While touching Start Pad, touch Prog Pad until the Digital Display Window show "PROG" and "P" (for more than 2 seconds).



3. Program Lock feature is now deactivated.

**Note:** In "Program Unlock"

- a. Oven reverts to a two-touch operating mode (Number/Memory Pad + Start Pad).
- b. Repeat and interrupt features are operational.
- c. Memory Pads can be programmed.
- d. Manual heating is operational.
- e. Tone loudness control, length control and pitch control (beep tone at the end of heating cycle/filter cleaning alarm) are operational.

## L. To Read Program List

1. Open the door and leave it open.



2. While touching Start Pad, touch Number Pad "1".

All currently programmed information (the program set into each Number/Memory Pad (A0 to C9), Beep Tone, Program Lock, Oven Lamp settings when the door is open, Oven Lamp blink settings at the end of heating cycle and Oven Lamp reduction settings during cooking information) will continuously appear.

**Note:** When the filter cleaning alarm counter is set, this appears after Program Lock.



### How to erase memory content

1. Open the door (keep it open) and touch Prog Pad.
2. Select the memory number you want to erase, and touch Power Level Selector Pad.
3. Touch Stop/Reset Pad, and "0" is displayed to indicate that memory is erased.  
\*Memory content is automatically erased if overwritten.



## M. To Select Beep Tone Options

(The oven can not be programmed until the program lock feature is deactivated.)

The beep tone can be set for loudness—(4 Levels), length of tone—(3 Options), pitch of tone—(3 Options) and pitch of filter cleaning alarm—(3 Options). You can select the combination of loudness, length and pitch that best suits your needs.

The beep tone is set at the factory to the loudest level (#3), to 3 beeps and to normal pitch.

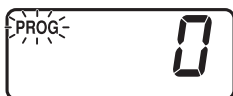
### To Select Loudness Level

1. Make sure the oven is plugged into a properly earthed electrical outlet.



2. Open the door and leave it open.

The oven lamp will turn on. "0" will appear in the display.



3. Touch Prog Pad first and then touch Start Pad.

"3 bEEP" and pattern of buzzer sound settings indicator "1" will appear in the Digital Display Window and "PROG" will blink.



4. Select the desired sound loudness level by touching Start Pad.

Repeated touching of Start Pad will lower the loudness of the tone all the way to silent. The tone will sound at its loudness level and the Digital Display Window will display loudness level in digits (3 to 0—loud to silent) followed by the word "bEEP".

[Example]: 3 bEEP—Loudest (Factory Setting)

1 bEEP—Low

2 bEEP—Mid

0 bEEP—Silent



5. Touch Prog Pad again, and "PROG" will stop blinking, and the set loudness of beep tone will appear for 3 seconds. Then "0" will appear.

To proceed to set length of beep tone, touch Start Pad before "0" is displayed after Step 5.



### To Select Length of Tone

There are 3 options for the length of beep tone at the end of heating cycle.

- 1st. 3 beeps (Factory Setting)

- 2nd. Short beeps for 60 seconds

- 3rd. "Beep" sounds for 5 seconds, and then 3 beeps sound 30 seconds later and again 60 seconds later. (Buzzer reminder functions to prevent food from being forgotten in the oven.)



6. Within 3 seconds after touching Prog Pad at Step 5, touch Start Pad.

A. "PROG" will blink.

B. Current length of beep tone will be displayed.

C. The display changes to 1st, 2nd, and 3rd each time Start Pad is touched and the settings change.



7. When the desired length of tone has been selected, touch Prog Pad again.

"PROG" will stop blinking, and the set length of tone at the end of heating cycle will appear for 3 seconds. Then "0" will appear.



To proceed to set pitch of beep tone, touch Start Pad before "0" is displayed after Step 7.

(Continued on next page.)



### To Select Pitch of Tone

There are 3 options for the pitch of tone at the end of the heating cycle.

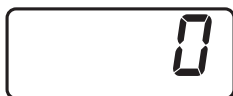
•: Low, ••: Normal (Factory Setting), •••: High



8. Within 3 seconds after touching Prog Pad at Step 7, touch Start Pad.
  - A. "PROG" will start to blink.
  - B. Current pitch of tone will be displayed.
  - C. The display changes to "•", "••", and "•••" each time Start Pad is touched and the settings change (Under the "bE" in "bEEP").



9. When the desired pitch of tone has been selected, touch Prog Pad again. "PROG" will stop blinking, and the set pitch of tone at the end of heating cycle will appear for 3 seconds. Then "0" will appear.



To proceed to set pitch of filter cleaning alarm, touch Start Pad before "0" is displayed after Step 9.

### To Select Pitch of Filter Cleaning Alarm

There are 3 options for the pitch of the filter cleaning alarm.

•: Low, ••: Normal (Factory Setting), •••: High



10. Within 3 seconds after touching Prog Pad at Step 9, touch Start Pad.
  - A. "PROG" will start to blink.
  - B. Current pitch of filter cleaning alarm will be displayed.
  - C. The display changes to "•", "••", and "•••" each time Start Pad is touched and the settings change (Under the "EP" in "bEEP").



11. When the desired pitch of filter cleaning alarm has been selected, touch Prog Pad again. "PROG" will stop blinking, and the set pitch of filter cleaning alarm will appear for 3 seconds. Then "0" will appear.



**Note:** When the programmed hour of cleaning Air Filter is "0", the pitch of filter cleaning alarm can not be selected.

## N. Procedure to Program the Air Filter



1. Open the door and leave it open.  
The oven lamp will turn on. "0" will appear in the Digital Display Window.



2. While touching Start Pad, touch Number Pad "7".



3. The display will show the length of time (in hours) between cleaning the Air Filter you have programmed in or the original time preset by the manufacturer.



4. Set the desired time between cleaning by touching the appropriate Number Pads. (Up to 9999 hours)  
[Example]: Touch Number Pads "6", "0" and "0" for 600 hours.

(Continued on next page.)



5. Touch Prog Pad.  
This completes the procedure to program time between cleaning of the Air Filter.



6. After 3 seconds, "0" will appear in the Digital Display Window. The oven is now ready for use.



- Note:** When "FILT" sign appears in Digital Display Window, remove the Air Filter and clean it.  
Touch Stop/Reset Pad for 2 seconds to clear the display.



#### To display the filter cleaning alarm counter

1. Open the door and leave it open.
2. While touching Start Pad, touch Number Pad "5".
3. The cumulative total cooking time starts over and is displayed after it is cleared.



After 3 seconds, "0" will appear in the Digital Display Window.

**N.B.** If the oven cuts out after short operation, check the Air Filter is clean before calling an engineer.

## O. Oven Lamp

(The oven can not be programmed until the program lock feature is deactivated.)

### •Oven Lamp settings when the door is open

#### To turn Oven Lamp settings OFF



1. Open the door and leave it open.  
The oven lamp will turn on, and "0" will appear.



2. While touching Start Pad, touch Number Pad "9".  
"PROG" will start to blink. The previously set Oven Lamp settings are displayed.



3. Touch Start Pad.  
**Note:** "on" → "off" → "on" is repeated each time the Pad is touched.



4. Touch Prog Pad.  
"PROG" will stop blinking, and the Oven Lamp settings will appear for 3 seconds.  
Then "0" will appear.



To proceed to Step 5, touch Start Pad before "0" is displayed after Step 4.

(Continued on next page.)

●Oven Lamp blinks at the end of heating cycle

**To turn the blinking Oven Lamp ON at the end of heating cycle**



5. Within 3 seconds after touching Prog Pad at Step 4, touch Start Pad.  
“PROG” will start to blink. The previously set Oven Lamp blink settings are displayed.



6. Touch Start Pad.  
**Note:** “oFF” → “on” → “oFF” is repeated each time the Pad is touched.



7. Touch Prog Pad.  
“PROG” will stop blinking, and the Oven Lamp blink settings will appear for 3 seconds. Then “0” will appear.

To proceed to Step 8, touch Start Pad before “0” is displayed after Step 7.



●Adjusting Oven Lamp brightness during cooking

**To decrease brightness of the inner cavity during cooking**



8. Within 3 seconds after touching Prog Pad at Step 7, touch Start Pad.  
“PROG” will start to blink. The previously set Oven Lamp reduction settings are displayed.



9. Touch Start Pad.  
**Note:** “oFF” → “on” → “oFF” is repeated each time the Pad is touched.



10. Touch Prog Pad.  
“PROG” will stop blinking, and the Oven Lamp reduction settings will appear for 3 seconds. Then “0” will appear.



# Before Cooking

## Microwave Basics

Fundamental principles determine the success of microwave food preparation.

They include:

1. **Temperature of Foods**—Frozen or refrigerated food items will require longer heating times to reach a desired serving temperature than foods at room temperature.
2. **Food Components**—Foods high in sugar, salt, fats and moisture content heat faster because these properties attract microwave energy. Denser foods high in protein and fiber, absorb microwave energy slower which means a lengthier heating time.
3. **Bulk/Volume**—The greater the mass of food, the longer it takes to heat.
4. **Containers**—Ceramic, paper, china, styrofoam, glass and plastic are suitable for use in microwave ovens with the following caution:

Heating foods with either high sugar or high fat content should be done **ONLY** in high temperature-resistant containers since these foods get very hot. Using styrofoam containers for these foods will cause the styrofoam to warp. Other low temperature restaurant glass or plastic platters may crack or warp under similar conditions.

**DO NOT HEAT** foods in a **SEALED** container or bag. Foods expand when heated and can break the container or bag.

5. **AVOID METAL** because it “bounces” the microwaves, causing uneven heating and sometimes even flashes, which may pit or mar the interior of the oven, the metal container or plate trim.
6. Heated liquids can erupt if not mixed with air. Do not heat liquids in your microwave oven without first stirring.

## General Guidelines for Heating in a Microwave Oven

For specific time, see each food category for appropriate heating techniques, plus necessary pre-preparation of foods.

### Heating Foods from Refrigerated Temperature

Foods stored in the refrigerator (5°C) should be covered before reheating with the exception of breads, pastries or any breaded product, which should be heated uncovered to prevent sogginess.

Most conventionally prepared foods should be slightly undercooked, and held in the refrigerator, so that overcooking does not occur during microwave heating.

Cooked items, such as vegetables, may be portion plated and covered for reheating without loss of color, texture or nutritional content.

### Heating Foods from Room Temperature

Food items such as canned entrees, vegetables, etc. will require significantly less heating time than those at refrigerated temperatures.

### Important Recommendations

1. For best results it is recommended that foods conventionally prepared be slightly undercooked when subsequently heated in this oven.
2. **REMEMBER** that after the heating cycle has been completed, internal food temperatures continue to rise slightly in foods heated in this oven.
3. A major abuse of microwave applications is the category of breads and baked goods. Because crusts of breads, pastries and pies are drier than insides of fillings, they heat more slowly. Therefore, baked goods should **ONLY** be heated until the crust is warm to the touch (50°C–55°C).
4. **DO NOT OVERHEAT YOUR FOOD:** 99% of all food quality complaints of microwave-heated foods can be traced to overheating.
5. When heating liquids, ensure they do not completely fill their containers; a headspace allows the liquids to be stirred during and at the end of the heating time without spillage.

# Heating and Defrosting Time Charts

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**Note:** • Following charts are some examples including the recipe of various countries.

- All heating times in the following charts are “**APPROXIMATE**”. We recommend you test your own recipe items and plating techniques in this oven to establish the correct heating times for your recipe items.
- The maximum programmable time for “P1” and “P0” is 30 minutes, and 15 minutes for all others. For items that cook longer than 15 minutes on power except for “P1” and “P0”, please program oven for two-stage cooking.  
For example: To program 20 minutes:  
First Stage: Program HIGH 15 minutes  
Second Stage: Program HIGH 5 minutes
- The maximum total programming time for five stage heating is  
P10–P2, PU1–PL2: 25 minutes  
P1, P0: 150 minutes

# Appetizers

Quantities of appetizers can be prepared conventionally in advance and refrigerated until needed. Most appetizers, with the exception of “nacho” platters and potato skins, should be heated covered. Appetizers of the same basic shape and size can be reheated together.

Most cooked appetizers heat on HIGH power, between 7 and 11 seconds per 25 g depending on weight, density, and bone content. “Nacho’s” need 30 to 37 seconds per 25 g depending on the amount of topping.

All heating times listed on the chart are for refrigerated temperatures (5°C) except for “nacho” chips.

Item	Quantity	Instructions for Pre-preparation	Instructions for Microwave Heating	Power Setting	Approximate Times
Chicken wings	140–168 g	Prepare conventionally, refrigerate, covered.	Place on plate, cover.	HIGH (P10)	28 sec.
Chili con Carne	224 g	Prepare conventionally, refrigerate, covered.	Place in small bowl, cover.	HIGH (P10)	28 sec.
Meatballs	112–140 g	Prepare conventionally, refrigerate, covered.	Arrange on plate, cover.	HIGH (P10)	14 sec.
Nachos	112 g	For Best Results— Prepare when ordered or only a short time before serving to keep chips crisp.	Spread refried beans on each individual nacho. Arrange on platter. Sprinkle with shredded Cheddar cheese. DO NOT COVER.	HIGH (P10)	28 sec.
Potato skins	224 g	Prepare skins conventionally, refrigerate, covered.	Arrange skins on platter. Sprinkle with shredded Cheddar cheese and cooked, crumbled bacon. DO NOT COVER.	HIGH (P10)	43 sec.
Shrimp de Jonghe	112 g	Prepare conventionally, refrigerate, covered.	Place on small plate, cover.	HIGH (P10)	33 sec.

# Baked Goods and Desserts

Breads, pastries and pies should be heated uncovered, at HIGH power. They should be placed on absorbent material, such as a napkin or paper towel, to prevent sogginess.

DO NOT OVERHEAT breads and pastries. Baked goods should only be heated until the crust feels warm to the touch (50°C – 55°C).

Because crusts of breads, pastries, and pies are drier than insides or fillings, they heat more slowly. After heating, let rest about 1 minute for equalization of temperature. If product is overheated, the end result will not be satisfactory.

Heating times for sweet baked goods and desserts are relatively short because of the high sugar content.

Item	Quantity	Instructions for Pre-preparation	Instructions for Microwave Heating	Power Setting	Approximate Times
Bread, mini-loaf white or wheat	224 g	Prepare conventionally, store at room temperature.	Place on paper towel, uncovered.	HIGH (P10)	14 sec.
Coffee cake, frozen	84 g	_____	Place on paper towel, uncovered.	HIGH (P10)	9 sec.
Muffins, fruit	2 pcs.	Prepare conventionally or defrost, store at room temperature.	Place on paper towel or napkin, uncovered.	HIGH (P10)	9 sec.
	6 pcs.	Prepare conventionally or defrost, store at room temperature.	Place on paper towel or napkin, uncovered.	HIGH (P10)	19 sec.
Pie, fruit	1 slice 140 g	Prepare conventionally, refrigerate, covered.	Place on plate, uncovered.	HIGH (P10)	19 sec.
Rolls, hard	4 pcs.	Room temperature.	Place on paper towel, uncovered. After heating, let rest 1 minute.	HIGH (P10)	28 sec.
Rolls, soft	6 pcs.	Room temperature.	Place on paper towel, uncovered. After heating, let rest 1 minute.	HIGH (P10)	9 sec.
Rolls, sweet	6 pcs.	Room temperature.	Place on paper towel, uncovered. After heating, let rest 1 minute.	HIGH (P10)	14 sec.

# Breakfast

All foods listed are prepared in advance and reheated at HIGH power from refrigerated temperatures (5°C).

Most breakfast foods are heated covered to retain moisture, with the exception of breads and pastries, which should be heated uncovered on absorbent material, such as a napkin or paper towel, to prevent sogginess.

For poached eggs, pierce yolks before heating and allow eggs to stand for 1 minute after cooking so pressure subsides before cutting into them.

When preparing breakfast foods conventionally, undercook slightly and immediately chill and store, covered, for later reheating.

Cured breakfast meats will reheat faster than uncured meats because salt readily absorbs microwave energy.

**WARNING:** Never cook or reheat eggs in the shell. They may explode when interior pressure builds up.

Item	Quantity	Instructions for Pre-preparation	Instructions for Microwave Heating	Power Setting	Approximate Times
Bacon	4 strips	Prepare conventionally, undercook slightly, refrigerate, covered.	Place on plate, cover.	HIGH (P10)	9 sec.
Eggs, poached	2 eggs	Prepare conventionally, undercook slightly, refrigerate in salted water, covered.	Place on plate, pierce yolks, cover. Let rest 1 minute after heating.	HIGH (P10)	19 sec.
Eggs, scrambled	2 eggs	Prepare conventionally, undercook slightly, refrigerate, covered.	Place on plate and cover.	HIGH (P10)	19 sec.
Eggs, scrambled with bacon	2 eggs 4 strips	Prepare conventionally, undercook slightly, refrigerate, covered.	Place on plate and cover.	HIGH (P10)	28 sec.
Eggs, scrambled with sausage links	2 eggs 4 links	Prepare conventionally, undercook slightly, refrigerate, covered.	Place on plate and cover.	HIGH (P10)	38 sec.
French toast	3 slices	Prepare conventionally, refrigerate, covered.	Place toast on plate. Heat uncovered.	HIGH (P10)	38 sec.
French toast with bacon	2 slices 4 strips	Prepare conventionally, refrigerate, covered.	Place toast on plate in single layer. Cover.	HIGH (P10)	28 sec.
French toast with sausage links	2 slices 4 links	Prepare conventionally, refrigerate, covered.	Place toast on plate in single layer. Cover.	HIGH (P10)	28 sec.
Ham steak	112 g	Prepare conventionally, refrigerate, covered.	Place on plate, cover. Let rest 1 minute after heating.	HIGH (P10)	28 sec.
Hash, corned beef, canned	84 g	Prepare conventionally, refrigerate, covered.	Place on plate and cover.	HIGH (P10)	28 sec.
Pancakes	4 pcs.	Prepare conventionally, refrigerate, covered.	Place on plate in single layer. Heat uncovered.	HIGH (P10)	33 sec.
Pancakes with bacon	4 pcs. 4 strips	Prepare conventionally, refrigerate, covered.	Place on plate in single layer, cover.	HIGH (P10)	38 sec.
Pancakes and Sausage patty	4 pcs. 112 g	Prepare conventionally, refrigerate, covered.	Place on plate in single layer, cover.	HIGH (P10)	28 sec.
Potatoes, hashed brown	126 g	Prepare conventionally, refrigerate, covered.	Place on plate and heat, uncovered.	HIGH (P10)	28 sec.
Sausage links	4 links	Prepare conventionally, undercook slightly, refrigerate, covered.	Place on plate, cover.	HIGH (P10)	28 sec.
Sausage patties	4 patties	Prepare conventionally, undercook slightly, refrigerate, covered.	Place on plate, cover.	HIGH (P10)	38 sec.



# Casseroles

Food-Service casseroles can be cooked successfully in this microwave oven. For best results, follow instructions below.

## Preparation

Remove all casseroles from their foil baking trays, while still frozen and place in a suitable microwave-safe container. Place in refrigerator and thaw for about 2 to 4 days.

Let stand 15 minutes before serving.

## Casseroles, Frozen—Heating

Item	Quantity	Preparation	Instructions for Microwave Heating	Power Setting	Approximate Times
Vegetable Lasagna	2.9 kg	Place in suitable container. Thaw in refrigerator for approx. 4 days.	Cover with lid. Let stand 15 minutes, before serving.	1st Stage MED (P5, P4)	10 min.
				2nd Stage HIGH (P10)	4 min. 43 sec.
Spinach Souffle	2 kg	Place in suitable container. Thaw in refrigerator for approx. 2 days.	Cover with lid. Let stand 15 minutes, before serving.	MED (P5, P4)	15 min.
Deep Dish Cherry Crisp	2 kg	Place in suitable container. Thaw in refrigerator for approx. 2 days.	Sprinkle with 2 tablespoons of sugar.	MED (P5, P4)	10 min.
Macaroni and Cheese	2.7 kg	Place in suitable container. Thaw in refrigerator for approx. 2 days.	Cover with lid. Stir after cooking.	HIGH (P10)	9 min. 27 sec.
Burritos	8 pcs.	Place on paper towel.	Heat uncovered. Rearrange midway through heating.	HIGH (P10)	9 min. 27 sec.

# Fish and Seafood

## Defrost

Fish and seafood can be defrosted and heated successfully in this microwave oven. To defrost evenly, fish should be arranged in a single layer in container and should be only thawed to the point of being flexible so it does not begin to cook at the edges.

## Primary Cooking

Cooking individual portions demands close attention as well as slight undercooking. Delicate fish and shellfish should always be undercooked and should be allowed to rest after heating.

### Fish/Seafood—Primary Cooking

Item	Quantity	Instructions for Pre-preparation	Instructions for Microwave Heating	Power Setting	Approximate Times
Lobster Tail	224 g	Defrost. Refrigerate, covered.	Place on plate, brush with butter and cover.	HIGH (P10)	2 min. 50 sec.
Perch, fillets	196 g	Defrost. Refrigerate, covered.	Place in microwave pan and brush with butter and herbs.	HIGH (P10)	43 sec.
Salmon Steaks	224 g	Defrost. Refrigerate, covered.	Place on plate brush with butter, cover.	HIGH (P10)	57 sec.
Scallops, Bay	140 g	Defrost slightly. Refrigerate, covered.	Place in microwave pan, dot with butter and cover.	HIGH (P10)	24 sec.
Shrimp, large	168 g	Defrost. Refrigerate, covered.	Place on plate and cover.	HIGH (P10)	33 sec.
Snapper, Red fillets	140 g	Defrost. Refrigerate, covered.	Place on plate, brush with butter and herbs, and cover.	HIGH (P10)	43 sec.
Sole, stuffed with crabmeat	168 g	Defrost. Refrigerate, covered.	Place on plate and cover.	HIGH (P10)	1 min. 53 sec.

### Fish/Seafood, Frozen—Defrosting

Item	Quantity	Instructions for Pre-preparation	Instructions for Microwave Heating	Power Setting	Approximate Times
Lobster Tail (Frozen)	224 g	_____	Place on plate and cover. After DEFROST cycle, let rest 5 min. and refrigerate or cook.	DEFROST (P1)	3 min.
Perch, fillets (Frozen)	450 g	_____	Place in microwave pan and cover. Halfway through defrost, turn over and if possible, rearrange fillets. After DEFROST cycle, let rest 5 min. and refrigerate or cook.	DEFROST (P1)	4 min.
Shrimp, large (Frozen)	168 g	_____	Place on plate and cover. After DEFROST cycle, refrigerate or cook.	DEFROST (P1)	2 min.

# Gravies, Sauces, and Soups

Some water-based gravies, sauces, and soup mixes may be prepared in large portions by using this oven to heat water and thicken the blended mixes.

Refrigerated gravies, sauces, and soups can be reheated quickly at HIGH power and may require stirring during heating to produce an even temperature.

## Gravies

Item	Quantity	Instructions for Pre-preparation	Instructions for Microwave Heating	Power Setting	Approximate Times
Brown gravy	1 qt.	Prepare conventionally or heat ingredients in microwave, if recommended. Refrigerate gravy.	Place in microwave pan. Cover. Stir midway through heating.	HIGH (P10)	5 min. 11 sec.
Chicken gravy	1 qt.			HIGH (P10)	3 min. 47 sec.

## Sauces

Item	Quantity	Instructions for Pre-preparation	Instructions for Microwave Heating	Power Setting	Approximate Times
Cheese sauce	1 qt.	Prepare conventionally or heat mix ingredients in microwave, if recommended. Refrigerate sauce.	Place in microwave pan. Cover. Stir midway through heating.	HIGH (P10)	5 min. 11 sec.
Espagnole (Stock base)	1 qt.			HIGH (P10)	3 min. 18 sec.
Mushroom sauce	1 qt.			HIGH (P10)	3 min. 18 sec.
Tomato sauce	1 qt.			HIGH (P10)	4 min.
White sauce (Bechamel)	1 qt.			HIGH (P10)	3 min. 47 sec.
White sauce (Stock base)	1 qt.			HIGH (P10)	3 min. 47 sec.

## Soups

Item	Quantity	Instructions for Pre-preparation	Instructions for Microwave Heating	Power Setting	Approximate Times
Beef broth	1 qt.	Prepare conventionally or heat mix ingredients in microwave, if recommended. Refrigerate soup.	Place in microwave pan. Cover. Stir midway through heating.	HIGH (P10)	2 min. 36 sec.
Chicken noodle soup	1 qt.			HIGH (P10)	3 min. 18 sec.
Clam chowder	1 qt.			HIGH (P10)	3 min. 18 sec.

# Plated Meat and Poultry Entrees

Meat and poultry can be reheated successfully in this oven.

Undercook meat slightly. Arrange meat or poultry slices in single layer, overlapping pieces as little as possible.

## CAUTION

Pork products must be fully cooked prior to reheating.

When appropriate, cover meats or poultry evenly with sauces.

Item	Quantity	Instructions for Pre-preparation	Instructions for Microwave Heating	Power Setting	Approximate Times
Beef, prime rib with gravy	336 g	Prepare conventionally, refrigerate, covered.	Place on plate and top meat with gravy. Cover.	HIGH (P10)	1 min. 53 sec.
Beef stew	224 g	Prepare conventionally, refrigerate, covered.	Put in small bowl, stir midway through heating, cover.	HIGH (P10)	43 sec.
Beef stroganoff with noodles	224 g	Prepare conventionally, refrigerate, covered.	Place on plate, cover.	HIGH (P10)	57 sec.
Chicken, breaded, fried	224 g	Prepare conventionally, refrigerate, covered.	Place on plate, uncovered.	HIGH (P10)	43 sec.
Chicken, broiled	½ pcs.	Prepare conventionally, refrigerate, covered.	Place on plate, cover.	HIGH (P10)	57 sec.
Chicken pieces, with potatoes, dressing and gravy	336 g	Prepare all components conventionally, refrigerate, covered.	Place on plate depress potatoes, and cover.	HIGH (P10)	1 min. 25 sec.
Duck	½ pcs.	Prepare conventionally, refrigerate, covered.	Place on plate, cover.	HIGH (P10)	1 min. 25 sec.
Burrito	224 g	Prepare conventionally, refrigerate, covered.	Place on plate, cover.	HIGH (P10)	43 sec.
Meat loaf with gravy	196 g	Prepare conventionally, refrigerate, covered.	Arrange slices in single layer on plate, cover with gravy. Cover.	HIGH (P10)	57 sec.
Green peppers, stuffed	168 g	Prepare conventionally, refrigerate, covered.	Place on plate, cover.	HIGH (P10)	47 sec.
Pork chop, stuffed	196 g	Prepare conventionally, refrigerate, covered.	Place on plate, cover.	HIGH (P10)	1 min. 11 sec.
Ribs, short	224 g	Prepare conventionally, refrigerate, covered.	Place on plate, cover.	HIGH (P10)	1 min. 11 sec.
Ribs, spare	448 g	Prepare conventionally, refrigerate, covered.	Place on plate, cover.	HIGH (P10)	1 min. 20 sec.
Salisbury steak	196 g	Prepare conventionally, refrigerate, covered.	Place on plate, cover.	HIGH (P10)	57 sec.
Turkey, sliced with gravy	336 g	Prepare conventionally, refrigerate, covered.	Arrange slices in single layer on plate, cover with gravy. Cover.	HIGH (P10)	1 min. 16 sec.

# Rice and Pasta

For best results, undercook rice and pasta dishes during primary cooking. Reheat covered at HIGH power. Adding moisture, such as a sauce, can facilitate reheating though its not essential.

Rice and pasta dishes with cheese sauces, require more stirring than tomato-based sauces to avoid over-heating and stringiness of cheese.

## Rice

Item	Quantity	Instructions for Pre-preparation	Instructions for Microwave Heating	Power Setting	Approximate Times
Chicken rice pilaf	112 g	Prepare conventionally, undercook slightly, refrigerate, covered.	Place on plate, cover.	HIGH (P10)	33 sec.
Rice, long grain and wild rice	112 g	Prepare conventionally, undercook slightly, refrigerate, covered.	Place on plate, cover.	HIGH (P10)	28 sec.

## Pasta

Item	Quantity	Instructions for Pre-preparation	Instructions for Microwave Heating	Power Setting	Approximate Times
Lasagna	224 g	Prepare conventionally, undercook slightly, refrigerate, covered.	Place on plate, cover. Cut in half let rest 1 minute after heating.	HIGH (P10)	1 min. 53 sec.
Macaroni and cheese	224 g	Prepare conventionally, undercook slightly, refrigerate, covered.	Place on plate, cover. Let rest 1 minute after heating.	HIGH (P10)	19 sec.
Noodles	112 g	Prepare conventionally, undercook slightly, refrigerate, covered.	Place on plate, cover.	HIGH (P10)	19 sec.
Ravioli	168 g	Prepare conventionally, undercook slightly, refrigerate, covered.	Arrange in single layer on small plate, cover.	HIGH (P10)	24 sec.
	336 g	Prepare conventionally, undercook slightly, refrigerate, covered.	Arrange in single layer on plate, cover.	HIGH (P10)	1 min. 39 sec.
Spaghetti with meat sauce	336 g	Prepare conventionally, keeping spaghetti and sauce separate, refrigerate, covered.	Place on plate, cover with sauce, cover.	HIGH (P10)	1 min. 39 sec.

# Sandwiches

Preassembled sandwiches can be heated quickly and easily in this microwave oven.

Meat fillings such as hamburgers and sausages should be precooked and preferably not be more than 1.3 cm thick.

Day-old, toasted breads, or breads whose formula is enriched with egg or fat, are advantageous because they tend to become less soggy when heated. When fresh, untoasted breads are required, seal with butter or another spread.

Thin sliced meats, lightly packed, allow for more even heating. Place meat over bread.

All but openfaced sandwiches should be heated uncovered on absorbent material such as paper towel or napkin to prevent sogginess.

Item	Quantity	Instructions for Pre-preparation	Instructions for Microwave Heating	Power Setting	Approximate Times
Beefburger on bun	168 g	Prepare beef conventionally, refrigerate, covered. Toast bun.	Assemble, place on paper napkin on plate, uncovered.	HIGH (P10)	28 sec.
Corned beef on rye	140 g	Assemble, refrigerate, covered.	Place on paper towel, uncovered.	HIGH (P10)	28 sec.
French dip	168 g	Assemble, refrigerate, covered.	Place on plate with gravy over beef and on side, uncovered.	HIGH (P10)	28 sec.
Grilled cheese	112 g	Prepare conventionally, refrigerate, covered.	Place on paper towel, uncovered.	HIGH (P10)	24 sec.
Hamburger, plain with cheese	140 g	Prepare burger conventionally. Toast bun.	Place on paper towel, uncovered.	HIGH (P10)	19 sec.
	140 g	Assemble, refrigerate, covered.		HIGH (P10)	33 sec.
Hot dog	84 g	Prepare conventionally. Toast bun. Assemble, refrigerate, covered.	Wrap loosely in plastic.	HIGH (P10)	14 sec.
Pastrami on rye	140 g	Assemble, refrigerated, covered.	Place on paper towel, uncovered.	HIGH (P10)	23 sec.
Reuben	168 g	Prepare conventionally, refrigerate, covered.	Place on paper towel, uncovered.	HIGH (P10)	28 sec.
Roast beef, open-face with gravy	224 g	Prepare beef and gravy conventionally, refrigerate, covered. Toast bread.	Assemble, plate, cover.	HIGH (P10)	38 sec.
Sausage, Italian on sub roll	154 g	Prepare sausage conventionally. Toast roll. Assemble, refrigerate, covered.	Place on paper towel, uncovered.	HIGH (P10)	52 sec.
Turkey, open-face with gravy	224 g	Prepare turkey and gravy conventionally, refrigerate, covered. Toast bread.	Assemble, plate, cover.	HIGH (P10)	38 sec.

# Vegetables

Most small and bulk portions of vegetables, defrost, heat, and cook very successfully in the microwave, retaining fresh color and texture as well as nutritional value. The thicker and more fibrous the vegetable, the longer the cooking time.

Frozen vegetables can be defrosted and heated in one step. 1 to 2 tablespoons of water should be added to frozen vegetables.

Icy sections should be broken up during heating for even temperature distribution.

Canned vegetables placed in suitable microwave-safe container can be heated at HIGH power in approximately 1 minute per 450 g.

Most fresh vegetables are prepared with a small amount of cooking liquid such as water.

## Vegetables, Frozen—Defrosting and Heating

Item	Quantity	Instructions for Pre-preparation	Instructions for Microwave Heating	Power Setting	Approximate Times
Beans, green	1.8 kg	_____	Place in a suitable microwave-safe container. Add 1 to 2 tablespoons of water. Cover with lid. Let stand, covered, 2 minutes.	HIGH (P10)	11 min. 20 sec.
	2.7 kg				18 min. 53 sec.
Cauliflower	1.8 kg	_____		HIGH (P10)	14 min. 10 sec.
	2.7 kg				18 min. 53 sec.
Broccoli	1.8 kg	_____		HIGH (P10)	14 min. 10 sec.
Carrots, sliced	2.7 kg	_____		HIGH (P10)	18 min. 53 sec.

## Vegetable, Fresh—Heating

Item	Quantity	Preparation	Instructions for Microwave Heating	Power Setting	Approximate Times
Carrot	1.8 kg	Peel carrots; cut into 8 slices.	Place in a suitable microwave-safe container. Add 2 tablespoons of water. Cover with lid. Stir midway through heating. Let stand, covered, 10 minutes.	HIGH (P10)	5 min. 40 sec.
	2.3 kg	Peel carrots; cut into 8 slices.	Place in a suitable microwave-safe container. Add 3 to 4 tablespoons of water. Cover with lid. Stir midway through heating. Let stand, covered, 10 minutes.	HIGH (P10)	6 min. 37 sec.
	2.7 kg			HIGH (P10)	9 min. 27 sec.
	3.2 kg			HIGH (P10)	11 min. 20 sec.

## Vegetable Fresh—Primary Cooking

Item	Quantity	Preparation	Instructions for Microwave Heating	Power Setting	Approximate Times
Broccoli	1.4 kg	Rinse broccoli. Cut into spears.	Place in a suitable microwave-safe container. Add 2 tablespoons of water. Cover with lid. Let stand, covered, 10 minutes.	HIGH (P10)	6 min. 37 sec.
Baked Potatoes	8 pcs.	Wash, dry and pierce several times with fork. Arrange evenly on paper towel in oven.	Rearrange halfway through heating. After heating, wrap in foil and let stand 1 minute.	HIGH (P10)	3 min. 47 sec.
Refried beans	3.2 kg	_____	Place in a suitable microwave-safe container. Cover with lid. Stir midway through heating. Let stand 5 minutes.	HIGH (P10)	4 min. 43 sec.

# Care of Your Microwave Oven

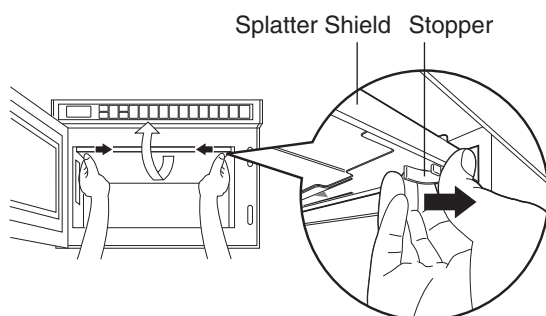
1. Remove the plug from the electrical socket before cleaning.
2. Keep the inside of the oven clean. If pieces of food or spilled liquids stick to the oven walls, or between door seal and door surface, they will absorb microwaves and may cause arcing or sparks. Wipe up all spills with a damp cloth. Kitchen detergent or Food Sanitizer Solution may be used if the oven gets very dirty. Do not use harsh detergents or abrasives.
3. The outside surface of this Microwave Oven should be cleaned with soap and water, then dried with a soft cloth. Make sure that water does not get into the back ventilation or control panel, opening since this can damage the unit.
4. The window of the door should be washed with very mild soap and water. Be sure to use a soft cloth. Never use window cleaner. The front door can be scratched by harsh soap or cleaners.

## Cleaning of the Splatter Shield

1. Hold snap in-snap out side stoppers of splatter shield with both hands and pull them in and down. Then take the splatter shield out of the oven cavity.
2. Rinse splatter shield in soapy water or Food Sanitizer Solution.
3. Be sure to replace the shield before using the oven.

### CAUTION

Splatter shield must be in place securely when you use the oven.

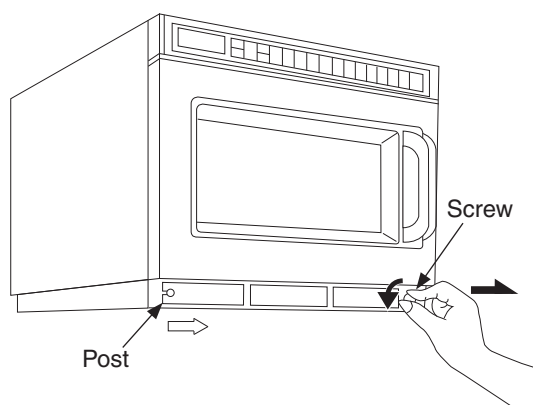


## Cleaning the Air Filter

Clean the Air Filter regularly according to the following instructions. The Oven may have problems when the Air Filter becomes clogged with dust(\*).

1. Remove the Air Filter from the front bottom skirt by turning the right screw to the left. Then slide the filter to the right and lift it off the post at the left.
2. Wash this filter in warm soapy water.
3. Be sure to replace the Air Filter before using the oven.

(\*)If the Air Filter becomes clogged with debris this will cause an overheating problem in the oven.





# Explanation of Self Diagnostics Failure Code

This oven monitors its operation and displays a Failure Code in the Digital Display Window when a problem occurs.

## What to do when a failure code appears:

Unplug the oven and wait more than 10 seconds before reconnecting.

If normal operation does not resume, follow the chart below.

CODE	PROBLEM	WHAT TO DO (BELOW)
F01	Temperature of exhaust air too High	1./2./3./4./5.
F33	Defective Thermistor Circuit	1./5.
F44	Defective Control Panel	1./5.
F81–82	Defective Relay Circuit	5./6./7.
F86–87	Defective Relay Circuit	1./5.
U30	Memory cooking has exceeded the maximum time during double quantity and triple quantity setting.	Check and change the time. —See page 8, step 5 “Note”.

1. Oven shuts off automatically. Disconnect the power cord from the wall socket.
2. Oven beeps continuously.
3. Oven resets for operation when cool.
4. Move oven to cooler location.
5. If problem persists call service agent.
6. Oven will operate even if failure code appears, just not as designed. Call service agent.
7. Touch Stop/Reset Pad and try again.

**Note:** Above Codes shown in the display do not indicate all the possible failures on the unit.

# Installation Instructions for Stacking

## Important

1. Disconnect the power cord from the wall socket before attempting installation.
2. For stacking installation, you must use the Panasonic Joint Plate A1134-3280 (Available via service route).
3. Combination of the unit for stacking is limited within only the following model.  
NE-1853
4. Do not stack more than one oven above bottom oven.

## Preparation

Be sure the oven cavity is empty.

## Installation

1. Stack the units and remove five screws (a) as shown in Fig. 1.
2. Loosen the screw (b).
3. The projection on the Joint Plate must face away from the oven. Place the Joint Plate on the screw (b).
4. Attach and tighten five screws (a) and the screw (b). See Fig. 2.
5. Ensure the top oven is at a safe and workable height.

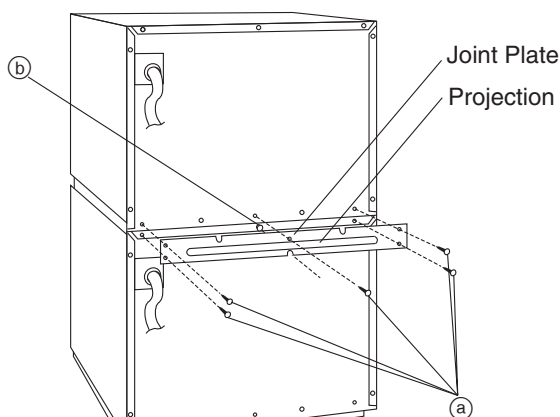


Fig. 1

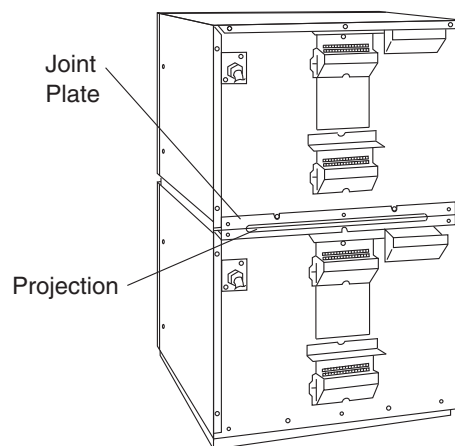


Fig. 2

# Before Requesting Service

## ALL THESE THINGS ARE NORMAL:

The oven causes interference with my TV.	Some radio and TV 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, hair dryers, etc. It does not indicate a problem with your oven.
The oven lights dim.	When cooking with a power other than HIGH, the oven must cycle to obtain the lower power levels. The oven light will dim and clicking noises can be heard when the oven cycles.
Steam accumulates on the 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.
I accidentally ran my microwave oven without any food in it.	Running the oven empty for a short time will not damage the oven. However, we do not recommend this to be done.

### PROBLEM

### POSSIBLE CAUSE

### REMEDY

Oven will not turn on.



The oven is not plugged in securely.

Remove plug from outlet, wait 10 seconds and re-insert.

Circuit breaker or fuse is tripped or blown.

Reset circuit breaker or replace fuse.

There is a problem with the outlet.

Plug another appliance into the outlet to check if the outlet is working.

Oven will not start cooking.



The door is not closed completely.

Close the oven door securely.

Start Pad was not touched after programming.

Touch Start Pad.

Another program has already been entered into the oven.

Touch Stop/Reset Pad to cancel the previous program and program again.

The program has not been entered correctly.

Program again according to the Operating Instructions.

Stop/Reset Pad has been touched accidentally.

Program oven again.

If it seems there is a problem with the oven, contact an authorised Service Center.

# Technical Specifications

			NE-1853
Power Source			60 Hz, single phase 220 V
Required Power			14.5 A   3000 W
Output*	HIGH	(P10)	1800 W*
	MEDIUM HIGH	(P9)	90%
		(P8)	80%
		(P7)	70%
		(P6)	60%
	MEDIUM	(P5) (P4)	50% 40%
	LOW	(P3) (P2)	30% 25%
	DEFROST	(P1)	340 W
OFF	(P0)	0%	
HEAT FROM TOP DOWN	(PU1) (PU2)	50% 25%	
HEAT FROM BOTTOM	(PL1) (PL2)	50% 25%	
Frequency			2450 MHz
Outside Dimensions (W×D×H)			422 mm×508 mm×337 mm
Cavity Dimensions (W×D×H)			330 mm×310 mm×175 mm
Net Weight			30.0 kg
Timer			30 minutes (digital)/10 touch pads Maximum programmable time for single stage heating P1 and P0=30 minutes P10–P2, PU1–PL2=15 minutes

## \*IEC Test Procedure

Specifications subject to change without notice.

Voltage requirement may differ by country.

