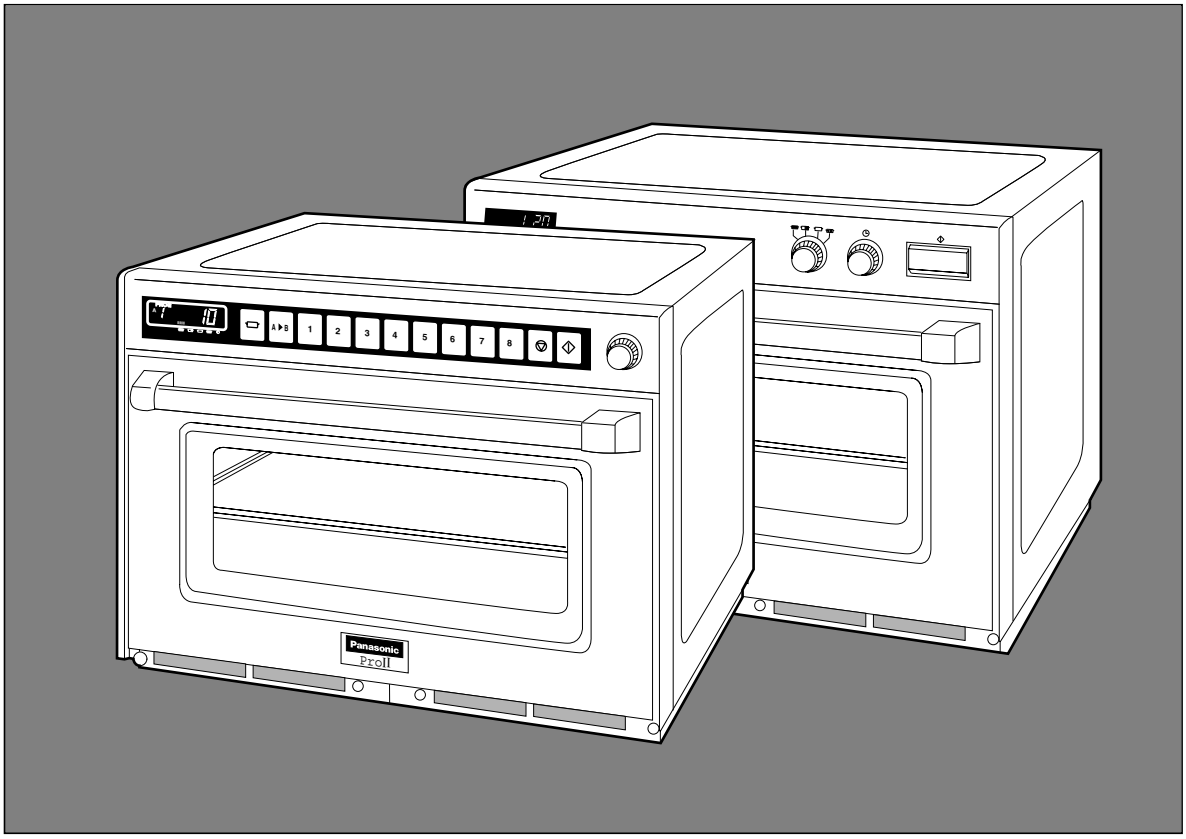
Operating Instructions

NE-3280/NE-2180/NE-1880/NE-1540

3200/2100/1800/1500 Watts Microwave Oven



FOR COMMERCIAL USE

Panasonic®

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

Table of Contents

For Your Safety 2
Unpacking Your Oven 2
Placement of Your Oven 3
Using Your Oven 3
Maintenance of Your Oven 3
Important Safety Instructions ——Read Carefully 4-5
How Does the Microwave Work? 6

- NE-1540 -
Outline Diagram 7
How to Operate 7-8

- NE-3280/NE-2180/NE-1880 -
Outline Diagram 9
How to Operate
A. Manual Heating single stage heating 10
2 or 3 stages heating 11
Repeat Feature 11
B. Programmed Heating 12
C. Programming Memory Pads single stage heating 13
2 or 3 stages heating 14
D. Program Lock 14-15
E. Beep Tone 15-16
F. Program List 16
G. Cycle Counter 16
Self Diagnostics Failure Code 17
Care of Your Microwave Oven 17
Cooking Instructions 18-19
Cooking/Defrosting Guide 20-21
Technical Specifications 22

This product is an equipment that fulfills the European standard for EMC disturbances (EMC = Electromagnetic Compatibility) EN 55011. According to this standard this product is an equipment of group 2, class B and is within required limits. Group 2 means that radio-frequency energy is intentionally generated in the form of electromagnetic radiation for warming and cooking of food. Class B means that this product may be used in normal household areas.

Earthing Instructions

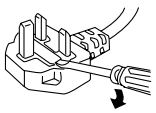
WARNING: THIS APPLIANCE MUST BE EARTHED.

WARNING: (NE-3280/NE-2180/NE-1880)
This appliance must be connected to an outlet having a rated current greater than 13 amps. A 13 amp, B.S. 1363 plug is, therefore, not suitable. It is recommended that this unit should be installed by a professional contractor, as the installation wiring should be in accordance with current IEE regulation and connected to the circuit with all poles having a disconnection of at least 3 mm. When the mains lead is connected to supply terminals , please observe the wiring code as shown below. If in doubt, please consult a qualified electrician.

For model **NE-1540**
This appliance is supplied with a moulded three pin mains plug for your safety and convenience. A 13 amp fuse is fitted in this plug. Should the fuse need to be replaced, please ensure that the replacement fuse has a rating of 13 amps and that it is approved by ASTA or BSI to BS1362. Check for the ASTA mark

ASTA or the BSI mark on the body of the fuse. If the plug contains a removable fuse cover, you must ensure that it is refitted when the fuse is replaced. If you lose the fuse cover, the plug must not be used until a replacement cover is obtained. A replacement fuse cover can be purchased from your local Panasonic Dealer.

HOW TO REPLACE THE FUSE
Open the fuse compartment with a screwdriver and replace the fuse.



IF THE FITTED MOULDED PLUG IS UNSUITABLE FOR THE SOCKET OUTLET THEN THE FUSE SHOULD BE REMOVED AND THE PLUG CUT OFF AND DISPOSED OF SAFELY AND AN APPROPRIATE ONE FITTED. THERE IS A DANGER OF SEVERE ELECTRICAL SHOCK IF THE CUT OFF PLUG IS INSERTED INTO ANY 13 AMP SOCKET.

If a new plug is to be fitted, please observe the wiring code as shown below. If in any doubt, please consult a qualified electrician.

IMPORTANT: The wires in this mains lead are coloured in accordance with the following code:

Green-and-yellow:	Earth
Blue:	Neutral
Brown:	Live

As the colours of the wire in the mains lead of this appliance may not correspond with the coloured markings identifying the terminals, proceed as follows:

The wire which is coloured GREEN-AND-YELLOW must be connected to the terminal which is marked with the letter E or by the Earth symbol ⏚ or coloured GREEN or GREEN-AND-YELLOW.

The wire which is coloured BLUE must be connected to the terminal which is marked with the letter N or coloured BLACK.

The wire which is coloured BROWN must be connected to the terminal which is marked with the letter L or coloured RED.

Voltage & Power

The voltage used must be the same as specified on this 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.

Do not immerse cord, plug or oven in water. Keep cord away from heated surfaces. Do not let cord hang over the edge of table or worktop. Do not plug your oven in via an extension cable as this can be dangerous. It is important to plug the oven directly into a wall socket.

The back of the appliance heats up during use. Do not allow the cord to be in contact with the back of the appliance or cabinet surface.

CAUTION:
The rear panel of model NE-3280 can become hot - take care when handling.

Unpacking Your Oven

1. **Examine Your Oven**
   Unpack the oven, remove all packing material, and examine the oven for any damage such as dents, broken door latches or cracks in the door. Notify dealer immediately if the unit is damaged. DO NOT install it if the unit is damaged.
2. **Guarantee Card**
   Fill out and post the pre-addressed guarantee card.
3. **Cord**
   If the supply cord of this appliance is damaged, it must be replaced by the manufacturer or its service agent or a similarly qualified person in order to avoid a hazard.
4. **Door Seal**
   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.
5. **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.
6. **Attach caution label**
   Before using this appliance, please attach the caution label to top of appliance.

Placement of Your Oven

1. Oven must be placed on a flat, stable surface. For proper operation, the oven must have sufficient air flow to the air vent i.e. 5 cm (2 inches) at the side and rear; 20 cm (8 inches) at the top.
2. Do not place the microwave oven on a shelf directly above a gas or electric hob. This may be a safety hazard and the oven may be damaged. It is dangerous to position the oven on a shelf which is so high that food cannot be safely removed by the user. If a shelf is used in a suitable position, ensure that it is capable of supporting the weight of the oven.
3. Do not block air vents on the rear and bottom of the cabinet. If air vents are blocked during operation, the oven may overheat. If the oven overheats, a thermal safety device will turn the oven off. The oven will remain inoperable with blank display until it has cooled.
4. Do not use the oven outdoors.

Using Your Oven

1. This oven must not be operated without food in the oven. Operation when empty will damage the appliance.
2. Children should be kept away from the oven at all times and should only be allowed to operate the oven under supervision. Ensure that children do not touch the hot outer casing.

3. Storage of accessories. Do not store any objects other than oven accessories inside the oven in case it is accidentally turned on. In case of electronic failure, the oven can be turned off at wall socket.
4. Do not dry fabrics in the oven since there is a possibility of the clothes burning if left in the oven for too long.
5. If smoke is observed, press the **Stop/Reset** Pad or turn the **Timer Dial** back to zero “0” position and leave the door closed. Disconnect the power cord, or shut off the power at the fuse or circuit breaker panel.
6. **Removable shelf**
   Do not slide the removable shelf in or out when placing or removing food. This action could cause damage to the shelf or cause hot food to tip towards the operator.

Maintenance of Your Oven

1. WHEN YOUR OVEN REQUIRES A SERVICE call your local Panasonic engineer (08701-591590) for service. It is dangerous for anyone other than a service technician trained by the manufacturer to perform repair service. Do not attempt to remove the outer casing of the oven.

2. Do not attempt to tamper with or make any adjustments or repairs to the door, control panel housing, safety interlock switches or any other part of the oven. **Do not remove outer panel from the oven.** The door seals and door seal areas should always be kept clean — use a damp cloth.
3. The oven lamp must be replaced by a service technician trained by the manufacturer. DO NOT attempt to remove the outer casing from the oven.

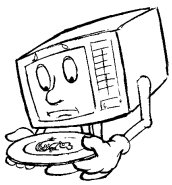
Short Cooking Times
As microwave cooking times are much shorter than other cooking methods it is essential that recommended cooking times are not exceeded without first checking the food.

Factors that may affect cooking times are: preferred degree of cooking, starting temperature, altitude, volume, size and shape of foods and utensils used. As you become familiar with the oven, you will be able to adjust these factors.

It is better to undercook rather than overcook foods. If food is undercooked, it can always be returned to the oven for further cooking. If food is overcooked, nothing can be done. Always start with minimum cooking times.

IMPORTANT
If the recommended cooking times are exceeded, the food will be spoiled and in extreme circumstances it could catch fire and possibly damage the interior of the oven.

1. **Small Quantities of Food**
   Take care when heating small quantities of food as these can easily burn, dry out or catch on fire if cooked too long. Always set short cooking times and check the food frequently.
   N.B. If materials inside the oven should ignite, keep the oven door closed, turn the oven off.



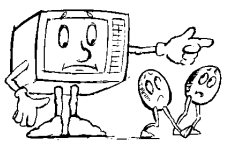
   Disconnect the power cord, or shut off the power at the fuse or circuit breaker panel.

   NEVER OPERATE THE OVEN WITHOUT FOOD.

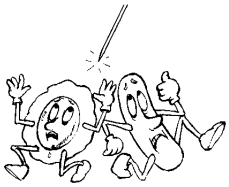
2. **Foods Low in Moisture**
   Take care when heating foods low in moisture, e.g. bread items, chocolate, popcorn, biscuits and pastries. These can easily burn, dry out or catch on fire if cooked too long.

3. **Christmas Pudding**
   Christmas puddings and other foods high in fats or sugar, e.g. jam, mince pies, must not be over heated. These foods must never be left unattended as with over cooking these foods can ignite.

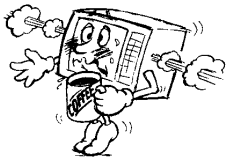
4. **Boiled Eggs**
   Do not boil eggs in their shells in the microwave. Raw eggs boiled in their shells can explode causing injury.



5. **Foods with Skins**
   Potatoes, apples, egg yolk, whole vegetables and sausages are examples of food with non porous skins. These must be pierced using a fork before cooking to prevent bursting.



6. **Liquids**
   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 of 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 the heating time.
   d) After heating, allow it to stand in the oven for a short time, stirring again before carefully removing the container.

7. **Lids**
   Always remove the lids of jars and containers and take away food containers before you microwave them. If you don't, steam and pressure might build up inside and cause an explosion even after the microwave cooking has stopped.

8. **Deep Fat Frying**
   Do not attempt to deep fat fry in your oven.

9. **Temperature probe**
   Use a temperature probe to check the temperature of foods when they have been removed from the microwave. If undercooked, return to the oven and cook for a few more minutes at the recommended power level. Do not leave the temperature probe in the oven when microwaving.

10. **Paper, Plastic**
    When heating food in plastic or paper containers, check the oven frequently as these types of containers ignite if overheated. Do not use wire twist-ties with roasting bags as arcing will occur. Do not use recycled paper products, e.g. kitchen roll unless they say they are specifically designed for use in a microwave oven. These products contain impurities which may cause sparks and/or fires when used.

11. Reheating

It is essential that reheated food is served “piping hot”. Remove the food from the oven and check that it is “piping hot”, i.e. steam is being emitted from all parts and any sauce is bubbling. If you wish you may choose to check the food has reached 72˚C with a food thermometer = (but remember do not leave this thermometer inside the microwave.) or to a temperature recommended by Government Food Hygiene Regulations.

For foods that cannot be stirred, e.g. lasagne, shepherds pie, the centre should be cut with a knife to test it is well heated through. Even if a manufacturer’s packet instructions have been followed, always check the food is piping hot before serving it. If in doubt return your food to the oven for further heating.

12. Standing Time

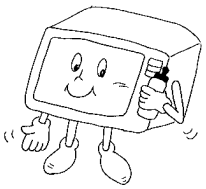
Standing time refers to the period at the end of cooking or reheating when food is left before being eaten, i.e. it is a rest time which allows the heat in the food to continue to conduct to the centre, thus eliminating cold spots.

13. Keeping Your Oven Clean

It is essential for the safe operation of the oven that it is wiped out regularly. Use warm soapy water or a food sanitizer solution. Squeeze the cloth out well and use it to remove any grease or food from the interior.

Disconnect the appliance from the electricity supply before cleaning.

14. Babies Bottles and Food Jars



When reheating babies bottles always remove top and teat. Liquid at the top of the bottle will be much hotter than at the bottom and must be shaken thoroughly before checking the temperature. The lid must also be removed from babies food jars, the contents must also be stirred or shaken before the temperature is checked.

The temperature has to be checked before consumption to avoid burns.

15. Containers

Before use check that utensils/containers are suitable for use in microwave ovens.

DO NOT USE METAL UTENSILS IN THIS OVEN.

16. Sealed Containers

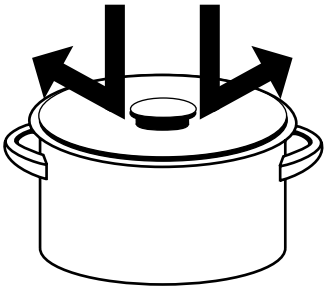
Liquids or other foods must not be heated in sealed containers since they are liable to explode.

How Does the Microwave Work?

Microwaves are a form of high frequency radio waves similar to those used by a radio including AM, FM and CB. They are, however, much shorter than radio waves; approximately 12 cm long. Electricity is converted into microwave energy by the magnetron tube. From the magnetron tube, microwave energy is transmitted and absorbed.

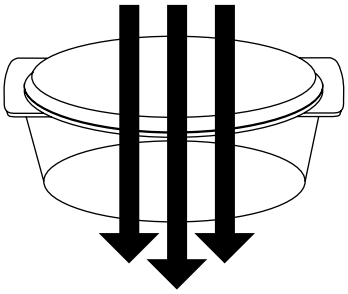
Reflection

Microwaves are reflected by metal just as a ball is bounced off a wall. A combination of stationary (interior walls) and rotating antenna, located underneath the bottom shelf and above the ceiling cover assure that the microwaves are well distributed within the oven cavity to produce even heating or cooking of foods.



Transmission

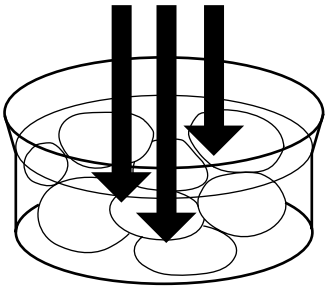
Microwaves pass through some materials such as paper, glass and plastic much like sunlight shining through a window. Because these substances do not absorb or reflect the microwave energy, they are ideal materials for microwave oven cooking containers.



Absorption

During heating, microwaves will be absorbed by food. They penetrate to a depth of about 1-5 cm. Microwave energy excites the molecules in the food (especially water, fat and sugar molecules), and causes them to vibrate at a rate of 2,450,000,000 times per second. This vibration causes friction, and heat is produced just as you will feel heat produced if you vigorously rub your hands together. The internal heating of larger foods is done by conduction. The heat which is produced by friction travels by conduction to the centre of the food. Foods also continue to heat by conduction during standing time.

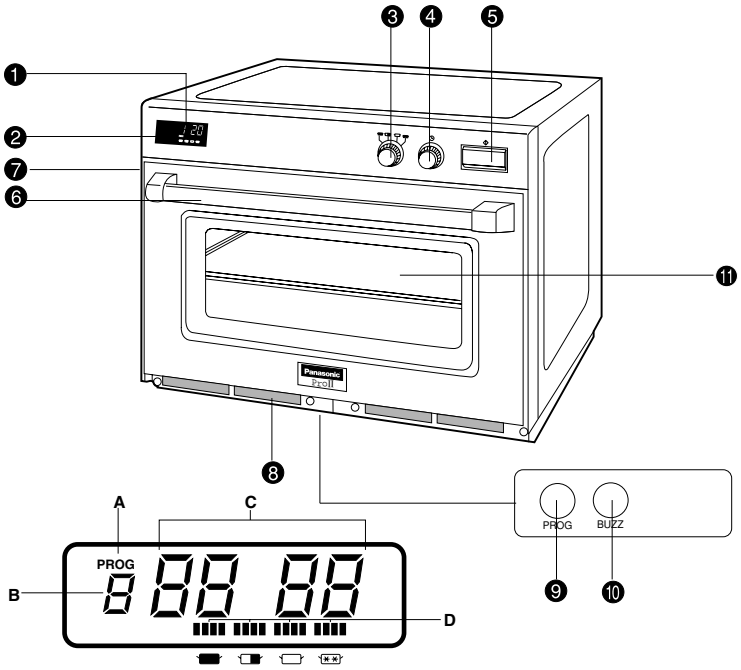
Because microwaves dissipate, much like sunlight as it reaches the Earth's surface, they are not stored in food.



Radio Interference

1. Operation of the microwave oven may cause interference to your radio,TV or similar equipment.
2. When there is interference, it may be reduced or eliminated by taking the following measures:
   a. Clean the door and sealed surfaces of the oven.(See Care of Your Microwave Oven found on page 17.)
   b. Place the radio, TV, etc. as far away as possible, from the microwave.
   c. Use a properly installed antenna, to obtain stronger signal reception.

Outline Diagram NE - 1540



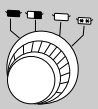
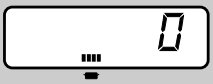
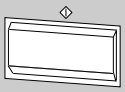
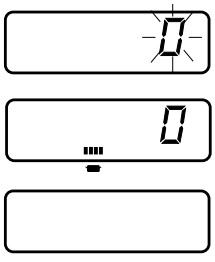
❶ Digital Display Window
❷ Power Level Indicator Display
❸ Power Level Selector Dial
❹ Timer Dial
❺ Start Button
❻ Door Handle
❼ Oven Lamp Cover
❽ Air Filters
❾ Program Entry Switch (behind Air Filter)
❿ Buzzer Switch (behind Air Filter)
⓫ Middle Shelf

A - Program Display
B - Beep Tone Mode Display
C - Heating Time Display (min. sec.)
D - Power Level Indicator
- HIGH
- MEDIUM
- LOW
- DEFROST

How to Operate NE - 1540

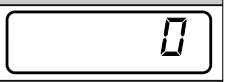
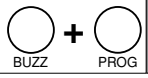
A. MANUAL HEATING

Example: To cook food at HIGH power for 2 minutes

	PAD	INSTRUCTION	DIGITAL DISPLAY WINDOW
1		**Open the door and put the food in the oven.** ☛ The oven lamp will turn on. "0" and Power Level Indicator will appear.	
2		**Select the desired Power Level by turning the Power Level Selector Dial.**	
3		**Set the desired heating time.** ☛ The heating time will appear in the digital display while turning the Timer Dial. **Note:** up to 60 minutes.	
4		**Press Start Button.** ☛ The oven lamp will turn on and heating will start. Power Level Indicator will start to blink, and heating time will count down.	
• At the end of the time, the beep tone will sound and all heating will stop. The oven lamp will go off. 1 minute later the cooling fan will stop. The display will blink "0" until the door is opened. • Open the door and take the food out. "0" will appear in the display window and the Power Level will be displayed. The oven lamp will be turned on. • Close the door. The oven lamp will go off and 1 minute later the display window will go blank. • When you press the Start Button with door open, "0" will appear in the display in all cases. • Even after setting the heating time you can still change the power level. • If you wish to change the heating time during heating, simply adjust the timer to desired minutes and seconds. The microwave oven can also be turned OFF by turning the Timer Dial to the left until "0" appears in the digital display and beep tone can be heard.			

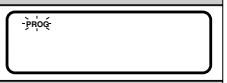
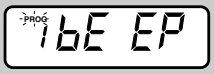
B. CYCLE COUNTER

◆*To Read Total Cumulative Times That The Oven Has Been Used*

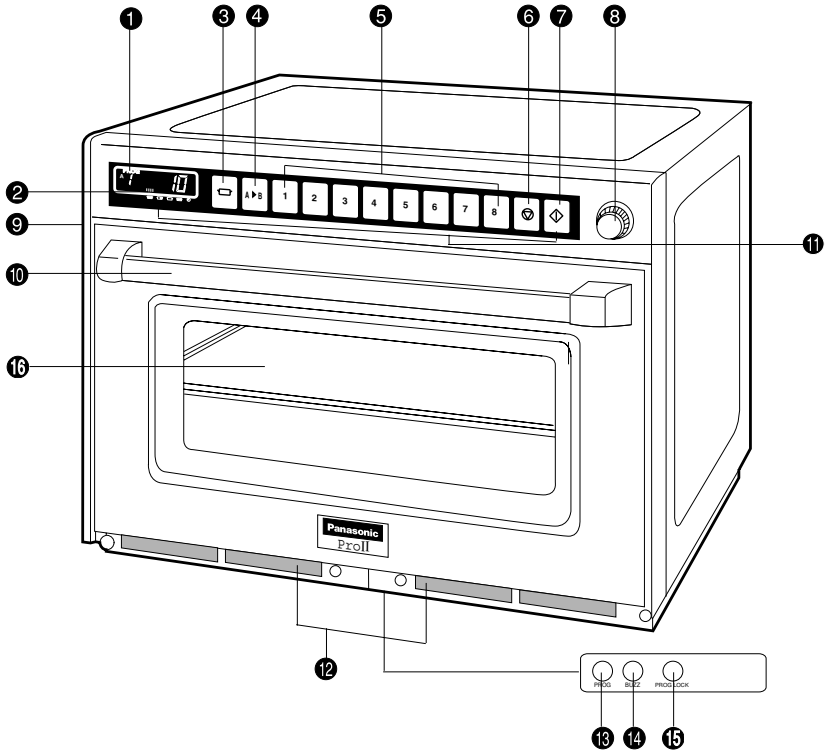
	PAD	INSTRUCTION	DIGITAL DISPLAY WINDOW
1		**Open the door. The oven lamp will be turned on.** ☛"0" will appear in the display.	
2		**Close the door.** **NOTE:** Carry out Step 3 within 60 seconds of closing the door, or the display will go blank.	
3		**While pressing Buzzer Switch, press Program Entry Switch.** **Example:** 99999 times	

C. BEEP TONE

◆*To Cancel Beep*

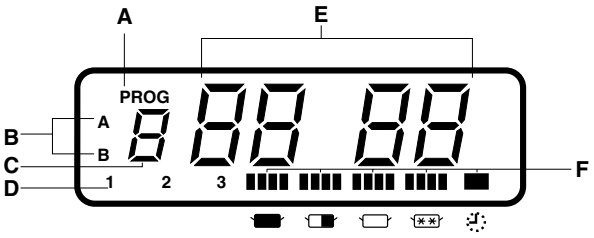
	PAD	INSTRUCTION	DIGITAL DISPLAY WINDOW
1		**Press Program Entry Switch.** (The door may be open or closed at this stage.)	
2		**Press Buzzer Switch.** ☛ "bEEP" and first stage heating indicator "1" will appear in Digital Display Window.	
3		**Press Buzzer Switch again.** ☛ "0 bEEP" will appear in Digital Display Window.	
4		**Press Program Entry Switch again.** ☛ "PROG" will stop blinking. You have completed setting silent level.	

Outline Diagram NE - 3280/NE - 2180/NE - 1880



❶ **Digital Display Window**
❷ **Power Level Indicator Display**
❸ **Power Level Selector Pad ( )**
❹ **Memory Shift Pad ( )**
❺ **Memory Pads**
❻ **Stop/Reset Pad ( )**
❼ **Start Pad ( )**
❽ **Timer Dial**

❾ **Oven Lamp Cover**
❿ **Door Handle**
⓫ **Control Panel**
⓬ **Air Filters**
⓭ **Program Entry Switch (behind Air Filters)**
⓮ **Buzzer Switch (behind Air Filters)**
⓯ **Program Lock Switch (behind Air Filters)**
⓰ **Middle Shelf**



A - Program Display
B - Memory Area Code Display
C - Memory Pad Number Display
D - Stage Heating Indicator
E - Heating Time Display (min. sec.)
F - Power Level Indicator
- **HIGH**
- **MEDIUM**
- **LOW**
- **DEFROST**
- **STAND**

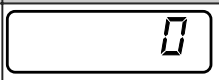
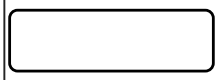
This oven is preset at the factory for the following:
- ◆ Manual operation
- ◆ Memory pads preset HIGH power at the indicated heating times for single stage heating
  1 = 10 sec. 2 = 20 sec. 3 = 30 sec. 4 = 45 sec. 5 = 1 min.
  6 = 1 min. 15 sec. 7 = 1 min. 30 sec. 8 = 2 min.
  (There are two sides, A and B. Only A-side is preset.)
- ◆ Program Unlock
- ◆ Cycle Counter set to “0” on all pads

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

A. MANUAL HEATING

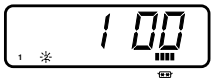
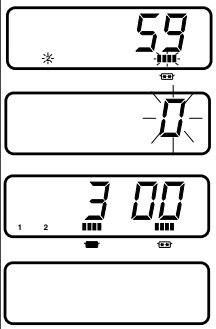
◆ *Single stage heating*

Example: To cook food at HIGH power for 2 minutes

	PAD	INSTRUCTION	DIGITAL DISPLAY WINDOW
1		**Open the door and put the food in the oven.** ☛ The oven lamp will turn on and "0" will appear. **Note:** While "0" appears, operation is available. One minute after the door is closed, "0" will disappear.	
2		**Press Power Level Selector pad once.** ☛ The selected power level will be indicated and 1st Stage Heating Indicator "1" will start to blink. **Note:** Press once for HIGH power, twice for MEDIUM power, 3 times for LOW, four times for DEFROST and 5 times for STAND.	
3		**Set the desired heating time using the Timer Dial.** ☛ The selected heating time will appear. **Note:** up to 15 min. on or , 60 min. on , or	
4		**Press Start pad.** ☛ The oven lamp will turn on and heating will start. Power Level Indicator will start to blink, and heating time will count down.	
• When all time expires, beep tone will sound and heating will stop. The oven lamp will turn off. "0" will blink until the door is opened. One minute later, cooling fan will stop. • Open the door and take the food out. The oven lamp will turn on. Digital Display Window will show the originally selected time and power. • Close the door. The oven lamp will turn off. One minute later, Digital Display Window will go blank.			 

◆ *2 or 3 stages heating*

Example: To cook food at HIGH power for 2 minutes and at DEFROST power for 1 minute

	PAD	INSTRUCTION	DIGITAL DISPLAY WINDOW
		Follow steps 1 to 3 on page 10.	
4		**Press Power Level Selector pad four times.** ☛ The selected power level will be indicated and 2nd Stage Heating Indicator "2" will start to blink.	
5		**Set the desired heating time for the second stage using the Timer Dial.** ☛ The set heating time will appear. **Note:** up to 15 min. on or , 60 min. on , or	
6		**Press Start pad.** ☛ The oven lamp will turn on. The total time for both stages will appear and start to count down. 1st Stage Heating Indicator "1" and Power Level Indicator for the first stage heating will start to blink.	
• After the first stage heating, a single beep tone will sound. 2nd Heating Stage Indicator "2" and Power Level Indicator for the second stage heating will start to blink and the remaining heating time will count down. • When all time expires, beep tone will sound and heating will stop. The oven lamp will turn off. "0" will blink until the door is opened. One minute later, cooling fan will stop. • Open the door and take the food out. The oven lamp will turn on. Digital Display Window will show the originally set time and power. • Close the door. The oven lamp will turn off. One minute later, Digital Display Window will go blank.			

Note: For 3 stages Heating, repeat steps 4 and 5 above before pressing Start pad ◈ .

SPECIAL NOTE: For both single and 2 or 3 stages heating

1. While heating, one press on Stop/Reset pad stops the operation. You can restart it by pressing Start pad or a second press on Stop/Reset pad will cancel the selected program.
2. While not heating, one press on Stop/Reset pad cancels the selected program.

Repeat Feature

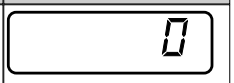
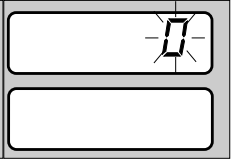
- You can repeat the last manually selected heating time by pressing the Start pad ◈ , if the oven is used within 1 minute.
- The Repeat Feature will be cancelled after 1 minute of non-use. The display goes blank.

B. PROGRAMMED HEATING

◆ *In Program Unlock Mode:*

MAKE SURE THE UNIT IS PROPERLY PROGRAMMED (see page 14 - 15).

Example: To select Memory pad "5" at A side in which your desired heating program (at HIGH power for 3 min., single stage heating) is set

	PAD	INSTRUCTION	DIGITAL DISPLAY WINDOW
1		**Open the door and put the food in the oven.** ☛ The oven lamp will turn on and "0" will appear. **Note:** While "0" appears, operation is available. One minute after the door is closed, "0" will disappear.	
2	5	**Press the Desired Memory Pad "5".** ☛ The currently programmed information will be indicated.	
3	◇	**Press Start pad.** ☛ The oven lamp will turn on and heating will start. The heating time will count down.	
• When all time expires, beep tone will sound and heating will stop. The oven lamp will turn off. "0" will blink until the door is opened. One minute later, cooling fan will stop. • Open the door and take the food out. The oven lamp will turn on. • Close the door. The oven lamp will turn off. One minute later, Digital Display Window will go blank.			

Note:
- When you want to select Memory Area B, press Memory Shift pad [A ▸ B] before pressing the desired Memory pad.

◆ *In Program Lock Mode:*

Just press the desired Memory pad. Heating will automatically start without pressing Start pad.

C. PROGRAMMING MEMORY PADS

◆*Single stage heating*

THE OVEN CAN NOT BE PROGRAMMED WHEN PROGRAM LOCK IS ACTIVATED! (see page 14 - 15)
DO NOT OPEN THE DOOR WHILE PROGRAMMING!

Example: To program cooking at DEFROST power for 1 minute into Memory pad "5"

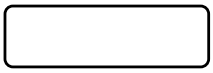
	PAD	INSTRUCTION	DIGITAL DISPLAY WINDOW
1		**Keep the door closed.** ☛ Digital Display Window must be blank or show "0".	
2	PROG	**Press Program Entry Switch.** ☛ "PROG" will start to blink.	
3	5	**Press Memory pad you wish to program.** ☛ The selected pad number will appear and currently programmed information will be indicated.	
4		**Press Power Level Selector pad four times.** ☛ The selected power level will be indicated, "PROG" and 1st Stage Heating Indicator "1" will start to blink.	
5		**Set the desired heating time using Timer Dial.** ☛ The set heating time will appear. **Note:** up to 15 min. on or , 60 min. on , or	
6	PROG	**Press Program Entry Switch again.** ☛ "PROG" and 1st Stage Heating Indicator "1" will stop blinking. This means that you have completed programming.	
• Three seconds later, Digital Display Window will go blank.			

Note:
- Program the remaining Memory pads as desired by repeating steps 2-6 above.
- When you want to select Memory Area B, press Memory Shift pad before selecting the desired Memory pad.

◆*2 or 3 stages heating*

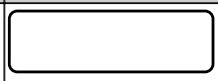
THE OVEN CAN NOT BE PROGRAMMED WHEN PROGRAM LOCK IS ACTIVATED! (see page 14 - 15)
DO NOT OPEN THE DOOR WHILE PROGRAMMING!

Example: To program cooking at DEFROST power for 1 minute and at HIGH power for 2 minutes into Memory pad "5"

	PAD	INSTRUCTION	DIGITAL DISPLAY WINDOW
		Follow steps 1 to 5 on page 13.	
6		**Press Power Level Selector pad once.** ☛ The power level for 2nd stage will be indicated, 2nd Stage Heating Indicator "2" will start to blink.	
7		**Set the desired heating time using Timer Dial.** ☛ The set heating time will appear. **Note:** up to 15 min. on or , 60 min. on , or	
8	 PROG	**Press Program Entry Switch again.** ☛ "PROG" and 2nd Stage Heating Indicator "2" will stop blinking. The total time for both stages will appear. This means that you have completed programming.	
• Three seconds later, Digital Display Window will go blank.			

D. PROGRAM LOCK

◆ *To Activate Program Lock:*

	PAD	INSTRUCTION	DIGITAL DISPLAY WINDOW
1		**Keep the door closed.** ☛ Digital Display Window must be blank.	
2	 PROG LOCK	**Press Program Lock Switch until "PROG", "P" and "L" appear. (for five seconds)** ☛ "PROG", "P" and "L" will appear.	

In Program Lock mode:
- The oven is started by pressing the desired Memory pad. There is no need to press Start pad.
- Opening the door cancels the remaining time on the program.
- The oven can not be programmed until the program lock is released.

◆ *To Release Program Lock:*

	PAD	INSTRUCTION	DIGITAL DISPLAY WINDOW
1		**Keep the door closed.** ☛ Digital Display Window must be blank.	
2	PROG LOCK	**Press Program Lock Switch until "PROG" and "P" appear. (for five seconds)** ☛ "PROG" and "P " will appear.	PROG P

In Program Unlock mode:
- Oven reverts to a two-touch operating mode (Memory pad + Start pad).
- Repeat and interrupt feature are operational.
- Memory pads can be programmed.
- Tone loudness control and length control are operational.

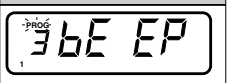
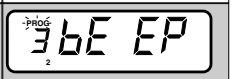
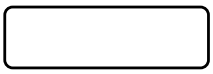
E. BEEP TONE

The loudness of beep tone and the length of beep tone at the end of heating cycle can be set.
There are four levels of the loudness.
There are two options of the length of beep tone at the end of heating cycle.
The loudest level and 3 beeps are preset at the factory.

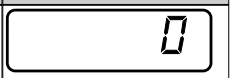
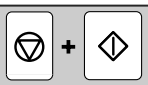
◆ *To Select Loudness Level and Length "3 beeps":*

	PAD	INSTRUCTION	DIGITAL DISPLAY WINDOW
1	PROG	**Press Program Entry Switch.** ☛ "PROG" sign will start to blink in the display window. (The door may be open or closed at this stage)	PROG
2	BUZZ	**Press Buzzer Switch.** ☛ The tone will sound at its loudness level and the loudness level "3" followed by the word "bEEP" will appear. "PROG" will start to blink and 1st Stage Heating Indicator "1" (the length of beep tone "3 beeps") will be indicated. **Note**: Repeatedly pressing the Buzzer Switch will lower the loudness level all the way to silent. (3bEEP — loudest, 2bEEP — middle, 1bEEP — quietest, and 0bEEP — silent)	PROG 3bE EP 1
3	PROG	**Press Program Entry Switch again.** ☛ "PROG" will stop blinking. That means that you have completed program. Three seconds later, the display window will go blank when the door is closed.	PROG 3bE EP 1

◆ *To Select Length of Tone "short beeps for 60 seconds":*

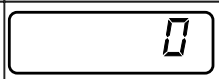
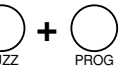
	PAD	INSTRUCTION	DIGITAL DISPLAY WINDOW
4		**Follow step 1-3 on page 15.**	
5	BUZZ	**Within three seconds after pressing Program Entry Switch at step 3, press Buzzer Switch.** ☛ "PROG" will start to blink and 2nd Stage Heating Indicator "2" (the length of beep tone "short beeps for 60 seconds") will be indicated.	
6	PROG	**Press Program Entry Switch again.** ☛ "PROG" will stop blinking. This means that you have completed programming. Three seconds later, the display window will go blank when the door is closed.	

F. PROGRAM LIST

	PAD	INSTRUCTION	DIGITAL DISPLAY WINDOW
1		**Open the door and leave it open.** ☛ The oven lamp will turn on and "0" will appear.	
2		**While pressing Stop/Reset pad, press Start pad.** ☛ All currently programmed information (the program set into each Memory pad (A/B sides), Beep Tone, and Program Lock information) will continuously appear.	

G. CYCLE COUNTER

◆ *To Read Total Cumulative Times That The Oven Has Been Used:*

	PAD	INSTRUCTION	DIGITAL DISPLAY WINDOW
1		**Open the door and leave it open.** ☛ The oven lamp will turn on and "0" will appear.	
2		**Close the door.** ☛ Carry out Step 3 within 60 seconds of closing the door, or the display will go blank.	
3	 BUZZ PROG	**While pressing Buzzer Switch, press Program Entry Switch.** ☛ The display shows the total cumulative number of times the oven has been used.	

Self Diagnostics Failure Code Explanation

This oven monitors its operation and displays a Failure Code in the display window when a problem occurs.

What to do when a failure code appears:

CODE	CAUSE	WHAT TO DO
F01	• Overcooked food. • Temperature of exhaust air too high.	• Disconnect appliance from electricity supply to stop beep. • Wait for appliance to cool down to reset operation. • If food ignites, do not open the door. • If normal operation does not resume, call the service agent with information of failure code.
F05	• Defective Memory IC.	• Disconnect appliance from electricity supply and wait more than 1 minute and reconnect. • If normal operation does not resume, call the service agent with information of failure code.
F33-34	• Defective thermistor circuit.	
F44	• Defective control panel.	
F81-F84 F86-F89	• Defective relay circuit.	

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

Care of Your Microwave Oven

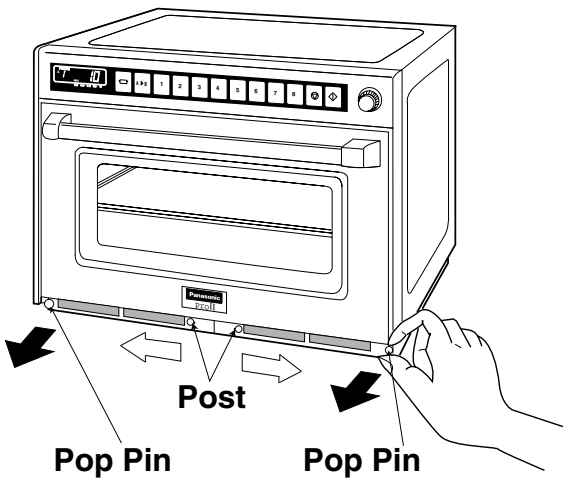
1. Disconnect the appliance from the electricity supply before cleaning.
2. Keep the inside of the oven clean. If pieces of food or spilled liquids stick to the oven walls, or between door seal and door surface, they will absorb microwave and may cause arcing or sparks. Wipe up all spills with a damp cloth. Kitchen detergent 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 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 door front can be scratched by harsh soap or detergents.

Cleaning the Air Filters

Clean the Air Filters occasionally according to the following instructions. Problems may occur with the oven if the filters become clogged with dirt or dust.*

1. Remove the right Air Filter from the front bottom skirt by pulling the Right Pop Pin straight out. Then slide the filter to the right and lift it off the post at the centre. Remove the left Air Filter the same as right one.
2. Wash the filters with soap and water.
3. To replace, align the filter with the centre post, and holding the front of the Pop Pin forward, locate the back of the pin into its hole. Press the front of the pin and it will pop into place. Be sure to replace the air filters before using this oven.

* If the Air Filter becomes clogged with dust or grease this will cause an overheat problem on the oven.



DEFROSTING FROZEN FOODS

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. 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.
5. Ice should be removed during defrosting.

OTHER HELPFUL INSTRUCTIONS

For best results

1. When determining heating time for a particular food, always calculate the minimum time and check occasionally during cooking for progress. The Microwave Oven cooks so quickly, it is easy to overcook foods.
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.
6. To achieve a more even cooking result, give the dish a half-turn, or turn the food over.

COOKWARE

1. Before using the oven always check that containers are suitable. DO NOT MICROWAVE sealed containers as they may explode.
   N.B. Always check manufacturer's instructions as some food manufacturers are producing food in containers that do not require piercing.
2. DO NOT leave the appliance unattended if paper, plastic or other combustible containers are used. Do not use re-cycled paper products, as they may contain impurities which may cause sparks and/or fires when used, unless packaging states they are specifically designed for MICROWAVE use.
3. Heat-proof glassware, such as Pyrocream and Pyrex, is best suited for use in the Microwave Oven.
4. Do not use metal ware, ceramics trimmed with gold or silver, or any container with a metal content.
5. If "arcing" should occur, check the cookware carefully again for metal.
6. 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.

CAUTION

Do not use METAL UTENSILS in this oven.

TWO LEVEL COOKING

When heating, one item always place the container in the centre of the base plate.

When using the microwave mainly for reheating one item at a time, remove the shelf and work on the base plate.

When reheating two items at a time place both dishes on the base plate side by side, unless the containers are too large and then place one on the shelf.

When heating more than two plates, place the dishes evenly on the base and shelf.

Allow some space between each plate, do not cram too much food into the oven.

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 from 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 fibre, 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 mark 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 the microwave oven without first stirring.

GENERAL GUIDELINES FOR HEATING IN A PANASONIC 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 colour, texture or nutritional content.

HEATING FOODS FROM ROOM TEMPERATURE

Food items such as canned entree, vegetables, etc. will require significantly less heating time than those from 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, pastries and pies. They are drier than insides or 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.

The times given in the following charts are a **guideline only.** Many factors eg **starting temperature** of the food can affect the final heating time required. The cooking and defrosting times must be adjusted when necessary. All times are tested using foods at **starting temperatures** as below;

Chilled foods . . . . . .Approx. +5˚C
Frozen foods . . . . . .Approx. -18˚C

Always check for the correct core temperature with a temperature probe to comply with current Government Food Hygiene Regulations.

Standard Portion Heating Chart

Function	Food	Weight	Power Level	Approx. Time			
				NE-3280	NE-2180	NE-1880	NE-1540
Defrosting	Fish Fillets	500 g		6 min 40 s	6 min 40 s	8 min	8 min
	Minced Beef	500 g		4 min 15 s	4 min 15 s	5 min	5 min
	Whole Chicken	1.36 kg		21 min 15 s	21 min 15 s	25 min	25 min
	Composite Dish						
	Multi portion	1.36 kg		17 min	17 min	20 min	20 min
	Single portion	275 g		6 min 40 s	6 min 40 s	8 min	8 min
	Apple Pie	1 portion		1 min 05 s	1 min 05 s	1 min 15 s	1 min 15 s
	Gateau	1 portion		1 min 40 s	1 min 40 s	2 min	2 min
	Bread Rolls	1 portion 50 g		25 s	25 s	30 s	30 s
Cooking from Chilled Raw Food	Scrambled Egg	2 eggs + 2 tbsp. milk		13-17 s	22-25 s	26-30 s	30-40 s
	Broccoli	500 g		1 min 40 s	3 min	3 min 30 s	4 min 20 s
	Fish Fillets	500 g		2 min 20 s	4 min	4 min 45 s	4 min 50 s
	Bacon	2 rashers		25 s	40 s	50 s	1 min
	Chicken Portions	500 g		2 min 30 s	6 min	7-8 min	8 min 20 s
				-3 min 25 s	-6 min 50 s		-9 min 40 s
Cooking and/or Reheating from Frozen	Peas	500 g		2 min 10 s	3 min 25 s	4 min	4 min 50 s
	Cooked Rice	167 g		1 min	1 min 25 s	1 min 40 s	2 min
	Cooked Sausages	x 3 (50 g each)		40 s	50 s	1 min	1 min 10 s
	Cooked Wings of Fire	x 7 pieces		1 min	1 min 25 s	1 min 40 s	2 min
	Cooked Boxed Cheeseburger	75 g		40 s	50 s	1 min	1 min 10 s
	Chocolate Fudge Cake	1 portion		25 s	25 s	30 s	30 s
Reheating from Cooked Chilled	Lasagne	325 g		1 min 40 s	2 min 30 s	3 min	3 min 30 s
	Chilli	325 g		1 min 40 s	2 min 30 s	3 min	3 min 30 s
	Apple Pie	1 portion		8 s	14 s	16 s	20 s
	Pepper Sauce	100 ml		35 s	40 s	50 s	1 min
	Baked Beans	100 ml		35 s	40 s	50 s	1 min
	Soup	125 ml		26 s	40 s	50 s	1 min

Multi-Portions and Large Quantities

Function	Food	Weight	Power Level	Approx. Time			
				NE-3280	NE-2180	NE-1880	NE-1540
Defrosting	Composite dish	1.36 kg	**	17 min	17 min	20 min	20 min
	Multi-Portion Apple Pie	whole 1 kg	**	17 min	17 min	20 min	20 min
Cooking from Chilled Raw Food	Jacket Potatoes (10 oz 290g)	x 1	10	1 min 20 s	2 min 30 s -3 min	3 min 30 s -4 min	4 min 30 s -5 min
		x 2	10	2 min 30 s	5 min -5 min 30 s	6 min 30 s	8 min
		x 3	10	4 min	7 min	9 min	11 min
		x 4	10	5 min 30 s	9 min	12 min	15 min
	Mixed Vegetables	2.5 kg	10	7 min	9 min	11 min	14 min
Reheating from Cooked Chilled	Lasagne	1.58 kg	10	5 min	5 min 45 s	6 min 45 s	8 min
	Leek & Bacon Bake	1.76 kg	10	6 min	6 min 45 s	7 min	9 min
	Chicken Tikka Masala	1.36 kg	10	3 min	4 min	5 min 30 s	6 min 30 s
	Cooked Mixed Vegetables	2.5 kg	10	4 min	5 min 30 s	7 min 30 s	12 min
Cooking from Frozen	Peas	1.5 kg	10	6 min	7 min 30 s	9 min	12 min
Reheating from Ambient Temperature	Baked Beans	2.6 kg	10	3 min 30 s	4 min 30 s	6 min	8 min

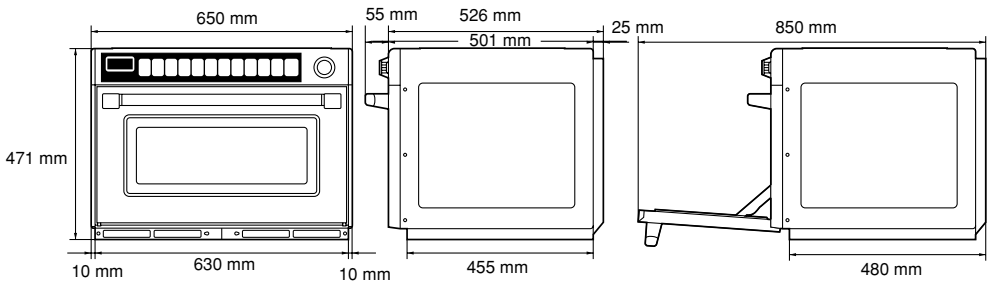
HINTS:
- Do not cook/reheat/defrost directly onto the base of the oven — use a suitable container.
- When defrosting **multi portions** of foods, turn over and break apart halfway through defrost time to allowbetter penetration of microwave energy.
- **Solid/dense foods** should not be cooked from frozen as they will be overcooked round the edges beforethe centre has reached the required temperature.
- **Cover** dishes where appropriate during cooking/reheating. This will retain moisture and prevent splashing/spillages.
- Loosen lids/pierce clingfilm before cooking/reheating covered foods.
- **Stir** or **shake** foods halfway through cooking/defrosting time to distribute the heat evenly.
- Allow a **Stand Time** before food temperature is checked and/or offered for consumption.

Technical Specifications

	NE-1540	NE-1880	NE-2180	NE-3280
Power Source	230 - 240 V, 50 Hz, single phase			
Required Power	2700 W/12.3 A	3400 W/14.8 A	3670 W/16.0 A	5220 W/22.3 A
Output	HI 1500 W * MED 750W LOW 340 W DEF 170 W	HI 1800 W * MED 900W LOW 340 W DEF 170 W STAND 0 W	HI 2100 W * MED 1050W LOW 340 W DEF 170 W STAND 0 W	HI 3200 W * MED 1600W LOW 340 W DEF 170 W STAND 0 W
Frequency	2450 MHz			
Outer Dimensions (W x D x H)	650 mm x 526 mm x 471 mm ($25^{9}/_{16}$" x $20^{3}/_{4}$" x $18^{9}/_{16}$")			
Cavity Dimensions (W x D x H)	535 mm x 330 mm x 250 mm ($21^{1}/_{16}$" x 13" x $9^{7}/_{8}$")			
Net Weight	54 kg			65 kg
Timer	60 min.	Maximum programable time for single stage heating and = 15 min. , and = 60 min.		
Memory Capability	———	16 programs		

* IEC Test Procedure

Specifications subject to change without notice.



Front View **Side View** **Side View with Opened Door**

Matsushita Electric Industrial Co., Ltd.

Cooking Systems Division
800 Tsutsui-cho, Yamatokoriyama City,
Nara 639-1188, Japan
http://www.panasonic.co.jp/global/

A00033A43BP
F0701-1064
Printed in Japan