

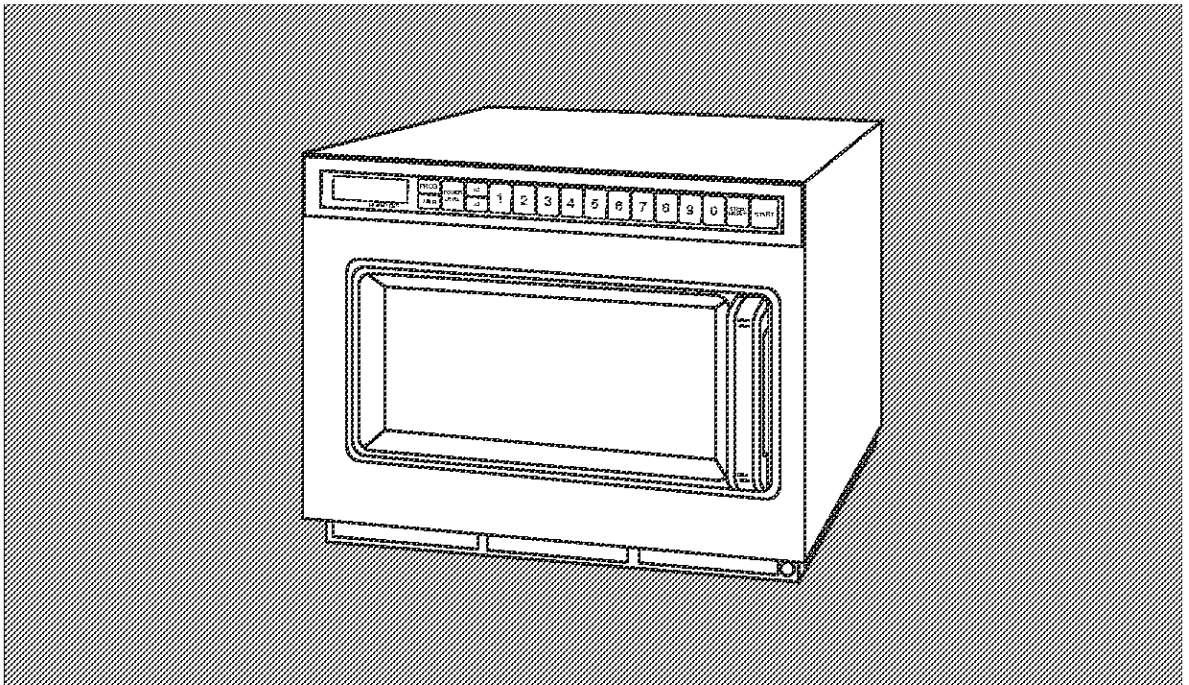
Operating Instructions

Commercial Microwave Ovens

NE-12521/NE-12523/NE-12721/NE-12723

NE-17521/NE-17523/NE-17721/NE-17723

NE-21521/NE-21523/NE-21721/NE-21723



Please read these instructions completely before operating this oven.

Before Calling for Service:

If failure code "F**" appears in the display, unplug oven and wait for 10 seconds before reconnecting. If normal operation does not resume, call the service agent with the information of failure code.

Contents

| | |
|--|-----------|
| PRECAUTIONS TO AVOID POSSIBLE EXPOSURE TO EXCESSIVE MICROWAVE ENERGY | 3 |
| IMPORTANT SAFETY INSTRUCTIONS | 3 |
| Installation and Grounding Instructions | 4 |
| Caution | 4 |
| How Does The Microwave Work? | 5 |
| Outline Diagram | 6 |
| How to Operate | |
| A. Manual Heating . . . single stage heating | 7 |
| 2 or 3 stage heating | 8 |
| B. Programmed Heating | 9 |
| C. Programming Number/Memory pads . . . single stage heating | 9 |
| 2 or 3 stage heating | 10 |
| D. Programming Double or Triple Quantity pad | 11 |
| E. Program Lock | 11 |
| F. Beep Tone | 12 |
| G. Program List | 13 |
| H. Cycle Counter | 13 |
| I. Air Filter | 14 |
| Installation Instructions for Stacking | 15 |
| Sanitary Counter Top Seal | 15 |
| Care of Your Oven | 16 |
| Self Diagnostics Failure Code Explanation | 17 |
| Heating and Defrosting Time Charts | 18 |
| Technical Specifications | 32 |

Owner's Record

Model No. _____

Serial No. _____

The serial number of this products
may be found on the side of the oven.

Dealer's Name _____

Dealer's Address _____

Date of Purchase _____

See page 17 before calling

Toll Free Service Information

To locate a convenient service agent call

1-888-350-9590

Chef Support: 201-348-7305

www.panasonic.com/cmo

Virtual Test Kitchens

PRECAUTIONS TO AVOID POSSIBLE EXPOSURE TO EXCESSIVE MICROWAVE ENERGY

- (a) **Do not attempt to operate this oven with the door open** since open-door operation can result in harmful exposure to microwave energy. It is important not to defeat or tamper with the safety interlocks. Under normal conditions, the oven will not operate with the door open.
- (b) **Do not place any object** between the oven front face and the door, or allow soil or cleaner residue to accumulate on sealing surfaces.
- (c) **Do not operate the oven** if it is damaged. It is particularly important that the oven door close properly and that there is no damage to the :
(1) door (bent)
(2) hinges and latches (broken or loose)
(3) door seals and sealing surfaces.
- (d) **The oven should not be adjusted or repaired** by anyone except properly qualified service personnel.

IMPORTANT SAFETY INSTRUCTIONS

Your microwave oven is a cooking device and you should use as much care as you use with a stove or any other cooking device.

When using this electric appliance, basic safety precautions should be followed, including the following:

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

1. Read all instructions before using the appliance.
2. Read and follow "**PRECAUTIONS TO AVOID POSSIBLE EXPOSURE TO EXCESSIVE MICROWAVE ENERGY,**" found on page 3.
3. This appliance must be grounded. Connect only to a properly grounded outlet. See "**Grounding Instructions**" found on page 4.
4. Install or locate this appliance only in accordance with the provided installation instructions found on page 4.
5. Do not cover or block any openings on this appliance.
6. Do not store or use this appliance outdoors. Do not use this product near water for example, near a kitchen sink, in a wet basement, or near a swimming pool, and the like.
7. Use this appliance only for its intended use as described in this manual. Do not use corrosive chemicals or vapors in this appliance. This type of oven is specifically designed to heat, or cook food. It is not designed for industrial or laboratory use.
8. When cleaning surfaces of door and oven that come together on closing the door, use only mild, non-abrasive soaps or detergents applied with a sponge or soft cloth.
9. As with any appliance, close supervision is necessary when used by children.
10. Do not operate this appliance if it has a damaged cord or plug, if it is not working properly, or if it has been damaged or dropped.
11. Do not immerse cord or plug in water.
12. Keep cord away from heated surfaces.
13. Do not let cord hang over edge of table or counter.
14. This appliance should be serviced only by qualified service personnel. Contact the nearest authorized service facility for examination, repair or adjustment.
15. Some products such as whole eggs and sealed containers (for example, closed glass jars) may explode and should not be heated in this oven.
16. To reduce the risk of fire in the oven cavity:
 - (a) Do not overcook food. Carefully attend appliance if paper, plastic, or other combustible materials are placed inside the oven to facilitate cooking.
 - (b) Remove wire twist-ties from paper or plastic bags before placing bag in oven.
 - (c) If materials inside the oven should ignite, keep oven door closed, turn oven off, and disconnect the power cord, or shut off power at the fuse or circuit breaker panel.
 - (d) Do not use the cavity for storage purposes. Do not leave paper products, cooking utensils, or food in the cavity when not in use.
17. Liquids, such as water, coffee, or tea are able to be overheated beyond the boiling point without appearing to be boiling due to surface tension of the liquid. Visible bubbling or boiling when the container is removed from the microwave oven is not always present. **THIS COULD RESULT IN VERY HOT LIQUIDS SUDDENLY BOILING OVER WHEN A SPOON OR OTHER UTENSIL IS INSERTED INTO THE LIQUID.** To reduce the risk of injury to persons:
 - (a) Do not overheat the liquid.
 - (b) Stir the liquid both before and halfway through heating it.
 - (c) Do not use straight-sided containers with narrow necks.
 - (d) After heating, allow the container to stand in the microwave oven for a short time before removing the container.
 - (e) Use extreme care when inserting a spoon or other utensil into the container.

SAVE THESE INSTRUCTIONS

For proper use of your oven read remaining safety cautions and operating instructions.

Installation and GROUNDING INSTRUCTIONS

Placement of the Oven

Locate the oven on a smooth, flat and stable surface. There should be no gap between the table surface and the bottom of the oven. Do not place the oven in a hot or damp area, i.e. near a stove, sink or directly above heat lamps on a serving line. 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.

Grounding Instructions

This oven must be grounded electrically. In the event of an electrical short circuit, grounding reduces the risk of electric shock by providing an escape wire for the electric current. The appliance is equipped with a cord having a grounding wire with a grounding plug. The plug must be plugged into an outlet that is properly installed and grounded.

WARNING — improper use of the grounding plug can result in a risk of electric shock.

Consult a qualified electrician or service person if the grounding instructions are not completely understood, or if doubt exists as to whether the appliance is properly connected.

If it is necessary to use an extension cord, use only a three wire extension cord that has a three blade grounding plug, and a three slot receptacle that will accept the plug on the appliance. The marked rating of the extension cord should be equal to or greater than the electrical rating of the oven.

Removal of Protective Film

A blue protective film is used to prevent scratching of the outer case during transportation. Peel the film from the exterior of the oven before installation or use.

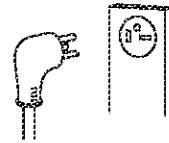
Wiring Requirements

No other appliance should share the circuit with the microwave oven. If it does, the branch circuit fuse may overload and either cause the oven to heat slower than

expected or blow the fuse.

- A. For Model NE-12521/NE-12523/NE-12721/NE-12723
The oven must be on a SEPARATE, 20 amp, 60 Hz-120 V GROUNDED CIRCUIT.

NEMA#
5-20P



120 V
Grounded
Outlet
NEMA# 5-20R

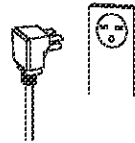
- B. For Models NE-17521/NE-17523/NE-17721/NE-17723
NE-21521/NE-21523/NE-21721/NE-21723

1. This oven must be on a separate, 60 Hz GROUNDED CIRCUIT - minimum 15 amps for NE-17521/NE-17523/NE-17721/NE-17723 and minimum 20 amps for NE-21521/NE-21523/NE-21721/NE-21723.

NE-17521/NE-17523
NE-17721/NE-17723

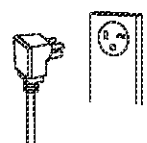
NE-21521/NE-21523
NE-21721/NE-21723

NEMA#
6-15P



208 V/230-240 V
Grounded Outlet
NEMA# 6-15R or 6-20R

NEMA#
6-20P



208 V/230-240 V
Grounded Outlet
NEMA# 6-20R

Caution

1. 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 the outer panel of the oven. Repairs should only be done by a qualified service person.
2. Do NOT operate the oven empty. The microwave energy will reflect continuously throughout the oven if no food or water is present to absorb energy.
3. If a fire occurs in the oven, press the Stop/Reset Pad and LEAVE THE DOOR CLOSED. Disconnect the power cord, or shut off the power at the fuse or circuit breaker panel.
4. Do NOT attempt to dry clothes, newspapers or other materials in the oven, as they may catch on fire.
5. Do NOT use recycled paper products, as they may contain impurities which may cause sparks and/or fires.
6. Do NOT use newspapers or paper bags for cooking.
7. Do NOT hit or strike the control panel. Damage to controls may occur.
8. POT HOLDERS may be needed when removing food from the oven. Heat is transferred from the hot food to the container.
9. Do NOT store flammable materials next to, on top of, or in the oven. It could be a fire hazard.
10. Do NOT operate the oven without the spatter shields (located in the top of inner cavity) in place.

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 five inches long. Electricity is converted into microwave energy by the magnetron tube. From the magnetron tube, microwave energy is transmitted to the oven cavity where it is: reflected, transmitted and absorbed.

Reflection

Microwave 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

Microwave 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 heating containers when covered.

Absorption

During heating, microwaves will be absorbed by food. They penetrate to a depth of about $\frac{3}{4}$ to $1\frac{1}{2}$ inches. 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 is conducted to the center of the food. Foods also continue to heat by conduction during standing time. ("carry-over" cooking)
Because microwave 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 door and sealing surfaces of the oven.
(See Care of Your Microwave Oven found on page 16.)
 - b. Place the radio, TV, etc. away from the microwave oven as far as possible.
 - c. Use a properly installed antenna, to obtain stronger signal reception.

Installation Instructions for Stacking

IMPORTANT

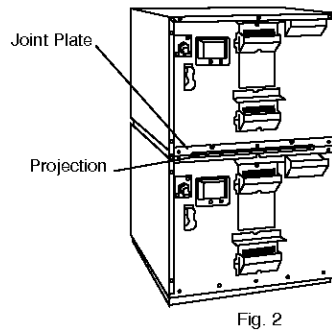
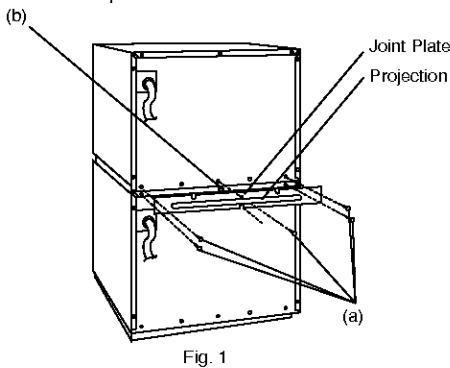
1. Disconnect the power cord from the wall socket before attempting installation.
2. For stacking installation, you must use the PANASONIC Joint Plate which is enclosed with this unit.
3. The maximum stacking height is the total heights of two units.

PREPARATION

Be sure the oven cavity is empty. Be sure surfaces where ovens meet is clean and sanitized.

INSTALLATION

1. Stack the units and remove five screws (a) as shown in Fig. 1.
2. Loosen the screw (b).
3. Projection on Joint Plate must face away from the oven. Place 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.

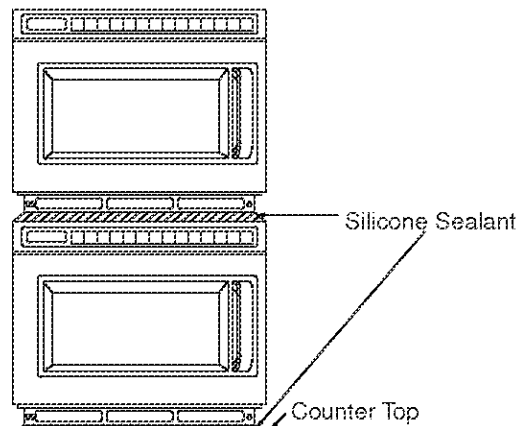


Sanitary Counter Top Seal

When microwave oven units are stacked on a counter top, their base must be sealed in accordance with N.S.F. Standards as per the following instructions.

1. Microwave oven should be located on a level counter top surface. Complete the electrical connections.
2. Thoroughly clean the microwave oven bottom perimeter and the counter top area around the microwave oven perimeter.
3. Lay generous bead of silicone seal around the entire perimeter of the base of each microwave oven unit.
4. Smooth the silicone seal into the crevice with finger or tool to provide a cove seal.

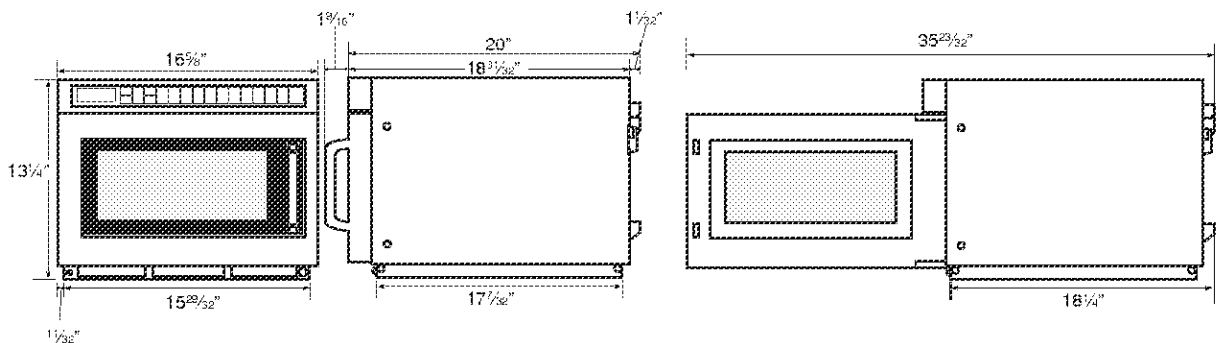
Note: Remove the Air Filter from the front of the oven before applying silicone. DO NOT FORGET to re-install the Air Filter after applying silicone.



Technical Specifications

| | NF-12XXX Series | NF-17XXX Series | NE-21XXX Series |
|----------------------------------|---|--|--|
| Power Source | 120 V, 60 Hz., single phase | 208/230 V, 60 Hz., single phase | |
| Required Power (Voltage) | 17.3 A (120 V) | 13.6 A (208 V) 12.2 A (230 V) | 16.3 A (208 V) 14.9 A (230 V) |
| Receptacle Required | 20 AMP NEMA #5-20R | 15 AMP NEMA #6-15R 20 AMP NEMA #6-20R | 20 AMP NEMA #6-20R |
| Output | HI: 1200 W* MED: 600 W DEF: 340 W | HI: 1700 W* MED: 850 W DEF: 340 W | HI: 2100 W* MED: 1050 W DEF: 340 W |
| Frequency | 2450 MHz | 2450 MHz | 2450 MHz |
| Outer dimensions (W x D x H) | 16 ⁵ / ₈ " x 20" x 13 ¹ / ₄ " (422 mm x 508 mm x 337 mm) | | |
| Cavity dimensions (W x D x H) | 13" x 12 ³ / ₈ " x 6 ¹ / ₈ " (330 mm x 310 mm x 175 mm) | | |
| Net weight (approx.) | 56 lbs. (25.4 kg) | 60 lbs. (27.2 kg) | 66 lbs. (29.9 kg) |

*IEC Test Procedure
Specifications subject to change without notice.



www.panasonic.com/cmo
Panasonic Consumer Electronics
Company, Division of Panasonic
Corporation of North America
 One Panasonic Way
 Secaucus, New Jersey 07094
 Or Call (201) 348-5377

A00033964AP
 F0900-3108
 Printed in Japan