



Heavy-Duty Stainless Steel Space Saver Microwaves with Push Button Controls

180MWASHD12	120V • 1200W
180MWASHD18	208/240V • 1800W
180MWASHD21	208/240V • 2100W



Read and keep these instructions. Indoor use only.

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180MWASHD12



180MWASHD18 /21



Important Safety Instructions



WARNING

To reduce the risk of burns, electrical shock, fire, or person injury when using electrical equipment, basic safety precautions should be followed.

1. READ all instructions before using equipment.
2. This equipment **MUST BE GROUNDED**. Connect only to properly GROUNDED outlet. See "GROUNDING/ EARTHING INSTRUCTIONS" on page 4.
3. Install or locate this equipment **ONLY** in accordance with the installation instructions in this manual.
4. Some products such as whole eggs and sealed containers (for example, closed glass jars) are able to explode and **SHOULD NOT BE HEATED** in this oven.
5. Use this equipment **ONLY** for its intended use as described in this manual. **DO NOT** use corrosive chemicals or vapors in this equipment. This type of oven is specifically designed to heat, cook, or dry food. It is not designed for industrial or laboratory use.
6. **HOT CONTENTS CAN CAUSE SEVERE BURNS. DO NOT ALLOW CHILDREN TO USE THE MICROWAVE.** Use caution when removing hot items.
7. **DO NOT** operate this equipment if it has a damaged cord or plug, if it is not working properly, or if it has been damaged or dropped.
8. This equipment, including power cord, must be serviced **ONLY** by qualified service personnel. Special tools are required to service equipment. Contact nearest authorized service facility for examination, repair, or adjustment.
9. **DO NOT** cover or block filter (if applicable) or other openings on equipment.
10. **DO NOT** store this equipment outdoors. **DO NOT** use this product near water – for example, near a kitchen sink, in a wet basement, a swimming pool, or a similar location.
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. Cleaning and user maintenance shall not be made by children without supervision.
15. To avoid risk of fire in the oven cavity:
 - a. **DO NOT** overcook food. Carefully attend oven when paper, plastic, or other combustible materials are placed inside the oven.
 - b. Remove wire twist-ties from paper or plastic bags before placing bag in oven.
 - c. If materials inside the oven ignite, keep oven door **CLOSED**, turn oven off and disconnect the power cord, or shut off power at the fuse or circuit breaker panel.
 - d. **DO NOT** use the cavity for storage. **DO NOT** leave paper products, cooking utensils, or food in the cavity when not in use.
16. For commercial use only.
17. It is hazardous for anyone other than a competent person to carry out any service or repair operation that involves the removal of any cover which gives protection against exposure to microwave energy.
18. If the door or door seals are damaged, the oven must not be operated until it has been repaired by a competent person.
19. Appliance is not to be used by children 8 years and below or persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge, unless they have been given supervision or instruction.
20. Only use utensils that are suitable for use in microwave oven.
21. When heating food in plastic or paper containers, keep an eye on the oven due to the possibility of ignition.
22. If smoke is observed, switch off or unplug the appliance and keep the door closed in order to stifle any flames.
23. Failure to maintain the oven in a clean condition could lead to deterioration of the surface that could adversely affect the life of the appliance and possibly result in a hazardous situation.

24. The appliance should not be cleaned with a water jet or steam cleaner.
25. Liquids or other foods must not be heated in sealed containers since they are liable to explode.
26. Microwave heating of beverages can result in delayed eruptive boiling, therefore care must be taken when handling the container.

Combination Ovens Only:

27. DO NOT insert oversized foods or oversized utensils in a microwave/convection oven as they may create a fire, an electrical arc, or risk of electrical shock.
28. DO NOT clean with metal scouring pads. Pieces can break off the pad and touch electrical parts involving risk of electrical shock.
29. DO NOT use paper products not intended for high temperature cooking when equipment is operated in convection or combination mode.
30. DO NOT store any materials, other than manufacturer's recommended accessories, in this equipment when not in use.
31. DO NOT cover any part of the oven with metal foil. Airflow restriction will cause overheating of the oven.
32. DO NOT spray oven cleaning solutions toward the rear inner cavity surface. This will contaminate and damage the convection heating assembly.



CAUTION

To avoid risk of personal injury or property damage, observe the following safety instructions:

General Use:

1. DO NOT use regular cooking thermometers in oven. Most cooking thermometers contain mercury and may cause an electrical arc, malfunction, or damage to oven.
2. Never use paper, plastic, or other combustible materials that are not intended for cooking.
3. When cooking with paper, plastic, or other combustible materials, follow manufacturer's recommendations on product use.
4. DO NOT use paper towels which contain nylon or other synthetic fibers. Heated synthetics could melt and cause paper to ignite.
5. To avoid surface deterioration, keep the oven in a clean condition. Infrequent cleaning could adversely affect the life of the appliance and possible result in a hazardous situation.
6. Clean oven regularly and remove any food deposits.

Heating Foods and Liquids:

7. 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 for a short time before removing it.
 - e. Use extreme care when inserting a spoon or other utensil into the container.
8. DO NOT deep fat fry in oven. Fat could overheat and be hazardous to handle.

9. DO NOT cook or reheat eggs in shell or with an unbroken yolk using microwave energy. Pressure may build up and erupt. Pierce yolk with fork or knife before cooking.
10. Pierce skin of potatoes, tomatoes, and similar foods before cooking with microwave energy. When skin is pierced, steam escapes evenly.
11. DO NOT heat sealed containers or plastic bags in oven. Food or liquid could expand quickly and cause container or bag to break. Pierce or open container or bag before heating.
12. DO NOT heat baby bottles in oven.
13. Baby food jars shall be open when heated and contents stirred or shaken before consumption, in order to avoid burns.
14. Never use oven to heat alcohol or food containing alcohol as it can more easily catch fire if overheated.

Additional Microwave Oven Safety Instructions:

15. DO NOT operate equipment without load or food in oven cavity.
16. Use only popcorn in packages designed and labeled for microwave use. Popping time varies depending on oven wattage. DO NOT continue to heat after popping has stopped. Popcorn will scorch or burn. DO NOT leave oven unattended.
17. DO NOT use metal utensils in oven.
18. An authorized servicer MUST inspect equipment annually. Record all inspections and repairs for future use.

Additional Combination Oven Safety Instructions:

19. DO NOT pop popcorn in this oven.
20. DO NOT use metal utensils in oven except when recommended by microwave food manufacturers or recipe requires metal utensils in convection or combination mode. Heat food in containers made of glass or china if possible.
21. Oven temperature is at least 450°F in convection mode. Verify plastic, paper or other combustible materials are recommended by the manufacturer to withstand the maximum oven temperature.
22. Racks, utensils, rack guides, and oven surfaces may become hot during or after use. Use utensils or protective clothing, like pan grips or dry oven mitts, when necessary to avoid burns.
23. DO NOT unplug oven immediately after use. Internal fan must cool oven to avoid damage of electrical components.
24. Caution: To avoid burns, do not use containers loaded with liquid or kitchen products that become liquid by heating at levels above those that can be easily observed.

Precautions to Avoid Possible Exposure to Excessive Microwave Energy

1. 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.
2. DO NOT place any object between the oven front face and the door or allow soil or cleaner residue to accumulate on sealing surfaces.
3. 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:
 - a. Door (bent).
 - b. Hinges and latches (broken or loosened).
 - c. Door seals and sealing surfaces.
4. The oven should not be adjusted or repaired by anyone except properly qualified service personnel.

Grounding



WARNING

To avoid risk of electrical shock or death, this oven must be grounded and plug must not be altered.

- Oven **MUST** be grounded. Grounding reduces risk of electric shock by providing an escape wire for the electric current if an electrical short occurs.
- This oven 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. Consult a qualified electrician or servicer if grounding instructions are not completely understood, or if doubt exists as to whether the oven is properly grounded.
- Do **NOT** use an extension cord. If the product power cord is too short, have a qualified electrician install a three-slot receptacle.
- This oven should be plugged into a separate circuit with the electrical rating as provided in product specifications (available on Solwave's website at www.SolwaveOvens.com) and the oven's serial plate / rating label. When the oven is on a circuit with other equipment, an increase in cooking times may be required and fuses can be blown.

External Equipotential Earthing Terminal (Export Only)

- Equipment has secondary earthing terminal. Terminal provides external earthing connection used in addition to earthing prong on plug. Located on outside of oven back, terminal is marked with symbol shown at right.



Installation



WARNING

Excessive Weight Hazard - Use two or more people to move and install oven. Failure to do so can result in back or other injury.

Unpacking the Oven

- Inspect oven for damage such as dents in door or inside oven cavity.
- Report any dents or breakage to source of purchase immediately.
- **DO NOT** attempt to use oven if damaged.
- Remove all packing materials from oven interior.
- If oven has been stored in extremely cold area, wait a few hours before connecting power.
- A protective film is used to prevent scratching of the outer case during transportation. Peel off the film from the exterior of the oven before installation.
- The warning label provided with the oven must be placed in an easily visible location near the oven.

Radio Interference

Microwave operation may cause interference to WiFi network, radio, television, or a similar oven. Reduce or eliminate interference by doing the following:

- Clean door and sealing surfaces of oven according to provided instructions.
- Place WiFi network, radio, television, etc. as far as possible from oven.
- Use a properly installed antenna on radio, television, etc. to obtain stronger signal reception.

Oven Placement

- Do NOT install oven next to or above source of heat, such as pizza oven or deep fat fryer. This could cause oven to operate improperly and could shorten life of electrical parts. Ambient temperatures above 90°F may cause damage to the unit.
- Do NOT block or obstruct oven filters. Allow access for cleaning.
- Install oven on level counter-top surface.
- Outlet should be located so that plug is accessible when oven is in place.
- This oven is required to be sealed to the countertop to establish proper sanitary operation. It is manufactured with a basepan gasket designed to provide this seal.
- Inspect gasket for damage before placing oven on countertop.
- Minimize sliding of oven to prevent damage to gasket.
- When in place, this gasket is intended to prevent liquid spillage on adjacent countertop surfaces from passing under inaccessible portions off the equipment.

Oven Stacking

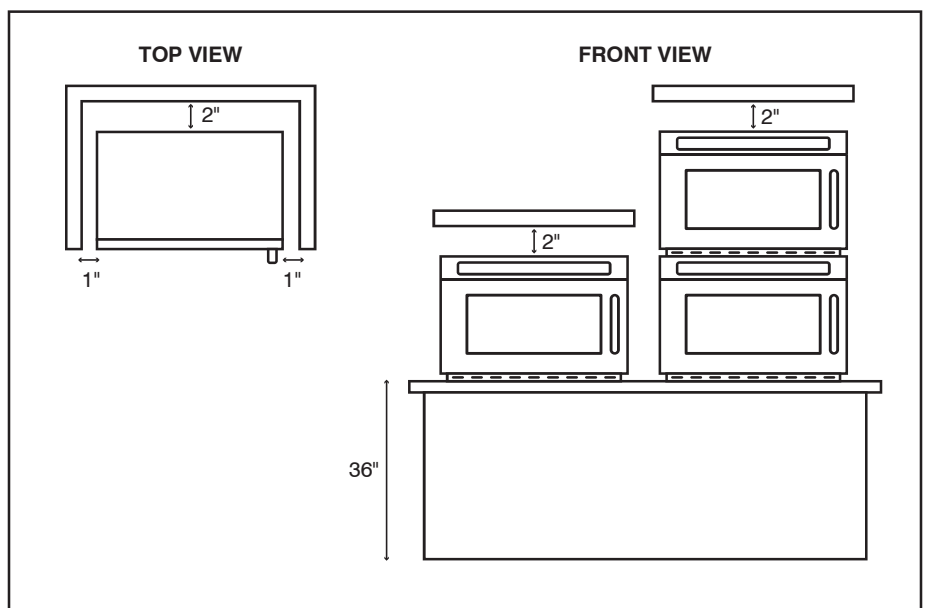
- Oven stacking is allowed using stacking bracket located on the top of the back panel on the hinge side corner.
- Remove screws from stacking brackets on the rear of the ovens and reattach them to the back panel between both ovens, securing them together using back panel screws.

Oven Clearances

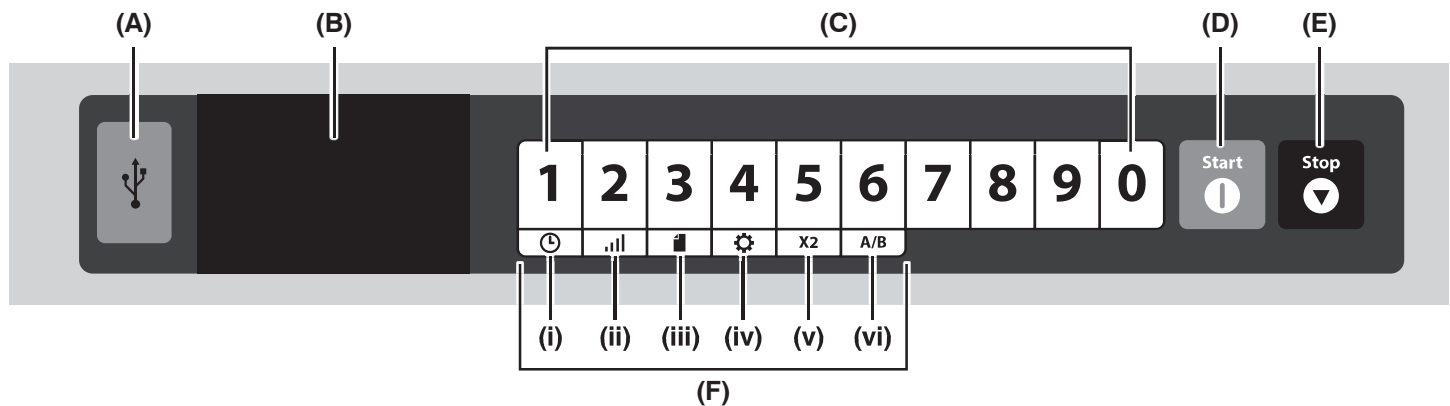
- Proper air flow around oven cools electrical components. With restricted air flow, oven may not operate properly and life of electrical parts is reduced.

Minimum Clearances (stacked and unstacked units)

- 2" (5.1 cm) above top of oven.
- 2" (5.1 cm) around back of oven.
- 1" (2.54 cm) around sides of oven.
- 36" (91.5 cm) above the floor.



Control Panel



(A) USB Port

Standard USB flash drive compatible.
Allows for import/export of programmed settings and user options, and to update firmware.

(B) DISPLAY

2.8" color LCD display.

(C) NUMBER KEYS

Used to operate preset cooking programs, enter settings, navigate through display, and/or activate secondary key functions.

(D) START/OK KEY

Begins cooking in Manual Time Entry Mode.
Restarts an interrupted cooking cycle. Used to save settings and entries. Toggles through pages in Programming and User Option Modes.

(E) STOP/RESET KEY

Interrupts operation, and/or exits modes and menus.

(F) SECONDARY FUNCTION KEYS

To activate, press and hold corresponding number key for 0.75 seconds.

Note: Press and hold time can be set between 0.75-2 seconds by factory option.

(i) Manual Time Entry Mode (1 Key)

Allows the operator to heat without changing the preset program keys.

(ii) Power Level (2 Key)

Use to set microwave power level between 0% to 100% in 10% increments (1 = 10% power, 2=20%, 3=30%, etc.) while in Manual Time Entry Mode. Used to edit COOK FACTOR while in Programming Mode.

(iii) Programming Mode (3 Key)

Edit preset programs and/or create new programs for customized cooking.

(iv) User Options (4 Key)

Allows the user to customize various oven settings.

(v) X2 - Double Quantity Cooking (5 Key)

Increases a preset cook time by a percentage of the original cook time, also known as a COOK FACTOR. Used for cooking multiple servings of foods.

(vi) Menu A/B (6 Key)

Toggles menu selection between two sets of programmed cook settings. "Menu A/B" function only available when factory option ALLOW AB MENU is enabled.

General Display Screens



(A) Ready Screen

Indicates that oven is ready to operate. The operator may press keys to begin preset programs or to activate secondary key functions.

- (i) Menu A/B disabled. Quantity X2 disabled.
- (ii) Menu A open. Quantity X2 enabled.

(B) Standby Screen

(C) Door Open Screen

Programming Features

Stage Cooking

Allows operator to use up to four different cooking cycles or stages consecutively without repeated input from the operator. For example, stage cooking could be set to defrost food initially, then cook it, and then keep the food warm until serving time.

Preset Program Keys

Oven can store between 10 to 200 cooking programs in memory. Available quantity varies based on "Digit Entry" User Option, and "Menu A/B" factory setting.

Note: To change "Digit Entry" options, see "User Options" section in this manual. "Menu A/B" only available when factory option ALLOW AB MENU is enabled.

DIGIT ENTRY USER OPTION	AVAILABLE COOKING PROGRAMS	
	"MENU A/B" DISABLED	"MENU A/B" ENABLED
Single Digit	10 Programs (0-9) (10 Total Cooking Programs)	2 Menu Sections (A or B) 10 Programs per Menu (0-9 & 0-9) (20 Total Cooking Programs)
Double Digit	100 Programs (00-99) (100 Total Cooking Programs)	2 Menu Sections (A or B) 50 Programs per Menu (00-49 & 00-49) (100 Total Cooking Programs)
Folders	10 Folders (0-9) 10 Programs per Folder (0-9) (100 Total Cooking Programs)	2 Menu Sections (A or B) 10 Folders per Menu (0-9 & 0-9) 10 Programs per Folder (0-9 & 0-9) (200 Total Cooking Programs)

Quantity Prompt

Allows operator to select preset program key(s) for a menu item, followed by the quantity of items to be heated. Cook times and settings can be customized for quantities 1-9.

Methods of Cooking & Programming

Cooking with Preset Program Keys

Allows operator to quickly activate saved cooking sequences using 1-2 key strokes.

Manual Time Entry Cooking

Allows operator to heat without changing the preset program keys.

Manual Key Programming

Allows operator to use keys to edit preset programs and/or create new programs for customized cooking.

USB Programming Uploads

Allows operator to load program settings and user options using a standard USB flash drive.

Oven Controls

Interrupting Operation

Open the oven door or press STOP/RESET key to interrupt operation. The display will continue to show the countdown time. Close door and press START/OK key to resume oven operation.

Canceling Mistakes

If oven is not cooking, press STOP/RESET key to clear display.

If oven is cooking, press STOP/RESET key once to stop oven, then again to clear display.

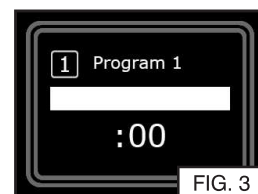
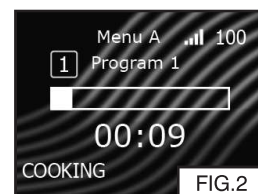
If oven door is open and time shows in display, close oven door and press STOP/RESET key to clear display.

Programmed Keys

From the factory, this oven comes preprogrammed with several cooking sequences in memory. To heat using a preset program, press number key(s). Oven will start to heat automatically.

1. Open oven door, place food in oven, and close oven door.
 - READY screen is displayed (Fig. 1).
 - If key is not pressed within 60 seconds, open and close oven door again.
2. Press desired number key(s).
 - Single Digit Key Cooking: press a single key (0-9).
 - Double Digit Key Cooking: press the two keys, in order, of the double digit number for the desired cooking sequence (00-99).
 - Folders: press one key to open folder (0-9), followed by key for desired cooking sequence (0-9).

Note: To change Digit Entry option see User Options section in this manual.
3. Oven operates and time counts down.
 - Display shows the program name and counts down cooking time (Fig. 2).
 - If additional cooking time is required, press preset keys before or after cooking cycle ends.
4. At the end of the cooking cycle, the oven beeps. Carefully remove food from oven (Fig. 4).



Factory Preset Programs - Menu A

KEY	1	2	3	4	5	6	7	8	9	0
TIME	00:10	00:20	00:30	00:45	01:00	01:30	02:00	03:00	04:00	05:00
POWER	100%									

Multiple Servings

1. Press and hold number key “5” (X2) to toggle double quantity feature ON.
 - “X2” appears at top center of screen.
2. Press desired number key(s).
 - Display shows the program name and counts down cooking time for two quantities.

Menu A/B

1. Press and hold number key “6” (A/B) to toggle between A and B menus.

Manual Time Entry

Allows operator to heat without changing the preset program keys.
From READY or DOOR OPEN screen:

1. Open oven door, place food in oven, and close door.
 - READY screen is displayed. Fan and light operate.
 - If key is not pressed within 60 seconds, open and close oven door again.
2. Press and hold number key “1”/ TIME ENTRY.
 - MANUAL COOK screen is displayed (Fig. 6).
3. Press number keys to enter desired cook time.
4. Press and hold number key “2”/ POWER LEVEL to change power level (Fig 7).
 - Press number keys to enter % microwave power (“1”=10%, “2”=20%,etc.).
 - For 100% power level, press and hold number key “2”/ POWER LEVEL.
5. Press START/OK key to begin cooking.
 - Oven operates and display counts down cooking time (Fig. 8).
6. At the end of the cooking cycle, the oven beeps. Carefully remove food from oven.

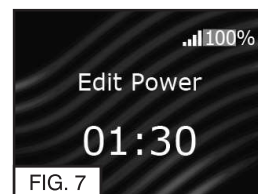
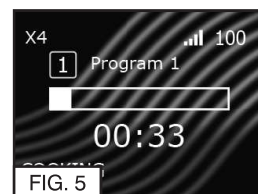
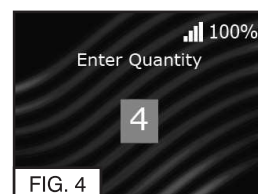
Manual Time Entry with Multiple Stages

Stage cooking allows consecutive cooking cycles (stages) without interruption.
Up to four different cooking cycles can be entered.

1. Follow “Manual Time Entry Mode” steps 1-4 above to enter settings for stage one.
2. To enter additional cooking stages: Press and hold number key “1”/ TIME ENTRY.
 - MANUAL COOK STAGE entry screen is displayed (Fig. 9).
3. To enter cook time for Stage Two: Press number key “2” (Fig. 10).
 - Press number key(s) to enter cook time.
 - Press START/OK key.
4. To enter power level for Stage Two: Press number key “6.”
 - Press number key(s) to enter % microwave power (“1”=10%, “2”=20%,etc.).
 - For 100% power level, press and hold number key “2”/ POWER LEVEL.
 - Press START/OK key.
5. To enter additional cooking stages: Repeat steps 3-4 for each additional stage, substituting corresponding number keys for each stage.
Example: For stage three, press number key “3” to edit cook time, and press number key “7” to edit power level.
6. Press START/OK key to begin cooking.

Quantity Prompt

1. Press desired number key(s).
 - ENTER QUANTITY screen is displayed (Fig. 4).
2. Enter desired quantity using key 1-9.
 - Display shows the program name and counts down cooking time (Fig. 5).
 - Quantity is displayed in top left corner.



Programming the Oven

Programming Mode Screen

Indicates oven is in programming mode.
The operator may press keys to open program and/or folder locations.

Note: Screens may vary based on "Digit Entry" User Option, and "Menu A/B" factory setting.

(A) PROGRAM/FOLDER LOCATIONS

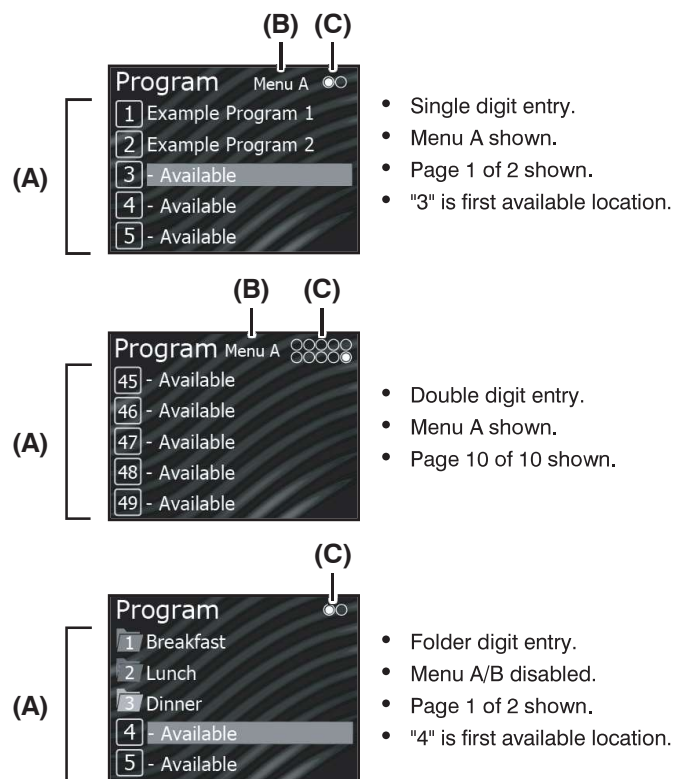
Numbers represent programmed cooking sequences and available memory locations. Unused locations are labeled "- Available." First available location is highlighted. Operator may press keys to view and edit locations.

(B) MENU A/B DISTINCTION (select models)

Displays active menu section. Operator may press and hold number key "6" to toggle between A and B menus.

(C) MULTIPLE PAGES

Radio button icons indicate page number. Display automatically toggles to the next page every 2 seconds. Operator may press START/OK key to manually toggle between pages.



Program Entry Screen

Displays while a program or folder location is open.
Stored location is represented by number at top right corner of screen.

KEY	FUNCTION
1	Edit Cook Time - Stage 1
2	Edit Cook Time - Stage 2
3	Edit Cook Time - Stage 3
4	Edit Cook Time - Stage 4
5	Edit Power Level - Stage 1
6	Edit Power Level - Stage 2
7	Edit Power Level - Stage 3
8	Edit Power Level - Stage 4
9	Delete Program
0	Edit Program Name
START	Save
STOP	Exit

Edit Name Screen

Displays while editing name of program or folder.
Operator may press number keys to enter a name. To cycle through available characters, press the same key within 1 second.

KEY	TEXT FUNCTION
1	1234567890
2	.,&!?'()/~@#\$\$%^*~+
3	QRSTqrst
4	ABCDabcd
5	IJLKijkl
6	UVWuvw
7	EFGHefgh
8	MNOPmnop
9	XYZxyz
0	(space)
START	(save and exit)
STOP	(backspace)

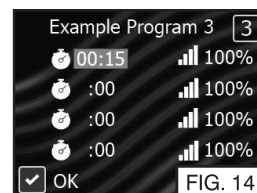
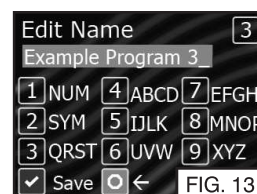
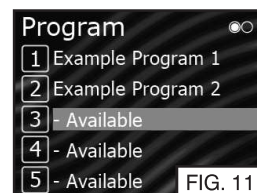
Manual Programming Mode

Allows operator to edit preset programs and/or create new programs for customized cooking.

Note: Manual Programming must be enabled in User Options.

From READY or DOOR OPEN screen:

1. Press and hold number key “3”/ PROGRAM.
 - Oven will display list of preset program and available locations (Fig. 11).
 - The first available location will be highlighted. If no locations are available, the first preset program on the first page will be highlighted.
 - Display automatically toggles to the next page of program locations every 2 seconds. Select the START pad to manually toggle to next page.
2. Press number key(s) to open the desired program location
 - PROGRAM ENTRY screen is displayed (Fig. 12).
3. To edit name: Press number key “0.”
 - EDIT NAME screen is displayed (Fig. 13).
 - Press number keys to enter program name.
 - Press START/OK key to save and return to program entry screen.
4. To edit cook time for Stage One: Press number key “1” (Fig. 14).
 - Press number keys to enter cook time.
 - Press START/OK key to save and return to program entry screen.
5. To edit power level for Stage One: Press number key “5” (Fig. 15).
 - Press number keys to enter % microwave power (“1”=10%, “2”=20%,etc.). For 100% power level, press and hold number key “2”/ POWER LEVEL.
 - Press START/OK key to save and return to program entry screen.
6. To save and exit programming mode: Press START/OK key.



Manual Programming Multiple Stages

Stage cooking allows consecutive cooking cycles (stages) without interruption.

Up to four different cooking cycles can be programmed.

1. Follow “Manual Programming Mode” steps 1-5 above.
2. Repeat steps 4-5 for each additional stage, substituting corresponding number keys for each stage.

Example: For stage two, press number key “2” to edit cook time, and press number key “6” to edit power level.
3. To save and exit programming mode: Press START/OK key

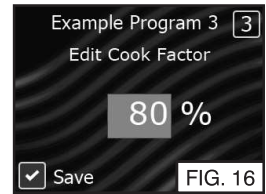
Quantity X2 Programming

This feature allows a preset percentage of original cook time, called a cook factor, to be added to a cook sequence. Default cook factor is 80% unless otherwise stated.

Edit the Cook Factor

From READY or DOOR OPEN screen:

1. Press and hold number key "3" / PROGRAM.
2. Press number key(s) to open the desired program location.
 - PROGRAM ENTRY screen is displayed.
3. Press and hold number key "2" / POWER LEVEL.
 - EDIT COOK FACTOR screen is displayed (Fig. 16).
 - Press number keys to enter cook factor between 10 - 100%.
 - Press START/OK key to save and return to program entry screen.



Folders Programming

Note: Folders must first be enabled in User Options > DIGIT ENTRY.

Navigate Folders

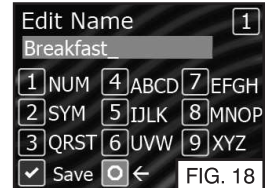
- **To open folder:** Press number key to open the desired folder.
- **To exit folder:** Press STOP/RESET key.

Create Folders

Note: Desired key location must be empty "-AVAILABLE" before creating a folder.

From READY or DOOR OPEN screen:

1. Press and hold number key "3" / PROGRAM
 - Oven will display list of preset program and available locations (Fig. 17).
 - The first available location will be highlighted. If no locations are available, the first preset program on the first page will be highlighted.
 - Display automatically toggles to the next page of program locations every 2 seconds. Select the START pad to manually toggle to next page.
2. Press an "- Available" key from 0-9.
 - PROGRAM ENTRY screen is displayed.
3. To edit name: Press number "0" key. Press number keys to enter name. Press START/OK key to save name (Fig. 18).
4. To save folder: Press START/OK key (Fig. 19).



Delete Folders

From READY or DOOR OPEN screen:

1. Press and hold number key "3" / PROGRAM to enter programming mode.
2. Press and hold the number key corresponding to folder to delete it.
 - Contents of a deleted folder will be moved to the top level.

USB Flash Drive

Export Menu via USB Flash Drive

Note: Before beginning, “PIN Code” must be enabled in User Options.

From READY or DOOR OPEN screen:

1. Insert flash drive into the USB port.
2. Press and hold key number “4”/ USER OPTIONS.
 - PIN Code prompt appears.
3. Press keys 1-3-5-7-9 to enter SERVICE MODE.
4. Press corresponding number key to select “Export to USB.”
 - EXPORTING... screen appears. Oven beeps once export is complete.
 - Settings, menu items, and oven usage data will be loaded on USB Flash Drive.
5. Press STOP/RESET key to exit SERVICE MODE. Remove USB Flash Drive.

Import Menu via USB Flash Drive

Note: Menu file must be .xml format; must be the only .xml file on the flash drive. Menu file must be saved at the top level (root directory) of the flash drive, and cannot be located inside any folders.

From READY or DOOR OPEN screen:

1. Insert flash drive into the USB port.
2. Press and hold key number “4”/ USER OPTIONS.
 - If prompted, enter the PIN Code and press START/OK key.
3. Press START/OK key to scroll through pages of user options until “Load File” appears.
4. Press corresponding number key to select “Load File.”

Caution: Uploading a new file will overwrite existing items on oven. To ensure items are not lost, first backup files by exporting to USB drive.

 - IMPORTING... screen appears.
 - IMPORT COMPLETE screen displays once import is complete.
 - Settings and menu items will now be loaded on oven and ready to use.
5. Press STOP/RESET key to exit USER OPTIONS. Remove USB Flash Drive.

Enable/Disable Pin Code

From READY or DOOR OPEN screen:

1. Press and hold key number “4”/ USER OPTIONS.
 - If prompted, enter the PIN Code and press START/OK key.
2. Press START/OK key to scroll through pages of user options until “PIN Code” appears.
3. Press corresponding number key to open “PIN Code” options.
4. To change the setting, press corresponding number key.
5. Press STOP/RESET key to exit User Options Menu.

Updating Firmware

Note: Firmware files must be loaded on USB flash drive. Must be saved at the root directory of the flash drive, and cannot be located inside any folders.

1. From READY screen, Press and hold keypad number “7.”
 - PIN Code prompt appears.
2. Press keypads 1-3-5-7-9 to enter SERVICE MODE.
3. Press and hold keypad number “7.”
 - Firmware update screen appears.
4. Insert flash drive into the USB port.
5. Press press START/OK keypad to begin update.

Troubleshooting:

If firmware fails to load: press and hold the STOP/RESET keypad while plugging in the oven.

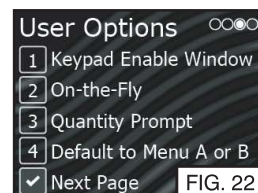
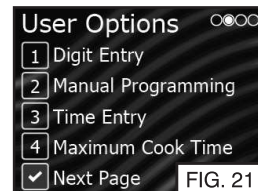
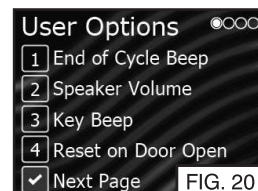
User Options

There are several options you can change to customize the operation of the oven for your business.

Access and Modify User Options

From READY or DOOR OPEN screen.

1. Press and hold keypad number “4”/ USER OPTIONS.
If prompted, enter the PIN Code and press START/OK keypad.
 - USER OPTIONS screen is displayed.
2. Press the START/OK keypad to scroll through pages of user options.
3. To access an individual user option, press the corresponding number keypad.
 - To change the setting, press corresponding number keypad.
 - To return to User Options Menu, press START or STOP/RESET.
4. Press STOP/RESET keypad to exit User Options Menu.



User Option Codes

- Default values marked in **bold**.

SETTING	DISPLAY	OPTIONS
Double Digit Entry	3 Seconds Continuous Burst	3 second continuous beep. Continuous beep until door is opened. 5 beep bursts until door is open.
Speaker Volume	Low Medium High	Sets volume to low. Sets volume to medium. Sets volume to high.
Key Beep	On Off	Allows beep when key is pressed. Prevents beep when key is pressed.
Reset on Door Open	End Cook Cycle Pause Cook Cycle	Cancels heating time count down after door is opened during cycle. Allows oven to resume heating time countdown after door is opened during cycle.
Digit Entry	Single Digit Double Digit Folders	Allows 10 (0-9) preprogrammed items. Allows 100 (00-99) preprogrammed items. Allows 10 folders (0-9), each with preprogrammed items.
Manual Programming	On Off	Allows use of manual time entry and preprogrammed keys. Allows use of preprogrammed keys only.
Time Entry	On Off	Manual time entry/cooking allowed. Manual time entry/cooking NOT allowed.
Maximum Cook Time	10 minutes 60 minutes	Allows 10 minutes of heating time. Allows 60 minutes of heating time.
Key Enable Window	15 seconds 30 seconds 1 minute 2 minutes	15 seconds after oven door is opened, keyboard disabled. 30 seconds after oven door is opened, keyboard disabled. 1 minute after oven door is opened, keyboard disabled. 2 minutes after oven door is opened, keyboard disabled.
On-The-Fly (add or change time mid-cycle without stopping)	On Off	Enables on-the-fly cooking. Disables on-the-fly cooking.
Quantity Prompt	On Off	Prompts for portion quantity multiplier (1-9) upon selecting a preset program. Allows user to cook individual portions and/or use X2 quantity multiplier feature.
Default to Menu A or B	Menu A Menu B	Menu A displayed by default. Menu B displayed by default.
PIN Code	Off On Set PIN Code	PIN code not required to access user options. PIN code required to access user options. PIN code required. Create new 4 digit PIN code.
Language	Bengali, Chinese (Mandarin), Danish, Dutch, English , Filipino, French, German, Greek, Hindi, Italian, Japanese, Korean, Laotian, Norwegian, Polish, Portuguese, Romanian, Russian, Spanish, Swedish, Thai, Ukrainian, Vietnamese.	
Load File	N/A	Detects USB flash drive and imports .xml format menu file.

Cooking Guidelines

The Solwave Microwave Oven can make your job easier. You'll cook ahead and pre-portion more. You'll also spend less time preparing special-order dishes. To be sure of consistently good results, you'll want to remember a few simple guidelines.

Food Variables

Microwave cooking can be directly affected by different food variables:

The shape of foods can greatly affect the amount of cooking time. Foods that are flat and thin heat faster than foods which are chunky. For example, a casserole will cook faster in a flat dish, rather than if heaped in a small dish. Foods cut into small pieces will cook faster than large-shaped foods. Pieces should be of a uniform size and shape for more uniform cooking, or the smaller pieces will cook faster. The greatest amount of cooking takes place within 3/4" (1.9 cm) of the food's surface. The interior of large food items, or dense foods, is heated by the heat conducted from the outer food layer. The most uniform cooking occurs in flat, doughnut shaped foods. For best results, cook foods together which have similar sizes and shapes.

The quantity or volume of a food can affect the amount of cooking time. As the volume of the food is increased, the time required to cook or heat the item increases almost proportionately. If twice the amount of food is placed in the oven, it will take almost twice as long to cook. To determine the time for larger quantities, multiply the individual serving time by the increased amount, then reduce the total cooking time by about 20%.

The density of foods can greatly affect the amount of cooking time. Porous foods, such as breads, cakes or pastries, will heat much more quickly than dense meats of the same size. Porous foods absorb microwaves quickly throughout. Meats absorb microwaves mostly at the exterior surface, and the interior is heated by conduction, increasing the cooking time. Meats can be cooked in a sauce, if desired. Due to the moisture content, a sauce will heat rapidly. The heat will transfer to the meat, so the meat will heat faster due to heat by conduction as well as by microwaves.

The starting temperature of foods affects the amount of cooking time. Each temperature degree that the food item is to raise must be supplied with a definite amount of energy. Lower initial starting temperatures require more energy and more time to cook. Therefore, refrigerator temperature foods require a longer cooking time than do room temperature foods. Foods already slightly warm will heat very quickly in the oven.

The moisture content of foods affects the amount of cooking time. The higher the moisture content is in a food the longer the amount of cooking time.

The salt, fat, and sugar content of foods affects the amount of cooking time. Foods containing high salt, fat, and sugar levels heat very quickly and may reach much higher temperatures than foods having low salt, fat, and sugar levels. Foods having lower salt, fat, and sugar levels require longer cooking times.

The arrangement of food within a microwave oven cavity affects the way in which the food cooks. A "round" arrangement is best. Use round utensils whenever possible. Also, arrange foods such as baked potatoes in a circle, rather than in rows, for cooking. When only one food item is being cooked, place it in the center of the oven glass shelf for cooking.

Manipulation of Foods

Sometimes recipes suggest manipulating or moving food during cooking. There are several forms of manipulation:

Stirring is required less often in microwave cooking than in conventional cooking. In conventional cooking, you use a spoon to move food up from the bottom of a pan to evenly distribute the heat. In microwave cooking, you still stir to redistribute the heat within some foods, but you need to stir from the outside of a dish toward the inside or center. If a recipe states to stir once or twice during cooking, stir at approximately even intervals. For example, in a 12-minute cooking period, if a recipe states to stir twice, stir after 4 minutes of cooking and again, after 8 minutes of cooking. However, it is not necessary to be precise. Stir only when necessary. When using lower power levels or settings, less stirring is required. Some examples of foods which may require stirring are puddings, some casseroles, some sauces, some soups, and some egg dishes. Some foods can't be stirred. These foods are rearranged or turned.

Some foods can't be stirred and should be **repositioned or rearranged** during cooking. Some examples include baked potatoes, cupcakes (in custard cups), chicken pieces, and others. Rearranging allows for more even cooking of foods. Foods which are cooked, covered, or which are cooked using lower power levels, usually require little rearranging.

There are actually **two types of turning**. Turning is done when foods cannot be stirred. Foods which are cooked, covered, or which are cooked at lower power levels usually require little turning.

Turning foods over: Turning foods over is done to distribute heat. Meat and poultry are two types of foods which are sometimes "turned over." Examples include roasts, turkeys and whole chickens. Small meat items such as poultry pieces may need to be turned over when in casseroles, or when in a browning skillet.

Rotating or turning dishes: There are a few foods which cannot be stirred, rearranged or turned over. Therefore, the actual cooking dish is turned or rotated. A half-turn means to grasp the dish and turn the portion of the dish that faces the oven door around, until it faces the back of the oven. Examples of foods which are sometimes turned or rotated in a cooking dish include cakes, quiches, or soufflés. When cooking foods at lower power levels or Settings, less turning of the cooking dishes is required.

Microwave Utensils

Never use cooking containers or covers with any metal content. This includes all metal and enameled metal-core ware, foil, and metal-trimmed containers. Suitable cooking containers include those made of paper products, glass, china, cloth, and wicker baskets.

Recommended:

- Glass/Ceramic
- Natural Fiber Cloth
- Non-Recycled Paper
- Plastic
- Wood

NOT Recommended:

- Aluminum Foil
- Grocery Bags
- Recycled Paper
- Lead Crystal
- Newspapers
- Metal
- Metallic Trimmed China

Utensil Check Test

Use the following test to check utensils for safety:

1. Place glass measuring cup of water next to empty dish to be tested in microwave oven.
2. Heat on full power for one minute.
3. Check temperature of dish and water.
 - If dish remains cool and water is hot, dish is microwave safe.
 - If dish is slightly warm, use for short term cooking.
 - If dish is hot and water is cool, do not use. Dish remains cool if not absorbing microwaves and microwaves are being absorbed.

Cooking Instructions

Cooking Tips

1. Cover foods for faster, more even cooking. Glass lids, plastic wrap, plate covers, or other paper products may be used. DO NOT seal. Instead, allow for steam-venting at all times.
2. Pierce pouches, plastic wrap covers, and all foods with a thin skin or membrane (potatoes, squash, tomatoes, eggs, etc.). This prevents an eruption in the oven and allows for expansion and/or the escape of steam.
3. Foods should be carefully plated. For best results, arrange food such as vegetables or casserole-type items evenly around the edge of the plate with slightly less depth in the center. The edges of food items should not overlap or overhang the rim of the container. Cover meats with gravy or au jus and moisten all dry foods other than bread or pastry items.
4. DO NOT stack food or plated dishes in your oven. Instead, when cooking more than one serving or platters, all plates should be placed at the same level in the oven, with space between all containers.

Steaming Tips

1. **Cooking Vessels**
 - a. Always heat or cook food items in covered containers to accomplish:
 - Retention of steam for efficient cooking and to keep foods moist
 - Even cooking results and temperatures
 - A cleaner oven interior and prevention of food splatters
 - b. Ceramic, paper, china, styrofoam, glass and plastic are suitable materials for use in microwave ovens. A high temperature resistant amber pan is recommended for ALL items, especially those high in fat or sugar content, as these ingredients get hot very quickly.
2. **Food Temperature**
 - a. To reach a mandatory serving temperature, frozen foods require a longer cook time than refrigerated items.
 - b. Refrigerated items:
 - Items stored at 40°F (4°C) in the refrigerator should be covered while heated; except breads, pastries or any products with a breaded coating, which should be heated uncovered to avoid softening.
 - c. Room temperature items:
 - Foods held at room temperature, such as canned items or vegetables, will require less time to heat than refrigerated items.
 - d. Conventionally prepared foods should be slightly undercooked to prevent overcooking when rethermed by microwave steaming.
 - e. After a steaming cycle has been completed, internal food temperatures continue to slightly rise due to the presence of steam.
3. **Structure of Food**
 - a. Food items that are high in fat, sugar, salt and moisture attract and quickly absorb microwave energy, allowing for a shorter cook time.
 - b. Items high in protein or fiber require a longer cook time, due to a slower absorption of microwave energy.
4. **Quantity**
 - a. As the mass of food increases, so will the necessary cook time.

Refer to and comply with all USDA/FDA Food Code guidelines when cooking or heating food items.

Cleaning and Maintenance

Microwave energy is attracted to any food source in the oven. Food splatters or spills can affect heating performance, and can also cause oven damage. To prevent damage to oven, keep the microwave oven clean and remove any food debris. Follow the recommendations below for proper maintenance of oven.



WARNING

To avoid electrical shock which can cause severe personal injury or death, unplug power cord or open circuit breaker to oven before cleaning.

Wear protective gloves and protective glasses when cleaning the oven.

Failure to maintain the oven in a clean condition could lead to deterioration of the surface that could adversely affect the life of the appliance and possibly result in a hazardous situation.



WARNING

Not following approved oven cleaning instructions may void your warranty.

- **ALWAYS UNPLUG THE OVEN BEFORE CLEANING.**
- DO NOT use abrasive cleaners or cleaners containing ammonia, citrus, phosphates, chlorine, sodium, or potassium hydroxide (lye). The use of caustic cleaning products can damage critical oven parts. Use of unapproved cleaning agents will void the terms of the warranty.
- DO NOT pour water into microwave oven bottom.
- DO NOT use water pressure type cleaning systems.
- DO NOT operate oven without the antenna shield and air filter in place.
- DO NOT turn on or operate oven during cleaning procedure.
- DO NOT clean appliance with water jet or steam cleaner.

Daily Care and Cleaning

Interior, Exterior, and Door

1. Remove any food debris.
2. Clean microwave oven with mild detergent in warm water using soft sponge or cloth. Wring sponge or cloth to remove excess water before wiping equipment (Fig. 24 & 25).
3. If desired, boil a cup of water in oven to loosen soil before cleaning.

Control Panel

1. Open oven door to deactivate oven timer.
2. Clean with mild detergent in warm water using soft sponge or cloth. Wring sponge or cloth to remove excess water before wiping equipment (Fig. 26).



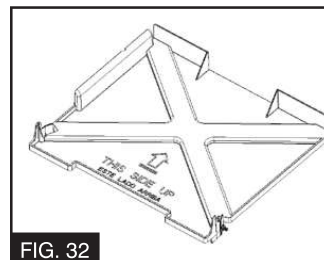
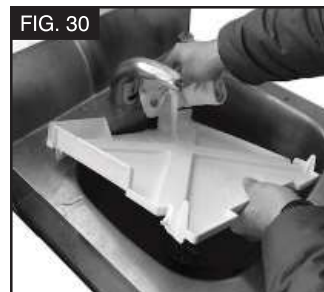
Antenna/Splatter Shield

1. The antenna shield (or splatter/grease shield) is a vital part of the oven's design. It is located on the ceiling of the interior of the unit and should be cleaned in place to prevent food splatter/debris from building up.
2. Clean antenna shield with mild detergent in warm water using soft sponge or cloth. Wring sponge or cloth to remove excess water before wiping equipment (Fig. 27).



For Stubborn Antenna/Splatter Shield Debris

1. Remove antenna shield.
 - a. Press the front 2 tabs and pull down (Fig. 28).
 - b. Remove the shield by inclining at a 45° angle (Fig. 29).
2. Clean shield in warm water with mild detergent (Fig. 30).
3. Rinse with water.
4. Dry thoroughly (Fig. 31).
5. Reinstall shield.
 - a. Position shield with "This Side Up" facing up and legible (Fig. 32).
 - b. Insert shield into cavity at an angle (Fig. 33).
 - c. Insert the back 2 pins, then push the front up into position.
6. Check for proper installation
 - a. After assembly, the 4 pins need to be inserted through the holes.
 - b. Using finger, pull downward on shield to assure all pins are engaged in cavity holes and shield is securely installed.
7. Reconnect power to oven.



Weekly Care and Cleaning



CAUTION

To avoid overheating and oven damage, filter should be cleaned regularly.
DO NOT operate oven without filter in place.

Air Filters

1. Grasp filter tabs and pull forward. Filter will release from retaining clips (Fig. 34).
2. Wash filter in hot water and mild detergent. Rinse and dry thoroughly.
3. To reinstall, place bottom of filter in clips and push top of filter into position.



Monthly Care and Cleaning

Discharge Air Vents

1. Check monthly for a buildup of cooking vapors along intake and discharge louvers on bottom and back of oven.
2. Clean air vents with damp cloth to ensure proper airflow. Dry thoroughly.

Troubleshooting



WARNING

To avoid electrical shock which can cause severe personal injury or death, DO NOT remove outer case at any time.

Only an authorized servicer should remove outer case.

SYMPTOM	POSSIBLE CAUSE	SOLUTION
Oven fan runs and light remains on after cook cycle has completed.	Normal operation.	The fan cools oven components, it is normal for the fan to run for 60 seconds after cook cycle is complete.
Oven fan runs while oven is not cooking.		
Oven does not operate.	Oven is unplugged.	Confirm oven is plugged in to appropriate outlet.
	Fuse has blown.	Check fuse and/or circuit breaker.
	Oven is plugged in to unqualified outlet.	Confirm oven is plugged in to dedicated, grounded circuit that matches information on serial plate. Contact electrician to confirm.
Oven does not accept entries when key is pressed.	Oven is turned off.	Confirm oven is plugged in and turned on.
	Oven door is ajar or was not closed properly.	Open and close oven door, try pressing key again.
Oven operates intermittently.	Possible blockage of airflow.	Check air filters and discharge area for obstructions, clean as directed in Cleaning and Maintenance section.
Oven operates, but does not heat food.	Possible oven failure.	Place one cup of cool water in oven. Heat for 1 minute. If temperature does not rise, oven is operating incorrectly and servicer should be called.
"Clean Filter" displays.	Normal operation.	Standard alert that will appear for 24 hours as a notification that it is time to clean the filter.
Frozen oven display.	Oven display needs to reset.	Unplug oven, wait 5 seconds, then plug back in.
"INVALID ENTRY" alert.	Cook time is zero or unset.	Enter correct cook time.
"Exceeds Maximum Cook Time" alert.	Total cook time exceeds maximum allowable time.	Check cook times per stage. Check User Option > Maximum Cook Time.