GE Consumer & Industrial

# Technical Service Guide

October 2007

# Profile 30-in. Free Standing Double Oven Range PB975 PB970



31-9157



GE Appliances General Electric Company Louisville, Kentucky 40225



#### IMPORTANT SAFETY NOTICE

The information in this service guide is intended for use by individuals possessing adequate backgrounds of electrical, electronic, and mechanical experience. Any attempt to repair a major appliance may result in personal injury and property damage. The manufacturer or seller cannot be responsible for the interpretation of this information, nor can it assume any liability in connection with its use.

#### WARNING

To avoid personal injury, disconnect power before servicing this product. If electrical power is required for diagnosis or test purposes, disconnect the power immediately after performing the necessary checks.

#### RECONNECT ALL GROUNDING DEVICES

If grounding wires, screws, straps, clips, nuts, or washers used to complete a path to ground are removed for service, they must be returned to their original position and properly fastened.

> *GE Consumer & Industrial Technical Service Guide Copyright © 2007*

All rights reserved. This service guide may not be reproduced in whole or in part in any form without written permission from the General Electric Company.

Anti-Tip Bracket	
Broil Element	47
Component Locator Views	27
Control Boards Connector Locator Views	
Control Features	6
Control Panel	55
Control Panel Assembly	55
Convection Element	
Convection Fan Assembly	
Cooktop Assembly	
Cooktop Lockout Relay	45
Diagnostics and Service Information	64
Door Switch	
Electrical Requirements	
Electronic Range Control (ERC) Assembly	57
Element On Indicator Lights	57
Glass Touch Panel	55
Hot Surface Indicator Light Assembly	60
Installation	
Introduction	4
Lock Assembly	61
Lower Oven Bake Element	
Lower Oven Door Assembly	
Lower Oven Door Hinge Receiver	44
Meat Probe and Outlet (PB975)	51
Nomenclature	5
Operational Notes	25
Oven Components	
Oven Light Assemblies	
Oven Sensor and Door Switch Test	70
Oven Temperature Sensor	
Radiant Heating Elements	59
Range Component Access Chart	
Range Components	
Range Top Components	59
Rear Cover Removal	
Schematics and Wiring Diagrams	71
Side Panel Removal	
Surface Unit Infinite Switches	56
Tri-Ring Burner Size Switch (PB975)/Warmer Switch	57
Under Over Delve Flement	
Opper Oven Bake Element	
Upper Oven Bake Element	50 46
Upper Oven Bake Element Upper Oven Control Board Upper Oven Door Assembly	50 46 34
Upper Oven Bake Element Upper Oven Control Board Upper Oven Door Assembly Upper Oven Door Hinge	50 46 34 45
Upper Oven Bake Element Upper Oven Control Board Upper Oven Door Assembly Upper Oven Door Hinge Upper Oven Liner	
Upper Oven Bake Element Upper Oven Control Board Upper Oven Door Assembly Upper Oven Door Hinge Upper Oven Liner Vent Tube/Smoke Eliminator	

## Introduction

GE introduced the new Profile 30-in. free standing double oven range. It is available in two design choices - convection and non-convection lower ovens. These ranges feature electronic oven controls and surface unit dial controls that combine the precision of modern digital technology with the simplicity of traditional mechanical controls. Their superior style and performance parallel commercial ranges.

- Electronically controlled oven heating elements -- provide precise cooking control with fast preheating.
- Convection models use reverse-air convection technology -- a bidirectional fan that works with a dedicated third heating element to promote even heat circulation.
- Performance compensation for 208-volt installation boosts power as needed in multifamily dwellings.
- 6.5 cu. ft. total capacity.
- Cooktop locked out during self clean.
- New motorized self-clean door latch.
- Recessed convection, low-profile broil elements, and hidden lower oven bake element.
- Dual Halogen lights located in both oven interiors.
- Full-extension, self-cleaning porcelain-coated racks that can be left in the oven during the self-clean cycle.
- Hidden lower oven bake element, concealed beneath the oven floor, allows quick and easy ash removal following the self-clean cycle.
- Broil Boost provides faster broil temperatures.
- Both range designs are available with slow cook, pizza, and warming features.



## Nomenclature

#### Model Number





PB975 Model shown

The nomenclature plate is located on the front left behind the oven door.

The mini-manual is placed in an envelope located inside the control panel.

#### Serial Number

The first two	numbers of t	he serial number
identify the r	month and ye	ar of manufacture.
Example:	<b>AM</b> 123456	5 <i>S = January, 2007</i>
<b></b>		
<b>A</b> - JAN	2007 - <b>M</b>	
D - FEB	2006 - L	
F - MAR	2005 - H	The letter desianatina
G - APR	2004 - G	the uear repeats everu
H - MAY	2003 - F	12 years.
L - JUN	2002 - D	5
M - JUL	2001 - A	Example:
R - AUG	2000 - Z	, T - 1974
S - SEP	1999 - V	T - 1986
T - OCT	1998 - T	T - 1998
V - NOV	1997 - S	
Z - DEC	1996 - R	

c . . frat to

#### Model PP975

## Using the oven controls.

NOTE: Throughout this manual, features and appearance may vary from your model.



## Oven Control, Clock and Timer Features and Settings



BAKE Pad

Touch to select the bake function.

#### BROIL HI/LO Pad

Touch to select the broil function.



Touch to select the Pizza function.



Touch to turn the oven light on or off.

#### SELF CLEAN HI/LO Pad

Touch to select self-cleaning function. See the *Using the self-cleaning upper and lower ovens* section.



#### WARM Pad

Touch to keep cooked foods warm. See the *How to Set the Lower and Upper Ovens for Warming* section.



Touch to get help on a specific function or to change options.

#### TIMER /CLOCK Pad

Touch to select the timer feature or to set the clock. Touch once for timer. Hold for 3 seconds to set clock.

#### CONTROL LOCK Pad

Hold this pad for 3 seconds to lock/unlock the range touch pad controls and cooktop controls.



Must be touched to start any cooking or cleaning function.

#### CLEAR/OFF Pad

DELAY START Pad

Touch to cancel **ALL** oven operations except the clock and timer.

Use along with **COOK TIME** or

13

#### COOK TIME Pad

you set.

Touch this pad and then touch the number pads to set the amount of time you want your food to cook. The oven will shut off when the cooking time has run out.

**SELF CLEAN HI/LO** pads to set the oven to start and stop automatically at a time



#### Display

Shows the time of day, oven temperature, whether the oven is in the bake, broil or self-cleaning mode and the times set for the timer or automatic oven operations.



#### Number Pads

Use to set any function requiring numbers such as the time of day on the clock, the timer, the oven temperature, the internal food temperature, the start time and length of operation for timed baking and self-cleaning.

If your oven was set for a timed oven operation and a power outage occurred, the clock and all programmed functions must be reset.

The time of day will flash in the display when there has been a power outage.



#### CONVECTION BAKE Pad

Touch to select baking with the convection function.



#### **CONVECTION ROAST Pad** Touch to select roasting with the



*SLOW COOK Pad* Touch to select the Slow Cook function.



*PROBE Pad* Touch when using the probe to cook food.

**NOTE:** When setting times, you are setting hours and minutes only. The lowest time you can set is one minute.





# Oven Control, Clock and Timer Features and Settings

#### BAKE Pad

Touch to select the bake function.

BROIL HI/LO Pad Touch to select the broil function.



OVEN LIGHT Pad

Touch to turn the oven light on or off.

#### SELF CLEAN HI/LO Pad

Touch to select self-cleaning function. See the *Using the self-cleaning upper and lower ovens* section.

## 6 WARM Pad

5

Touch to keep cooked foods warm. See the *How to Set the Lower and Upper Ovens for Warming* section.



## HELP Pad

Touch to get help on a specific function or to change options.



#### CONTROL LOCK Pad

Hold this pad for 3 seconds to lock/unlock the range touch pad controls and cooktop controls.

#### START Pad

Must be touched to start any cooking or cleaning function.



#### CLEAR/OFF Pad

Touch to cancel **ALL** oven operations except the clock and timer.



### DELAY START Pad

Use along with **COOK TIME** or **SELF CLEAN HI/LO** pads to set the oven to start and stop automatically at a time you set.



#### COOK TIME Pad

Touch and then touch the number pads to set the amount of time you want your food to cook. The oven will shut off when the cooking time has run out.



#### Display

Shows the time of day, oven temperature, whether the oven is in the bake, broil or self-cleaning mode and the times set for the timer or automatic oven operations.

If your oven was set for a timed oven operation and a power outage occurred, the clock and all programmed functions must be reset.

The time of day will flash in the display when there has been a power outage.



#### Number Pads

Use to set any function requiring numbers such as the time of day on the clock, the timer, the oven temperature, the internal food temperature, the start time and length of operation for timed baking and self-cleaning.



*SLOW COOK Pad* Touch to select the Slow Cook function.



Touch to select the timer feature.



*CLOCK Pad* Touch before setting the clock.



**NOTE:** When setting times, you are setting hours and minutes only. The lowest time you can set is one minute.





#### How to Set the Upper Oven for Baking

- Touch the **BAKE** pad.
- Touch the number pads to set the desired temperature.
- **3** Touch the **START** pad.
- Check food for doneness at minimum time on recipe. Cook longer if necessary.
- **5** Touch the **CLEAR/OFF** pad when cooking is complete.



- How to Set the Lower Oven for Baking or Roasting
- Touch the **BAKE** pad.
- **Z** Touch the number pads to set
- the desired temperature. Touch the **START** pad.

**NOTE:** On some models, you will hear the convection fan while the oven is preheating. The fan will stop after the oven is preheated and the display shows your set temperature. This is normal.

- Check food for doneness at minimum time on recipe. Cook longer if necessary.
- **5** Touch the **CLEAR/OFF** pad when cooking is complete.

## Using the upper and lower ovens.



If your range is connected to 208 volts, rare steaks may be broiled by preheating the broiler and positioning the oven rack one position higher.

#### How to Set the Upper and Lower Ovens for Broiling

Leave the door open to the broil stop position. The door stays open by itself, yet the proper temperature is maintained in the oven.

- Place the meat or fish on a broiler grid in a broiler pan.
- Sollow suggested rack positions in the *Broiling Guide*.
- **3** Touch the **BROIL HI/LO** pad once for **HI Broil**.

To change to **LO Broil**, touch the **BROIL HI/LO** pad again.

Use **LO Broil** to cook foods such as poultry or thick cuts of meat thoroughly without over-browning them.

**4** Touch the **START** pad.

*CLEAR/OFF* pad.

**NOTE:** Broil and self-clean settings will not work if the temperature probe is plugged in.

# Using the timed baking and roasting features. (on some models)

**NOTE:** Foods that spoil easily—such as milk, eggs, fish, stuffings, poultry and pork—should not be allowed to sit for more than 1 hour before or after cooking. Room temperature promotes the growth of harmful bacteria. Be sure that the oven light is off because heat from the bulb will speed harmful bacteria growth.



#### How to Set an Immediate Start and Automatic Stop

The oven will turn on immediately and cook for a selected length of time. At the end of the cooking time the oven will turn off automatically.

**1** Touch the **BAKE** pad.

Z Touch the number pads to set the desired oven temperature.

#### **3** Touch the **COOK TIME** pad.

**NOTE:** If your recipe requires preheating, you may need to add additional time to the length of the cooking time.

Touch the number pads to set the desired length of cooking time. The minimum cooking time you can set is 1 minute.

The oven temperature that you set and the cooking time that you entered will be in the display.

**5** Touch the **START** pad.

**NOTE:** An attention tone will sound if you are using timed baking and do not touch the **START** pad.

The oven will turn **ON**, and the display will show the cooking time countdown and the changing temperature starting at 100°F. (The temperature display will start to change once the oven temperature reaches 100°F.) When the oven reaches the temperature you set, 3 beeps will sound.

The oven will continue to cook for the set amount of time, then turn off automatically, unless the WARM feature was set. See the *How to Set the Oven for Warming* section.

Touch the *CLEAR/OFF* pad to clear the display if necessary. Remove the food from the oven. Remember, even though the oven turns off automatically, food left in the oven will continue cooking after the oven turns off.



How to Set a Delayed Start and Automatic Stop

The oven will turn on at the time of day you set, cook for a specific length of time and then turn off automatically.

Make sure the clock shows the correct time of day.



- Z Touch the number pads to set the desired oven temperature.
- **3** Touch the **COOK TIME** pad.

**NOTE:** If your recipe requires preheating, you may need to add additional time to the length of the cooking time.

Touch the number pads to set the desired length of cooking time. The minimum cooking time you can set is 1 minute.

The oven temperature that you set and the cooking time that you entered will be in the display.

**5** Touch the **DELAY START** pad.

- *T*ouch the number pads to set the time of day you want the oven to turn on and start cooking.
- 7 Touch the **START** pad.

**NOTE:** An attention tone will sound if you are using timed baking and do not touch the **START** pad.

**NOTE:** If you would like to check the times you have set, touch the **DELAY START** pad to check the start time you have set or touch the **COOK TIME** pad to check the length of cooking time you have set.

When the oven turns **ON** at the time of day you set, the display will show the cooking time countdown and the changing temperature starting at 100°F. (The temperature display will start to change once the oven temperature reaches 100°F.) When the oven reaches the temperature you set, beeps will sound.

The oven will continue to cook for the set amount of time, then turn off automatically, unless the WARM feature was set. See the *How to Set the Oven for Warming* section.

Touch the *CLEAR/OFF* pad to clear the display if necessary. Remove the food from the oven. Remember, even though the oven turns off automatically, food left in the oven will continue cooking after the oven turns off.



# How to Set the Lower Oven For Baking/Roasting When Using the Probe (on some models)

- $\boxed{7} Insert the probe fully into the food.$
- Plug the probe into the outlet in the oven. Make sure it's pushed all the way in. Close the oven door. Make sure the probe cable is not touching the broil element.
- **3** Touch the **PROBE** pad. Display will show "Set Probe Temperature."
- Touch the number pads to set the desired internal food or meat temperature. The maximum internal temperature for the food that you can set is 200°F.
- **5** Touch the **BAKE** pad.
- **Touch the number pads to set the desired oven temperature.**
- **7** Touch the **START** pad.

After the internal temperature of the food reaches 100°F, the changing internal temperature will be shown in the display.

- When the internal temperature of the food reaches the number you have set, the probe and the oven turn off and the oven control signals. To stop the signal, touch the **CLEAR/OFF** pad. Use hot pads to remove the probe from the food. Do not use tongs to pull on it—they might damage it.
- If the probe is removed from the oven while probe cooking, the oven will not automatically turn off.

To change the oven temperature during the Bake/Roast cycle, touch the **BAKE** pad and then the number pads to set the new temperature.

You can use the Kitchen Timer even though you cannot use timed oven operations while using the probe.



(on some models)



(on some models) Make sure the clock is set to the correct time of day.



The Kitchen Timer does not control oven operations. The maximum setting on the Kitchen Timer is 9 hours and 59 minutes.

CONTROL

LOCK

#### To Set the Clock

The clock must be set to the correct time of day for the automatic oven timing functions to work properly. The time of day cannot be changed during a timed baking or self-cleaning cycle. On some models, touch the TIMER/CLOCK pad and hold for 3 seconds. On other models, touch the CLOCK pad.

 $\boxed{2}$  Touch the number pads.

**3** Touch the **START** pad.

#### To Set the Kitchen Timer

Touch the **TIMER/CLOCK** or **TIMER** pad (depending on model).

Touch the number pads until the amount of time you want shows in the display. For example, to set 2 hours and 45 minutes, touch **2**, **4** and **5** in that order. If you make a mistake touch the **TIMER/CLOCK** or **TIMER** pad (depending on model) and begin again.

**3** Touch the **START** pad.

#### To Reset the Kitchen Timer

If the display is still showing the time remaining, you may change it by touching the *TIMER/CLOCK* or *TIMER* pad (depending on model), then touch the number pads until the time you want appears in the display.

After touching the **START** pad, **SET** disappears; this tells you the time is counting down, although the display does not change until one minute has passed. Seconds will not be shown in the display until the last minute is counting down.

When the Kitchen Timer reaches **:00**, the control will beep 3 times followed by one beep every 6 seconds until the **TIMER/CLOCK** or **TIMER** pad (depending on model) is touched.

The 6-second tone can be canceled by following the steps in the Special features of your oven control section under Tones at the End of a Timed Cycle.

If the remaining time is not in the display (clock, delay start or cooking time are in the display), recall the remaining time by touching the **TIMER/CLOCK** or **TIMER** pad (depending on model) and then touching the number pads to enter the new time you want.

#### To Cancel the Kitchen Timer

Touch the *TIMER/CLOCK* or *TIMER* pad (depending on model) twice.

#### Control Lock (on some models)

Your control will allow you to lock out the touch pads and the cooktop so they cannot be activated when touched.

To lock/unlock the controls and cooktop:

Touch and hold the **CONTROL LOCK** pad for 3 seconds.

The oven display will show "**Oven** controls and burners locked" for several seconds, then "**Range** Locked."

- To unlock the control, touch and hold **CONTROL LOCK** for 3 seconds.
- The CONTROL LOCK mode affects all touch pads. No touch pads will work when this feature is activated.

# Adjust the upper or lower oven thermostat

You may find that your new oven cooks differently than the one it replaced. Use your new oven for a few weeks to become more familiar with it. If you still think your new oven is too hot or too cold, you can adjust the thermostat yourself.

*Do not use thermometers, such as those found in grocery stores, to check the temperature setting of your oven. These thermometers may vary 20–40 degrees.* 

**NOTE:** This adjustment will only affect baking and roasting temperatures; it will not affect broiling, convection or self-cleaning temperatures. The adjustment will be retained in memory after a power failure.



#### To Adjust the Thermostat

1 Touch the upper oven *BROIL HI/LO* and *BAKE* pads at the same time until the display shows *SF*.

NOTE

To adjust the upper oven thermostat, touch the upper oven *BAKE* pad. To adjust the lower oven thermostat, touch the lower oven *BAKE* pad.

- 2 Touch the *BAKE* pad. A two digit number shows in the display.
- 3 Touch *BAKE* again to alternate between increasing and decreasing the oven temperature.
- The oven temperature can be adjusted up to (+) 35°F hotter or (-) 35°F cooler. Touch the number pads the same way you read them. For example, to change the oven temperature 15°F, touch 1 and 5.





#### **Convection Fan Operation**

In a convection oven, a fan circulates hot air over, under and around the food.

This circulating hot air is evenly distributed throughout the oven cavity. As a result, foods are evenly cooked and browned—often in less time with convection heat. **NOTE:** To maximize cooking evenness, the fan is designed to rotate in both directions, with a pause in between. This is normal.

The convection fan shuts off when the oven door is opened. **DO NOT** leave the door open for long periods of time while using convection cooking or you may shorten the life of the convection heating element.

#### Introduction

The convection oven comes with two convection baking modes: Convection Bake Multi and Convection Bake 1 Rack:

**MULTI**—for convection cooking on more than one rack. Touch the **CONVECTION BAKE MULTI/1 RACK** pad and then the **2** pad. See the *Multi-Rack Convection Baking* section below. **1 RACK**—for convection cooking on one rack only. Touch the **CONVECTION BAKE MULTI/1 RACK** and then the **1** pad. See the **1-Rack Convection Baking** section below.



Multi-rack position.

#### Multi-Rack Convection Baking

Because heated air is circulated evenly throughout the oven, foods can be baked with excellent results using multiple racks.

Multi-rack baking may increase cook times slightly for some foods but the overall result is time saved. Cookies, muffins, biscuits and other quickbreads give very good results with multi-rack baking. To cook food on more than one rack in convection bake, use *CONVECTION BAKE MULTI*.

When baking on 3 racks, place one rack in the second (A) position, another rack in the fourth (C) position and the third rack in the sixth (E) position.

For two-rack baking, place one rack in the second (B) rack position. Place the other rack in the fifth (E) rack position.

#### 1-Rack Convection Baking

When convection baking with only 1 rack, use **CONVECTION BAKE 1 RACK** and follow the rack positions recommended in the Using the oven section.

Ideal for baked foods cooked on 1 rack.



#### **Convection Roast**

Good for large tender cuts of meat, uncovered.

The convection fan circulates the heated air evenly over and around the food. Meat and poultry are browned on all sides as if they were cooked on a rotisserie. The heated air seals in juices quickly for a moist and tender product while, at the same time, creating a rich golden brown exterior. When you are convection roasting it is important that you use a broiler pan and grid for best convection roasting results. The pan is used to catch grease spills and the grid is used to prevent grease spatters.

#### How to Set the Lower Oven for Convection Baking or Roasting

Touch the **CONVECTION BAKE MULTI** 

**1 RACK** pad and then the **2** pad for multi-rack convection baking. This mode is used for cooking food items on more than one rack (i.e., 2, 3 or more racks) at the same time in convection bake. See the *Multi-Rack Convection Baking* section for more information.

#### Touch the CONVECTION BAKE MULTI/

**1 RACK** pad and then the **1** pad for one-rack convection baking. This mode is used for cooking food items on only one rack in convection bake. Touch the **CONVECTION ROAST** pad

for convection roasting.

- Z Touch the number pads to set the oven temperature.
- **3** Touch the **START** pad.

**NOTE:** If the Auto Recipe<sup>™</sup> Conversion Feature is on, it will automatically reduce the set regular baking temperature by 25°F to the appropriate convection temperature in convection bake mode. See Auto Recipe<sup>™</sup> Conversion in the Special Features section.

To change the oven temperature, touch the **CONVECTION BAKE MULTI/1 RACK** or **CONVECTION ROAST** pad and then the number pads to set the new temperature.

When the oven starts to heat, the changing temperature, starting at 100°F, will be displayed. When oven reaches the temperature you set, 3 beeps will sound.

Touch **CLEAR/OFF** pad when finished.

- You will hear a fan while cooking with convection. The fan will stop when the door is opened, but the heat will not turn off.
- You may hear the oven clicking during baking. This is normal.
- In convection bake modes, for maximum cooking evenness, the fan is designed to rotate in both directions, with a pause in between. This is normal.



# Using the timed features for convection cooking. (on some models)

You will hear a fan while cooking with these features. The fan will stop when the door is opened, but the heat will not turn off.

**NOTE:** Foods that spoil easily—such as milk, eggs, fish, stuffings, poultry and pork—should not be allowed to sit for more than 1 hour before or after cooking. Room temperature promotes the growth of harmful bacteria. Be sure that the oven light is off because heat from the bulb will speed harmful bacteria growth.



#### How to Set an Immediate Start and Automatic Stop

The lower oven will turn on immediately and cook for a selected length of time. At the end of the cooking time, the oven will turn off automatically.

Make sure the clock shows the correct time of day.

Touch the **CONVECTION BAKE MULTI/1 RACK** pad and then the **2** pad for multi-rack convection baking. This mode is used for cooking food items on more than one rack (i.e., 2, 3 or more racks) at the same time in convection bake. See *Multi-Rack Baking* section for more information.

> Touch the **CONVECTION BAKE MULTI/ 1 RACK** pad and then the **1** pad for one-rack convection baking. This mode is used for cooking food items on only one rack in convection bake.

> Touch the *CONVECTION ROAST* pad for convection roasting.

Z Touch the number pads to set the oven temperature.



Touch the **COOK TIME** pad.

**NOTE:** If your recipe requires preheating, you may need to add additional time to the length of the cooking time.

- Touch the number pads to set the desired length of cooking time. The minimum cooking time you can set is 1 minute. The oven temperature that you set and the cooking time that you entered will be in the display.
- **5** Touch the **START** pad.

The oven will turn **ON**, and the display will show the cooking time countdown and the changing temperature starting at 100°F. (The temperature display will start to change once the oven temprature reaches 100°F.) When the oven reaches the temperature you set, 3 beeps will sound.

**NOTE:** If the Auto Recipe<sup>™</sup> Conversion Feature is on, it will automatically reduce the set regular baking temperature by 25°F to the appropriate convection temperature in convection bake mode. See Auto Recipe<sup>™</sup> Conversion in the Special Features section.

The oven will continue to cook for the set amount of time, then turn off automatically, unless the WARM feature was set. See the *How to Set the Oven for Warming* section.

After the oven turns off, the end-of-cycle tone will sound.

Touch the *CLEAR/OFF* pad to clear the display if necessary. Remove the food from the oven. Remember, even though the oven turns off automatically, food left in the oven will continue cooking after the oven turns off.

## Using the timed features for convection cooking. (on some models)



#### How to Set a Delayed Start and Automatic Stop

The lower oven will turn on at the time of day you set, cook for a specific length of time and then turn off automatically.

Make sure the clock shows the correct time of day.

**7** Touch the **CONVECTION BAKE** 

**MULTI/1 RACK** pad and then the **2** pad for multi-rack convection baking. This mode is used for cooking food items on more than one rack (i.e., 2, 3 or more racks) at the same time in convection bake. See *Multi-Rack Baking* section for more information.

Touch the **CONVECTION BAKE MULTI/ 1 RACK** pad and then the **1** pad for one-rack convection baking. This mode is used for cooking food items on only one rack in convection bake.

Touch the *CONVECTION ROAST* pad for convection roasting.

- Z Touch the number pads to set the oven temperature.
- **3** Touch the **COOK TIME** pad.

**NOTE:** If your recipe requires preheating, you may need to add additional time to the length of the cooking time.

Touch the number pads to set the desired length of cooking time. The minimum cooking time you can set is 1 minute.

The oven temperature that you set and the cooking time that you entered will be in the display.

- **5** Touch the **DELAY START** pad.
- *C* Touch the number pads to set the time of day you want the oven to turn on and start cooking.
- **Touch the START** pad.

**NOTE:** An attention tone will sound if you are using timed baking or roasting and do not touch the **START** pad.

**NOTE:** If you would like to check the times you have set, touch the **DELAY START** pad to check the start time you have set, or touch the **COOK TIME** pad to check the length of cooking time you have set.

When the oven turns **ON** at the time of day you set, the display will show the cooking time countdown and the changing temperature starting at 100°F. (The temperature display will start to change once the oven temperature reaches 100°F.) When the oven reaches the temperature you set, 3 beeps will sound.

**NOTE:** If the Auto Recipe<sup>™</sup> Conversion Feature is on, it will automatically reduce the set regular baking temperature by 25°F to the appropriate convection temperature in convection bake mode. See Auto Recipe<sup>™</sup> Conversion in the Special Features section.

The oven will continue to cook for the programmed amount of time, then shut off automatically, unless the WARM feature was set. See the *How to Set the Oven for Warming* section.

After the oven turns off, the end-of-cycle tone will sound.

Touch the *CLEAR/OFF* pad to clear the display if necessary. Remove the food from the oven. Remember, even though the oven shuts off automatically, food left in the oven will continue cooking after the oven turns off.



For best results when roasting large turkeys and roasts, we recommend using the probe included in the convection oven.



To change the oven temperature during the Convection Roast cycle, touch the **CONVECTION ROAST** pad and then touch the number pads to set the new desired temperature.

#### How to Set the Lower Oven for Convection Roasting when Using the Probe

- Place the oven rack in the position that centers the food between the top and bottom of the oven. Insert the probe into the meat. Make sure it is pushed all the way in.
- Plug the probe into the outlet in the oven. Make sure it is pushed all the way in. Close the oven door.
- **3** Touch the **PROBE** pad.
- Touch the number pads to set the desired internal meat temperature.

**NOTE:** The maximum internal temperature for the food that you can set is 200°F.

- $\boxed{5}$  Touch the **CONVECTION ROAST** pad.
- **(b)** Touch the number pads to set the desired oven temperature.

The display will flash **PROBE** and the oven control will signal if the probe is inserted into the outlet, and you have not set a probe temperature and pressed the **START** pad.

**Touch the START** pad.

When the oven starts to heat, the word *LO* will be in the display.

After the internal temperature of the meat reaches 100°F, the changing internal temperature will be shown in the display.

When the internal temperature of the meat reaches the number you have set, the probe and the oven turn off and the oven control signals. To stop the signal, touch the **CLEAR/OFF** pad. Use hot pads to remove the probe from the food. Do not use tongs to pull on it they might damage it.

**NOTE:** If the probe is removed from the oven while probe cooking, the oven will not automatically turn off.

**CAUTION:** To prevent possible burns, do not unplug the probe from the oven outlet until the oven has cooled.

#### NOTE:

- You will hear a fan while cooking with this feature. The fan will stop when the door is opened, but the heat will not turn off.
- You can use the Kitchen Timer even though you cannot use timed oven operations.
- Never leave your probe inside the oven during a self-cleaning cycle.
- Do not store the probe in the oven.
- Probe not for use in Broil or Self-Clean functions.
- Fan only rotates in one direction.

## Using the slow cook, pizza and warming features.



#### How to Set the Lower Oven For Slow Cook

Slow Cook is designed for long hours of unattended cooking.

Touch the **SLOW COOK** pad once for HI Slow Cook.

To change to LO Slow Cook, touch the *SLOW COOK* pad again.

Touch the number pads to select the desired setting – 1 for Beef, 2 for Poultry, 3 for Pork or 4 for Stews. Use 1–Beef if you are unsure which setting to use.

Touch the number pads to set the desired length of cooking time. For the HI setting, the cooking time must be between 3 and 8 hours. For the LO setting, the cooking time must be between 3 and 12 hours.

**4** Touch the **START** pad.

When the *Slow Cook* function has completed, the oven will go into the Warm mode. Display will say "Cooking Complete Keeping Warm." The total time the oven will be on (Slow Cook time plus Warm time) is 12 hours. This is because of the safety 12-Hour Shutdown feature.

**NOTE:** If a power outage occurs while the oven is in Slow Cook, the range will shut off.



#### How to Set the Upper Oven For Pizza

Adjust rack position for type of pizza tray being used (see chart).

- Touch the **PIZZA** pad
- $\boxed{2}$  Touch the number pads to select 1 for fresh or 2 for frozen pizza.
- 3 Touch the number pads to set the baking temperature.
- [**4**] Touch the **START** pad.

Baking time is determined by package directions.

Type of Pizza Tray	Rack Position			
Tray supplied with fresh pizza	В			
Pizza placed directly on rack	В			
Metal tray	Α			



#### How to Set the Lower and Upper Ovens For Warming

The **WARM** feature keeps cooked foods hot.

This feature is not designed to reheat cold food.

To use the *WARM* feature, touch the *WARM* pad and then the *START* pad.

To use the **WARM** feature after Timed Baking or Roasting, follow these steps:

- Touch the mode of cooking that you want to use (**BAKE, CONVECTION BAKE MULTI, CONVECTION BAKE 1 RACK** or **CONVECTION ROAST**).
- Z Touch the number pads to set the oven temperature.
- **3** Touch the **COOK TIME** pad.
- Touch the number pads to set the desired length of cooking time.
- **5** Touch the **WARM** pad.
- **6** Touch the **START** pad.

#### To Crisp Stale Items

- Place food in low-sided dishes or pans.
- For best results, place the food items in a single layer. Do not stack.

- Leave them uncovered.
- Check crispness after 20–30 minutes. Add time as needed.

#### **IMPORTANT NOTES:**

- Food should be kept hot in its cooking container or transferred to a heat-safe serving dish.
- For moist foods, cover them with an oven-safe lid or aluminum foil.
- Fried or crisp foods do not need to be covered, but can become too dry if warmed for too long.
- Repeated opening of the door allows the hot air to escape and the food to cool.
- Allow extra time for the temperature inside the oven to stabilize after adding items.
- With large loads it may be necessary to cover some of the cooked food items.
- Remove serving spoons, etc., before placing containers in the oven.
- Do not use plastic containers, lids or plastic wrap.

**CAUTION:** Plastic containers, lids or plastic wrap will melt if placed in the oven. Melted plastic may not be removable and is not covered under your warranty.

## Using the self-cleaning upper and lower ovens.



Wipe up heavy soil on the oven bottom.

#### Before a Clean Cycle

We recommend venting your kitchen with an open window or using a ventilation fan or hood during the first self-clean cycle.

Remove any broiler pan, broiler grid, probe, all cookware and any aluminum foil from the oven.

#### NOTE:

- If your oven is equipped with shiny, silver-colored oven racks, remove them before you begin the self-clean cycle.
- If your oven is equipped with gray porcelain-coated oven racks, they may be left in the oven during the self-clean cycle.

Soil on the front frame of the range and outside the gasket on the door will need to be cleaned by hand. Clean these areas with hot water, soap-filled steel-wool pads or cleansers such as Soft Scrub<sup>®</sup>. Rinse well with clean water and dry.

Do not clean the gasket. The fiberglass material of the oven door gasket cannot withstand abrasion. It is essential for the gasket to remain intact. If you notice it becoming worn or frayed, replace it.

Wipe up any heavy spillovers on the oven bottom.

Make sure the oven light bulb cover is in place and the oven light is off.

**IMPORTANT:** The health of some birds is extremely sensitive to the fumes given off during the self-cleaning cycle of any range. Move birds to another wellventilated room.

#### How to Set the Upper/Lower Oven for Cleaning

The oven doors must be closed and all controls set correctly for the cycle to work properly.

Touch the **SELF CLEAN HI/LO** pad once for a 5-hour clean time or twice for a 3-hour clean time.

> A 3-hour self-clean time is recommended for use when cleaning small, contained spills. A self-clean time of 5 hours is recommended for a dirtier oven.

 If a time other than 5 hours or 3 hours is needed, use the number pads and enter the desired clean time.

You can change the clean time to any time between 3 hours and 5 hours, depending on how dirty your oven is.

[3] Touch the **START** pad.

The upper and lower oven doors lock automatically. The cooktop elements are also locked out during self-clean. The display will show the clean time remaining. It will not be possible to open the oven doors or use the cooktop until the temperature drops below the lock temperature and **LOCKED** goes off in the control display.

When *LOCKED* goes off, you will be able to open the doors.

- The word LOCKED will flash and the word door will display if you set the clean cycle and forget to close the oven doors.
- To stop a clean cycle, touch the *CLEAR/OFF* pad. When *LOCKED* goes off, indicating the ovens have cooled below the locking temperature, you will be able to open the doors.

You can set a clean cycle in both ovens at the same time; however, they will not self-clean at the same time. The last oven set will automatically delay its start until the end of the first oven's clean cycle.

When an oven is set to self-clean, both oven doors will lock and the cooktop controls will lock out. The ovens and cooktop cannot be used when an oven is set to self-clean.



The oven doors must be closed and all controls set correctly for the cycle to work properly.



#### How to Delay the Start of Cleaning

Touch the **SELF CLEAN HI/LO** pad once for a 5-hour clean time or twice for a 3-hour clean time.

A 3-hour self-clean time is recommended for use when cleaning small, contained spills. A self-clean time of 5 hours is recommended for a dirtier oven.

If a time other than 5 hours or 3 hours is needed, use the number pads and enter the desired clean time.

You can change the clean time to any time between 3 hours and 5 hours, depending on how dirty your oven is.

#### After a Clean Cycle

You may notice some white ash in the oven. Wipe it up with a damp cloth after the oven cools.

If white spots remain, remove them with a soapfilled steel wool pad and rinse thoroughly with a vinegar and water mixture.

These deposits are usually a salt residue that cannot be removed by the clean cycle.

If the oven is not clean after one clean cycle, repeat the cycle.

Touch the **DELAY START** pad.

- Using the number pads, enter the time of day you want the clean cycle to start.
- 5 Touch the **START** pad.

.3

The upper and lower oven doors lock automatically. The cooktop elements are also locked out during self-clean. The display will show the start time. It will not be possible to open the oven doors or use the cooktop until the temperature drops below the lock temperature and **LOCKED** goes off in the control display.

When *LOCKED* goes off, you will be able to open the doors.

- You cannot set the oven for cooking or another self-clean cycle until the oven is cool enough for the door to unlock.
- While the oven is self-cleaning, you can touch the *TIMER/CLOCK* or *CLOCK* pad (depending on model) to display the time of day. To return to the clean countdown, touch the *SELF CLEAN HI/LO* pad.
- If the racks become hard to slide, apply a small amount of cooking oil to a paper towel and wipe the edges of the oven racks with the paper towel.

# Special features of your oven control.

Your new touch pad control has additional features that you may choose to use. The following are the features and how you may activate them.

The special feature modes can only be activated while the display is showing the time of day. They remain in the control's memory until the steps are repeated.

To enter a special feature for either oven, you must first touch the upper oven BROIL HI/LO and BAKE pads at the same time. The lower oven BROIL HI/LO and BAKE pads will not activate special features.

When the display shows your choice, touch the **START** pad. The special features will remain in memory after a power failure, except for the Sabbath feature, which will have to be reset.

#### **Help Function**

Touch this pad to get additional information on the keypad of your choice.

The options on page 22 and 23 can be adjusted using the method described here or through HELP.

Touch the HELP pad and the display will show "Press keypad for help on that feature or 1 for options.



HELP

#### 12-Hour Shutdown

With this feature, should you forget and leave the oven on, the control will automatically turn off the oven after 12 hours during baking functions or after 3 hours during a broil function.

If you wish to turn **OFF** this feature, follow the steps below.

Touch the *upper oven BROIL HI/LO* 1 and **BAKE** pads at the same time until the display shows **SF**.

#### Fahrenheit or Celsius Temperature Selection

Your oven control is set to use the Fahrenheit temperature selections, but you may change this to use the Celsius selections.

Touch the upper oven BROIL HI/LO 1 and **BAKE** pads at the same time until the display shows SF.

Touch the **DELAY START** pad until 2 no shdn (no shut-off) appears in the display.

Touch the **START** pad to activate the 3 no shut-off and leave the control set in this special features mode.



Touch the **COOK TIME** and **BROIL** 2 HI/LO pads at the same time. The display will show **F** (Fahrenheit).

Touch the **COOK TIME** and **BROIL** 3 **HI/LO** pads again at the same time. The display will show **C** (Celsius).

Touch the **START** pad. 4



#### Tones at the End of a Timed Cycle

At the end of a timed cycle, 3 short beeps will sound followed by one beep every 6 seconds until the CLEAR/OFF pad is touched. This continual 6-second beep may be canceled.

To cancel the 6-second beep:

- Touch the upper oven BROIL HI/LO 1 and **BAKE** pads at the same time until the display shows SE.
- Touch the **BROIL** pad. The display 2 shows CONTI BEEP (continuous beep). Touch the **BROIL** pad again. The display shows **SINGLE BEEP**. (This cancels the one beep every 6 seconds.)
- Touch the **START** pad. 3



#### Tone Volume

This feature allows you to adjust the tone volumes to a more acceptable volume. There are three possible volume levels.



- until the display shows *SF*.
  7 Touch the *COOK TIME* pad. The
- Touch the COUK TIME pad. The display will show 2 BEEP. This is the middle volume level.

Touch the **COOK TIME** pad again. The display will show **3 BEEP**. This is the loudest volume level. Touch the **COOK TIME** pad again. The display will show **1 BEEP**. This is the quietest volume level.

For each time the level is changed, a tone will sound to provide an indication of the volume level.

- Choose the desired sound level (1 BEEP, 2 BEEP, 3 BEEP).
- Touch the **START** pad to activate the level shown.



#### 12-Hour, 24-Hour or Clock Blackout

Your control is set to use a 12-hour clock.

If you would prefer to have a 24-hour military time clock or black out the clock display, follow the steps below.

- Touch the *upper oven BROIL HI/LO* and *BAKE* pads at the same time until the display shows *SF.*
- Touch the *TIMER/CLOCK* or *CLOCK* pad (depending on model) once. The display will show *12 hr.* If this is the choice you want, touch the *START* pad.

# Touch the *TIMER/CLOCK* or *CLOCK* pad (depending on model) again to change to the 24 hour military time clock. The display will show *24 hr.* If this is the choice you want, touch the *START* pad.

Touch the **TIMER/CLOCK** or **CLOCK** pad (depending on model) again to black out the clock display. The display will show **OFF**. If this is the choice you want, touch the **START** pad.

**NOTE:** If the clock is in the black-out mode you will not be able to use the Delay Start function.



#### Auto Recipe<sup>™</sup> Conversion

When using convection bake, the Auto Recipe™ Conversion feature will automatically convert entered regular baking temperatures to convection baking temperatures.

This feature is activated so that the display will show the actual converted (reduced) temperature. For example, if you enter a regular recipe temperature of 350°F and touch the **START** pad, the display will show **CON** and the converted temperature of 325°F.

#### To deactivate the feature:

Touch the **upper oven BAKE** and **BROIL HI/LO** pads at the same time until the display shows **SF**.

- Touch the CONVECTION BAKE MULTI/1 RACK pad. The display will show CON ON. Touch the CONVECTION BAKE MULTI/1 RACK pad again. The display will show CON OFF.
- **3** Touch the **START** pad.

To reactivate the feature, repeat steps 1–3 above but touch the **START** pad when **CON ON** is in the display.

## Hour 21 Hour or Clask Diseles-

## Using the Sabbath feature. (upper and lower ovens)

(Designed for use on the Jewish Sabbath and Holidays) (on some models)

The Sabbath feature can be used for baking/roasting only. It cannot be used for convection, broiling, self-cleaning or Delay Start cooking.

NOTE: The oven light comes on automatically (on some models) when the door is opened and goes off when the door is closed. The bulb may be removed. See the Oven Light Replacement section. On models with a light switch on the control panel, the oven light may be turned on and left on.





When the display shows  $\Box$  the oven is set in Sabbath. When the display shows  $\Box \Box$  the oven is baking/roasting.

- Make sure the clock shows the correct time of day and the oven is off.
- Touch and hold **both** the **BROIL HI/LO** and 1 BAKE pads, at the same time, until the display shows SF.

**NOTE:** If bake or broil appears in the display, the **BROIL HI/LO** and **BAKE** pads were not touched at the same time. Touch the CLEAR/OFF pad and begin again.

- Tap the **DELAY START** pad until **SAb bAtH** appears in the display.
- Touch the **START** pad and  $\Box$  will appear 3 in the display.
- Touch the **COOK TIME** pad. 4
- Touch the number pads to set the 5 desired length of cooking time between 1 minute and 9 hours and 99 minutes. The cooking time that you entered will be displayed.

#### How to Exit the Sabbath Feature

- Touch the **CLEAR/OFF** pad.
- If the oven is cooking, wait for a 2 random delay period of approximately 30 seconds to 1 minute, until only  $\Box$  is in the display.
- Touch and hold **both** the **BROIL HI/LO** 3 and **BAKE** pads, at the same time, until the display shows SF.
- Tap the **DELAY START** pad until **12 shdn** 4 or **no shdn** appears in the display.
- Choose **12 shdn**, indicating that the oven 5 will automatically turn off after 12 hours or **no shdn**, indicating that the oven will not automatically turn off after 12 hours.

Press START when the option that you 6 want is in the display (**12 shdn** or **no shdn**).

NOTE: If a power outage occurred while the oven was in Sabbath, the oven will automatically turn off and stay off even when the power returns. The oven control must be reset.



Touch the **BAKE** pad. No signal will 4 be given.

## active during the Sabbath feature.

- How to Set for Timed Baking/Roasting-Immediate Start and Automatic Stop Touch the START pad. 6
  - Touch the **BAKE** pad. No signal will be 7 given.
  - Using the number pads, enter the 8 desired temperature. No signal or temperature will be given.
  - Touch the **START** pad. 9
  - After a random delay period of 10 approximately 30 seconds to 1 minute,  $\Box \Box$  will appear in the display indicating that the oven is baking/roasting. If  $\Box \Box$ doesn't appear in the display, start again at Step 7.

To adjust the oven temperature, touch the **BAKE** pad, enter the new temperature using the number pads and touch the START pad.

When cooking is finished, the display will change from  $\Box \sqsubseteq$  to  $\Box$  and **0:00** will appear, indicating that the oven has turned **OFF** but is still set in Sabbath. Remove the cooked food.

#### **Operational Notes**

Certain modes, when selected, will automatically enter into a preheat and 100°F will appear in the display. (The temperature display will start to change once the oven temperature reaches 100°F.) On convection models, the convection fan will turn on several seconds into the preheat cycle and remain on until 1 degree before the oven has reached the set temperature. The control will beep when the oven is preheated—this will take approximately 4 to 6 minutes for the upper oven and 10 to 15 minutes for the lower oven. The display will then show the set temperature.

#### Preheat Chart

Mode	Preheat
Bake	Yes
Convection Bake - 1 Rack	Yes
Convection Bake - Multi	Yes
Convection Roast	Yes
Broil	No
Pizza - Fresh	Yes
Pizza - Frozen	Yes
Slow Cook	No
Warm	Yes
Clean	No
Probe Usage	Yes

- Preheat operation consists of multiple phases which are time and/or temperature dependant. Each phase of preheat utilizes combinations of bake, broil, and convection elements. For example, one phase may use the convection element, convection fan, and the outer broil element simultaneously. Another phase may use the inner broil element, convection element, and the convection fan simultaneously. And another phase may use the bake element, outer broil element, and the convection fan.
- The convection fan will cycle on and off while cooking to best distribute hot air in the oven. The convection fan shuts off when the oven door is opened.

- On convection models, when in bake or timed baking is used, the bake, broil, and convection elements cycle during preheat with one element on at a time. The convection fan also operates while preheating and will turn off once the set temperature is reached. Once bake preheat temperature is reached, the bake and broil elements cycle for the balance of the bake operation with one element on at a time.
- On non-convection models, when bake or timed baking is used, the bake and broil elements cycle during both the preheat and the baking operation with one element on at a time.
- In Convection Bake or Convection Roast, the convection element and the fan operate whenever the oven is heating.
- Timed baking can be used in both ovens at the same time.
- Broil will not work if the temperature probe is plugged in. Never leave the probe inside the oven during a broil cycle.
- When using the probe, you can use the timer, but you cannot use timed oven operations.
- The clean cycle can be set for a minimum of 3 hours and a maximum of 5 hours. The default setting is 5 hours. The 5 hour set time consists of 4 hours and 20 minutes of cleaning and 40 minutes of cool down. The door will unlock at an approximate temperature of 450°F.
- A clean cycle can be set in both ovens at the same time. The last oven set will automatically delay its start until the first oven's clean cycle cools to 400°F.
- When an oven is set to Self Clean, both oven doors will lock and the cooktop controls will lock out. The ovens and cooktop cannot be used when an oven is set to Self Clean.
- When the clean cycle is started, only the broil unit is on during the first 30 minutes or until the sensor reaches 750°F. During the balance of the clean cycle, the oven will cycle between bake and broil units.
- The convection fan and element do not operate during the clean cycle.
- Self Clean will not work if the temperature probe is plugged in or if the Sabbath feature is set.

#### **Electrical Requirements**

**Caution**: For personal safety, do not use an extension cord with this appliance.

This appliance must be supplied with the proper voltage and frequency, and connected to an individual properly grounded branch circuit, protected by a circuit breaker or fuse having amperage as specified on the rating plate. The rating plate is located on the left-hand side of the lower oven front frame.



You must use a 3-wire, single-phase A.C. 08Y/120 Volt or 240/120 Volt, 60 hertz electrical system. If the electrical service provided does not meet the above specifications, have a licensed electrician install an approved outlet.

WARNING: ALL NEW CONSTRUCTIONS, MOBILE HOMES AND INSTALLATIONS WHERE LOCAL CODES DO NOT ALLOW GROUNDING THROUGH NEUTRAL, REQUIRE A 4-CONDUCTOR UL-LISTED RANGE CORD.

Use only a 3-conductor or a 4-conductor UL-listed range cord. These cords may be provided with ring terminals on wire and a strain relief device.

A range cord rated at 40 amps with 125/250 minimum volt range is required. A 50-amp range cord is not recommended but if used it should be marked for use with nominal 1%-in. diameter connection openings. Care should be taken to center the cable and strain relief within the knockout hole to keep the edge from damaging the cable.

- Because range terminals are not accessible after range is in position, flexible service conduit or cord must be used.
- On some models, a filter capacitor may be connected between the black and white leads on the junction block.

#### Anti-Tip Bracket

#### WARNING:

The range must be secured by the anti-tip bracket supplied.

WARNING: Unless properly installed, the range could be tipped by stepping or sitting on the doors. Injury may result from spilled hot liquids or from the range itself.

An anti-tip bracket is supplied with instructions for installation in a variety of locations. The instructions include all necessary information to complete the installation. Read the safety instructions and the instructions that fit your situation before beginning installation.



Typical installation of anti-tip bracket attachment to wall

# **Component Locator Views**

## Front View (PB975 shown)





Shown with oven doors removed



Shown in service position

### Main Top (PB975 shown)





**Note:** The lower oven bake element terminals are located behind the left side panel.

\* The electronic range control (ERC) consists of the lower oven control board and the display board.

#### Lower Oven Control Board and Display Board



- J2 Glass Touch Panel
- J3 Glass Touch Panel
- J5 Upper and Lower Oven Sensors
- J6 Meat Probe
- J7 Lower Oven Lock Motor, Cooktop Lockout Relay Coil, Lower Broil Outer Element, Convection Fan Motor, Lower Oven Lights
- J10 Ground
- J11 Neutral
- J14 L1 supply to Lower Oven Lock Motor, Cooktop Lockout Relay Coil, Lower Broil Outer Element, Convection Fan Motor
- J16 Lower Oven Lock Switch, Lower Oven Unlock Switch
- J17 Communication Cable
- J20 L2 supply to ERC Transformer
- J21 Surface unit feedback to ERC (for broil boost operation)

- K1 Oven Lights
- K3 Broil Element Relay
- K4 Convection Fan Direction Relay
- K5 Convection Fan Relay
- K7 Bake Element Relay
- K8 Broil Boost Relay
- K10 Convection Element Relay
- K11 Cooktop Lock Relay
- K13 Door Lock Relay
- K14 Double Line Break Relay

#### Upper Oven Control Board



- J7 Lock Motor, Outer Broil Element, Oven Lights
- J11 Neutral
- J14 L1 supply to K3 and J7
- J16 Oven Lock Switch, Oven Unlock Switch
- J17 Communication Cable
- K1 Oven Lights
- K3 Broil Relay
- K7 Bake Relay
- K8 Broil Boost Relay
- K13 Door Lock Relay
- K14 Double Line Break Relay

#### WARNING:

- The Profile 30-in. free standing double oven range is heavy and may require two people to remove it from the installation. Care should be taken when removing and installing.
- Sharp edges may be exposed when servicing. Use caution to avoid injury. Wear Kevlar gloves or equivalent protect

ree standing is heavy wo people to installation. een when alling. be exposed e caution to Kevlar gloves ection.	Uppear Relling Position	ser over al Removal	201 Line	Remo	12	
	$\rightarrow$	$\rightarrow$	$\rightarrow$		$\rightarrow$	$ \rightarrow$
Bake Element - Upper Oven	•					
Bake Element - Lower Oven			•		•	
Broil Elements				•		
Control Board - Upper Oven				•		
Convection Element						
Convection Fan Assembly				•		
Cooktop Lockout Relay				٠		
Door Assemblies						
Door Hinge - Upper Oven						
Door Switches						
ERC		•				
Glass Touch Panel						
Hinge Receiver - Lower Oven					•	
Hot Surface Indicator Light Assembly			•			
Lock Assembly - Lower Oven			•	•	•	
Lock Assembly - Upper Oven			•	•		
Meat Probe and Outlet (PB975)	•					
Oven Light Assemblies (excluding upper oven right side)	•					
Oven Light Assembly (upper oven right side)				•		
Oven Liner - Upper Oven				٠		
Oven Temperature Sensors				•		
Radiant Heating Elements						
Smoke Eliminator - Lower Oven	•					
Surface Unit Switches and Element On Lights		•				
Vent Tube - Lower Oven				•		
Vent Tube/Smoke Eliminator - Upper Oven				•		

## Range Components

WARNING: Sharp edges may be exposed when servicing. Use caution to avoid injury. Wear Kevlar gloves or equivalent protection.

#### Upper Oven Door Assembly

The upper oven door can be separated into 2 assemblies. The outer assembly consists of the outer panel, outer glass, and a replaceable door handle. The inner assembly is made up of the inner panel, door gasket, inner glass assembly, insulation retainer, and replaceable door hinge receivers.

**Caution**: The door is heavy. Use the correct lifting procedure. Do not lift the door by the handle.

#### To remove the upper oven door assembly:

- 1. Open the door fully.
- 2. Lift each hinge lock towards the oven frame until it stops.



- 3. Close the door to the stop position. The hinge locks will contact the oven frame.
- 4. Simultaneously press down on each release button located on the top of both hinges.



- 5. Lift the door up until it is clear of the door hinges.
- 6. Pull on the hinge arms lightly to relieve pressure on the locking tabs.
- 7. Push the hinge locks down onto the hinge.
- 8. Push the hinges in toward the unit so they are closed.

#### To replace the upper oven door:

- 1. Pull the hinges down away from the oven frame to the fully open position.
- 2. Lift up on the hinge locks and rotate toward the oven frame until they stop.
- 3. The hinges will release to the 45-degree position. The hinge locks will contact the oven frame.
- 4. Slide the door back onto the hinges. Make sure the buttons pop back out.
- 5. Fully open the door.
- 6. Rotate the hinge locks back toward the door and onto the hinge.
- 7. Close the oven door.

#### To remove the outer door assembly:

- 1. Remove the door. (See *Upper Oven Door Assembly*.)
- 2. Place the door assembly gasket side down on a protective surface.
- 3. Remove the 4 Phillips-head screws that attach the bottom of the outer door assembly to the outer door.



4. Remove the Phillips-head screw from each side of the outer door panel.



- 5. Separate the outer door assembly from the inner door.
- 6. Place the outer door assembly handle side down on a protective surface.

7. Remove the six ¼-In. hex-head screws that attach the handle to the outer door assembly.



8. Remove four ¼-in. hex-head screws from each side of the outer door panel.



9. Slide the outer door glass down to clear the 6 retaining tabs.



(Continued next page)

#### To replace the inner door assembly:

- 1. Remove the outer door assembly. (See previous page.)
- 2. Remove the four T-20 Torx screws (2 on each side) that attach each door hinge receiver to the inner door.



- 3. Place the inner door panel gasket side down.
- 4. Remove the seven ¼-in. hex-head screws that hold the heat barrier to the inner door panel.



5. Remove the insulation and the inner glass assembly from the inner door.



#### Lower Oven Door Assembly

The lower oven door can be separated into 2 assemblies. The outer assembly consists of the outer panel, outer glass, and a replaceable door handle. The inner assembly is made up of the inner panel, inner glass assembly, heat deflector, heat barrier, door gasket, and replaceable door hinge assemblies.

**Caution:** The door is very heavy. Use the correct lifting procedure. Do not lift the door by the handle.

#### To remove the lower oven door assembly:

- 1. Open the door fully.
- 2. Insert a flat-blade screwdriver into the cut-out in each of the hinge door locks. Push the hinge locks from the locked position down toward the door frame, to the unlocked position.



- 3. Firmly grasp both sides of the door at the top.
- 4. Close door to the door removal position.
5. Lift door up until the hinge arm is clear of the slot.



#### To replace the lower door:

1. Firmly grasp both sides of the door at the top. With the door at the same angle as the removal position, seat the indentation of the hinge arm into the bottom edge of the hinge slot.



- 2. Fully open the door.
- 3. Push the hinge locks up against the front frame of the oven cavity, to the locked position.
- 4. Close the oven door.

#### To remove the outer door assembly:

- 1. Remove the door. (See previous page.)
- 2. Place the door assembly, gasket side up, on a protective surface.
- 3. Remove the 4 Phillips-head screws from the bottom of the outer door assembly.



4. Remove the 4 Phillips-head screws (2 on each side) from the outer door assembly.



Note: The inner door assembly is heavier than the outer door assembly.

- 5. Separate the inner door assembly from the outer door assembly.
- 6. Remove the four ¼-in. hex-head screws that hold the door handle to the outer door assembly.



#### Caution:

- Care must be taken if reinstalling the door handle. Be sure that each handle cushion is placed between the glass and the bracket.
- Overtightening screws can damage handle/ glass. Hand-tighten screws and make sure handle fits snugly to door panel. (**Do not use** electric driver.)

#### To replace the inner door assembly:

Remove the outer door assembly. (See previous page.)

1. Remove the four T-20 Torx screws (2 on each side) that attach each door hinge to the inner door. Carefully turn the door over and remove both door hinges.



2. Remove the two ¼-in. hex-head screws that attach the heat deflector to the heat barrier. Remove the heat deflector.



3. Remove the six ¼-in. hex-head screws that hold the heat barrier to the inner door. Remove the heat barrier.



4. Remove the insulation and the inner glass assembly from the inner door.



#### Assembly Notes

When assembling, make sure the hinges are parallel to each other and perpendicular to the door liner. If not, the hinge may bind on the receiving channel of the door. If the new hinge is not in the cocked and locked position after installing, place the bottom of the door against a firm, protected surface and push the hinge arm down to the cocked position. Pull the hinge lock back against the door liner surface to lock the hinge in this position.

Air enters the door assembly through large slots in the bottom and flows upward between the inner and outer assemblies, exhausting through slots in the top of the door. DO NOT INSULATE THIS AIR CHANNEL.

Arrows on the side of the inner glass assembly indicate the direction in which the inner oven door glass is installed. The arrows should be pointing toward the oven cavity.



#### **Door Gaskets**

The gasket forms a complete seal around the front edge of the oven liner and the inner door panel. The door gasket is attached to the inner door panel by spring clips. When removing the gasket, pull the ends of the gasket out of the slots at the bottom of the door. Place a finger under the gasket beside each clip and pull straight up.



When installing the door gasket, it is helpful to fold the gasket in half and locate the center clip. Insert the clip at the top of the door and work your way around the door.

Make sure the gasket is cross tucked in the bottom slots of the inner door panel. Use a small screwdriver to tuck the loose ends of the gasket into the slots. The overlap is required to ensure a proper door seal.



#### **Cooktop Assembly**

The ceramic glass cooktop is sealed into the cooktop frame and is not replaceable as a separate part. The glass cooktop and frame come as a complete assembly.

#### To remove the cooktop assembly:

- 1. Disconnect power to the range.
- 2. Open the upper oven door and remove the two ¼-in. hex-head screws that hold the front of the cooktop to the range frame.



**Caution**: To prevent damage to the cooktop or the control panel, do not raise the cooktop more than 45 degrees.

- 3. Raise and support the cooktop.
- 4. Disconnect 2 wire harnesses from the inside of the back frame.
- 5. Mark and disconnect the gray and the gray/ black wires from the outer terminals of the warmer element.
- 6. Remove the ¼-in. hex-head ground screw and the ground wire from the lock rod channel.



**Note:** The cooktop panel hinge slots rest on a hinge pin mounted to each end plate.



- 7. Lift the front of the cooktop panel upward to approximately 45-degrees.
- 8. Lower the rear of the cooktop panel to disengage the hinge slots from the hinge pins.
- 9. Lift the cooktop panel upwards and over the hinge pins and remove the cooktop panel.



Range shown with control panel removed for clearer view.

#### **Rear Cover Removal**

#### To remove the rear cover:

- 1. Disconnect power to the range.
- 2. Pull the range out from its installation.
- 3. Remove and capture the hidden ¼-in. hex-head screw from the bottom of the cover.
- 4. Remove the ¼-in. ground screw and ground wire from the top of the cover.
- 5. Remove eight ¼-in hex-head screws that attach the panel to the range.



6. Pull the top of the cover away from the range and disengage the 3 cover tabs from the slots near the bottom of the range.



#### Side Panel Removal

The procedures to remove both the left and right side panels are identical.

- 1. Disconnect power to the range.
- 2. Remove the range from its installation.
- 3. Raise and support the cooktop or remove the cooktop. (See *Cooktop Assembly*.)
- 4. Remove the hidden screw near the front leveling leg.



5. Remove the four screws from the rear of the side panel.

6. Remove the three top screws and maintop strike from the top of the side panel.



**Note:** The front of the panel is held to the range frame by 3 plastic grommets that engage 3 keyhole slots placed along the inside front flange of the panel.

7. Grasp the front and rear portion of the side panel. Lift the side panel up and pull towards you then disengage the three rubber grommets.





#### **Oven Light Assemblies**

Each oven is equipped with two halogen light assemblies. The light assemblies for the upper oven are located on the back wall of the oven. The light assemblies for the lower oven are located on the ceiling of the oven. Each oven door switch monitors the position of the oven door and provides this information to the control board. The control board operates the light relay located on the control board. The lights come on when the door is opened or when the oven is in a cooking cycle. The oven lights do not come on during self-cleaning or if the Sabbath feature is set.

Each light assembly consists of a removable light cover, a light lens with halogen bulb and socket, and wire harness.

To access the oven light assemblies in the lower oven and the left side light assembly in the upper oven, follow method #1. It will be necessary to follow method #2 to replace the right side light assembly in the upper oven.

#### Method #1:

Open the oven door and remove the two ¼-in. hexhead screws that attach the light assembly to the oven liner.

### Lower Oven Light



#### Left Side Upper Oven Light



The light assembly and wiring can then be pulled away from the oven liner approximately 2½ inches.

#### Note

- There is a gasket placed between the light assembly and the oven cavity. Be sure to install the gasket to its original location.
- When replacing the light assembly, cut the wires and splice the new light assembly using approved heat resistant connectors.

#### Left Side Upper Oven Light Assembly



Note: Upon reassembly, ensure displaced insulation around the wiring entry hole is returned to its original position.

(Continued next page)

#### Method #2:

- 1. Disconnect power from the range.
- 2. Remove the range from the installation.
- 3. Remove the rear panel. (See Rear Cover Removal.)
- 4. Disconnect the right side upper oven light assembly wire harness.
- 5. Remove the two ¼-in. hex-head screws that attach the light housing to the oven liner.

6. Carefully pull the light assembly and wire harness from the oven liner.



#### Note:

- Upon reassembly, ensure displaced insulation around the wiring entry hole is returned to its original position.
- There is a gasket placed between the light assembly and the oven cavity. Be sure to install the gasket to its original location.

### **Oven Light Bulbs**

**Caution**: Before replacing your oven light bulb, disconnect the electrical power to the range at the main fuse or circuit breaker panel.

**Note:** The glass cover should be removed only when cold. Wearing latex gloves may offer a better grip.

#### To remove a light bulb:

Turn the glass cover counterclockwise 1/4 turn until the tabs of the glass cover clear the grooves of the socket.



Using gloves or a dry cloth, remove the bulb by pulling it straight out.



#### Right Side Upper Oven Light

To replace a light bulb, use a new 130-volt halogen bulb, not to exceed 50 watts.

#### Note:

- Higher wattage bulbs will damage your oven.
- Using gloves or a dry cloth, remove the bulb from its packaging. Do not touch the bulb with bare fingers. Oil from bare fingers may cause hot spots on the glass surface and lead to premature failure of the bulb. If you do touch the glass, clean it with alcohol prior to installation.
- 1. Push the bulb straight into the receptacle all the way.
- 2. Place the tabs of the glass cover into the grooves of the socket. Turn the glass cover clockwise 1/4 turn.

**Note:** For improved lighting inside the oven, clean the glass cover frequently using a wet cloth. This should be done when the oven is completely cool.

3. Reconnect electrical power to the oven.

#### **Door Switch**

Each oven utilizes a door switch located on the left side of the door frame that is accessible from the front. Each oven door switch monitors the position of the oven door and provides this information to the oven's control board. The procedure to remove each door switch is identical.

#### To remove the door switch:

- 1. Disconnect power to the range.
- 2. Pull the switch forward to locate the ends of two spring clips (one on each side).



- 3. Insert a small flat-blade screwdriver on one of two spring clips and depress the spring clip while pulling the switch from the door frame.
- 4. Insert the small flat-blade screwdriver on the other spring clip, depress the spring clip, and continue pulling the switch from the door frame.
- 5. Disconnect the door switch wire harness.



#### Lower Oven Door Hinge Receiver

Each lower oven door hinge receiver is attached to the frame with two T-15 Torx screws. To replace it requires removing the side access panel (See *Side Panel Removal.*), then lifting the insulation from the outside of the oven.



**Note:** Upon reassembly, ensure displaced insulation around oven and components is returned to its original position.

#### Upper Oven Door Hinge

Each upper oven door hinge is attached to the frame with two T-20 Torx screws. To replace it requires removing the upper oven door (See *Upper Oven Door Assembly*.), then removing the side panel (See *Side Panel Removal*.).



#### **Cooktop Lockout Relay**

When an oven is set to Self Clean, the cooktop controls will lock out. The cooktop cannot be used when an oven is set to Self Clean.

The cooktop lockout relay is attached to the back of the range with two ¼-in. hex-head screws. To replace it requires removing the rear cover. (See *Rear Cover Removal*.) Mark and disconnect wires from the relay.



## **Oven Components**

#### Upper Oven Control Board

To remove the upper oven control board:

1. Remove the rear cover. (See Rear Cover Removal.)

**Note**: In the following step, do not remove the relay jumper wire (orange wire) or the wire harness wiring from the control board.

- Disconnect the control board wire harness and remove the connectors at board locations J7, J16, and J17.
- 3. Remove the 5 Phillips-head screws that attach the board to the frame.
- 4. Transfer the relay jumper wire and the control board wire harness to the replacement board.



#### **Oven Temperature Sensor**

The oven temperature sensor has a resistance of:

- 1091  $\Omega$  at room temperature
- 1654 Ω at 350°F
- 2634  $\Omega$  at 865°F (Clean temperature)

The oven temperature sensor has a resistance change rate of 2  $\Omega$  per °F.

To remove the oven temperature sensor:

- 1. Disconnect power.
- 2. Remove rear cover. (See Rear Cover Removal.)
- 3. Disconnect the sensor wire harness.



- 4. Remove oven racks.
- 5. Remove the two ¼-in. hex-head screws that attach the sensor to the broiler element bracket.



6. Carefully pull the sensor and sensor wiring harness from the oven liner.

Note: When reinstalling the sensor, use a small flatblade screwdriver to push and guide the sensor wire harness into the oven liner.



#### **Broil Element**

- The broil element is composed of an inner and an outer (broil boost) element. It is replaced as one unit.
- The outer (broil boost) element will be energized when BROIL is selected and less than 3 surface units are in operation. Once the third surface unit is turned on, broil boost will be deenergized.
- The broil elements will not work if the temperature probe is plugged in.
- The broil element is located on the back wall of the oven. The oven sensor must be removed to access the broil element.

Broiler Element Ratings*			
Element	Wattage	Resistance	Amps
Upper oven outer element	500	115.2 Ω	2.1
Upper oven inner element	2500	23 Ω	10
Lower oven outer element	950	60.6 Ω	3.75
Lower oven inner element	2650	21.7 Ω	10.5

\*Ratings are approximate.

#### To remove the broil element:

1. Remove the sensor. (See *Oven Temperature Sensor*.)

**IMPORTANT:** The lower wattage outer element utilizes  $\frac{3}{16}$ -in. terminal connections. The higher wattage inner element utilizes  $\frac{1}{4}$ -in. terminal connections.

2. Disconnect the wires from the broiler element.



3. Remove the seven ¼-in. hex-head screws (upper oven) or the five ¼-in. hex-head screws (lower oven) that hold the broiler to the top of the oven cavity.

#### Upper Oven





4. Carefully pull, then lower the broiler element towards the front of the oven.

**Note:** There is a gasket placed between the element bracket and the oven cavity. Be sure to install the gasket to its original location.

#### **Convection Element**

- The element is rated at 2500 watts, has an approximate resistance value of 23 Ω, and draws approximately 10 amps.
- The convection bake element is located on the back wall of the lower oven and can be removed from inside the oven cavity.

The convection element operates during the following modes:

- Preheat
- Convection Bake
- Convection Roast
- Clean
- To remove the convection bake element:
- 1. Remove oven racks.
- 2. Remove the four ¼-in. hex-head screws that hold the convection cover to the back wall of the oven cavity.



3. Remove the four ¼-in. hex-head screws that hold the convection element to the back wall of the oven cavity.



4. Carefully pull the convection element towards the front of the oven until the element terminals are accessible.



5. Disconnect the wires from the convection element.

**Note**: There is a gasket placed between the element bracket and the oven cavity. Be sure to install the gasket to its original location.

#### **Convection Fan Assembly**

The convection fan assembly is located on the back wall of the oven cavity and consists of the convection cover, fan blade, and motor. The fan motor utilizes a capacitor that can be accessed from the back of the range. (See *Component Locator Views*.) The convection fan assembly can be removed from the back of the range.

The convection fan operates during the following modes:

- Preheat
- Convection Bake
- Convection Roast

The convection fan will turn on (after a short delay). The fan may cycle on and off, and change direction in any of these modes, to best distribute hot air in the oven. The convection fan shuts off when the door is opened.

#### **Convection Airflow**



The convection fan motor has approximate resistance values between the following wires:

- Red and Blue: 174  $\Omega$
- Red and Gray: 78  $\Omega$
- Blue and Gray: 96  $\Omega$

# To remove the convection fan and motor assembly:

- 1. Remove oven racks.
- 2. Remove the four ¼-in. hex-head screws that hold the convection cover to the back wall of the oven cavity.

**Note:** The fan blade is attached to the "D" shaped motor shaft with a left-hand thread 13-mm. hex-nut. Turn the nut clockwise to remove.

3. Remove the fan blade nut.



4. Pull the fan blade off the "D" shaped motor shaft.

**Note:** Do not remove the 2 Phillips-head screws from the back wall of the oven cavity.



- 5. Remove the rear cover. (See *Rear Cover Removal*.)
- 6. Disconnect the fan motor wire harness.
- 7. Remove the three ¼-in. hex-head screws that hold the convection fan motor to the range.



#### Upper Oven Bake Element

- The element is rated at 2500 watts, has an approximate resistance value of 23 Ω, and draws approximately 10 amps.
- The bake element is located on the oven floor and can be removed from inside the oven cavity.

The upper oven bake element is attached to the inside of the oven cavity with two ¼-in. hex-head screws. After removing the screws, the element can then be carefully pulled out from the back wall of the cavity and the 2 wires disconnected.

**Note:** There is a gasket placed between the element bracket and the oven cavity. Be sure to install the gasket to its original location.

#### Lower Oven Bake Element

- The element is rated at 2650 watts, has an approximate resistance value of 21.7 Ω, and draws approximately 13.6 amps.
- The bake element is located under the oven floor. The bake element terminals are located behind the left side access panel.

#### To remove the lower oven bake element:

- 1. Disconnect power to the range.
- 2. Remove the range from the installation, then remove the left side panel. (See *Side Panel Removal.*)
- 3. Disengage the bottom hooks of the wire insulation retainers from the frame of the range.



4. Using rubber gloves to protect your hands, carefully grasp the insulation which covers the side of the range and roll it upwards to the top of the range.

5. Tuck the insulation up under the 2 wire insulation retainers.



- 6. Disconnect the two wires from the bake element terminals.
- 7. Remove two ¼" hex-head screws securing the ground wire and the bake element to the frame of the range.



8. Grasp the bake element on both sides and gently pull it towards you as you remove it from the frame.



### Meat Probe and Outlet (PB975)

The lower oven is equipped with a meat probe outlet. The meat probe outlet is connected to the lower oven control board in the control compartment at location J6. The meat probe has a resistance value of  $30K-50K \Omega$  at room temperature.

The probe outlet is accessed through a cutout near the front right side of the broiler shield.



The probe outlet is held in place with two  $^{1\!\!/}_{4}\-$  in. hexhead screws.



After removing the two ¼-in. hex-head screws, the outlet and wiring can then be pulled down from the oven wall approximately 3 inches.

Note: When replacing the meat probe outlet, cut the probe wires and splice the new probe using approved heat resistant connectors.



**Note:** Upon reassembly, ensure displaced insulation around oven and components is returned to its original position.

#### Vent Tube/Smoke Eliminator

Each oven is equipped with an oven vent tube and a smoke eliminator. The vent tube and smoke eliminator for the upper oven are located on the top left rear corner of the oven cavity above the broiler element. The vent tube and smoke eliminator for the lower oven are located at the right rear top corner of the oven cavity. Air vented from the oven cavity will pass through the catalyst, then enter the vent tube to be exhausted under the bottom of the control panel.

## To remove the upper oven vent tube and smoke eliminator:

- 1. Remove the upper oven broil element. (See *Broil Element*.)
- 2. Remove the cooktop. (See Cooktop Assembly.)
- 3. Carefully cut, then remove the insulation that covers the upper oven vent tube.



4. Remove the 2 hex-head screws that attach the vent tube to the top of the oven liner.

5. Remove the ¼-in. hex-head screw that holds the vent tube to the rear of the range.



6. Grasp and carefully remove the vent tube from under the insulation retaining wire.





7. Compress and push up the 4 tabs that lock the smoke eliminator to the top of the oven cavity.



(Continued next page)

Note: It is not necessary to remove the lower oven vent tube to remove the lower oven smoke eliminator.

To remove the lower oven vent tube, it is necessary to remove the rear cover. (See *Rear Cover Removal.*) The lower oven vent tube is held to the back of the range by a ¼-in. hex-head screw.



The lower oven smoke eliminator is attached to the oven cavity by two ¼-in. hex-head screws.



#### **Upper Oven Liner**

#### To remove the upper oven liner:

- 1. Disconnect power to the range.
- 2. Remove the range from its installation.
- 3. Remove the cooktop. (See Cooktop Assembly.)
- 4. Remove the rear and side panels. (See *Rear Cover Removal* and *Side Panel Removal*.)
- 5. Disconnect the wire harness from the door switch.
- 6. Remove the upper oven lock assembly. (See *Lock Assembly*.)
- 7. Disconnect the 2 wire harnesses to the upper lights.
- 8. Disconnect the sensor wire harness.
- 9. Remove wires from the upper oven bake and broil elements.
- 10. Remove the two ¼-in. hex-head screws that secure the liner to the rear wall of the range.
- 11. Using a flat-blade screwdriver, push upwards while pushing forward on the 2 metal hooks and disengage them from the back wall of the range.



- 12. Release and remove the insulation retaining hooks from each side of the lower frame.
- 13. Carefully lift and remove the insulation covering the liner.
- 14. Remove the two ¼-in. hex-head screws that hold the vent to top of liner. (See *Vent Tube/ Smoke Eliminator.*)
- 15. Remove the 5 screws and the clamp that hold the front of the liner to the oven frame.



16. Carefully slide oven liner from frame.

### **Control Panel Assembly**

#### **Glass Touch Panel**

The glass touch panel and touch board will be supplied as a complete assembly. If the glass is damaged or the touch board is defective, the glass touch panel assembly will have to be replaced. The glass touch panel must be removed to replace the tri-ring burner size switch and the warmer switch.

The glass touch panel assembly is attached to the front of the control panel.

#### To remove the glass touch panel:

**Caution**: To prevent electrostatic discharge that can damage electronic controls, ground yourself to the range frame or use an ESD wristband.

- 1. Place a protective cover on the main top.
- 2. Remove all control panel knobs.



3. Remove the 4 glass touch panel retainer nuts that hold the glass touch panel to the control panel.



4. Disconnect the 2 ribbon harness connectors from the glass touch panel.



#### **Control Panel**

The control panel contains the ERC, infinite heat switches, tri-ring burner size switch (PB975), and the warmer element switch.

#### To remove the control panel:

- 1. Pull the range out approximately 6 inches from the wall.
- 2. Loosen (do not remove) the two ¼-in. hex-head screws that hold the top of the control panel to the range.



**Rear View** 

- 3. Place a protective cover on the main top.
- 4. Using a stubby or off-set Phillips-head screwdriver, remove the 2 inverted screws that attach the bottom of the control panel to the range.



5. Grasp the control panel and pull the bottom out then lift the panel off the top 2 screws.



6. Place the control panel in the service position.



Service Position

#### Surface Unit Infinite Switches

#### To remove the surface unit infinite switch (1 of 4):

1. Pull out the knob, then loosen and remove the retainer nut from the switch to be removed.



2. Remove and capture the 2 Phillips-head screws that hold the threaded retainer nut mount and the infinite switch to the control panel. Slide the crystal mount off the shaft.



- 3. Place the control panel in the service position. (See *Control Panel*.)
- 4. Mark and remove the infinite switch wiring.
- 5. Remove the infinite switch from the control panel.



# Tri-Ring Burner Size Switch (PB975)/Warmer Switch

To remove the tri-ring burner size switch (PB975)/ Warmer switch:

- 1. Remove the glass touch panel. (See *Glass Touch Panel*.)
- 2. Remove the 14-mm nut that holds the burner size switch or the 2 Phillips-head screws that hold the warmer switch to the control panel.



- 3. Place the control panel in the service position. (See *Control Panel*.)
- 4. Mark and remove the burner size switch wiring or the warmer switch wiring.
- 5. Remove the burner size switch or the warmer switch from the control panel.



#### **Element On Indicator Lights**

The element on indicator lights are inserted in the control panel and held in place with 2 lock tabs. Access the lights by removing the glass touch panel (See *Glass Touch Panel.*), then placing the control panel in the service position (See *Control Panel.*).

### Electronic Range Control (ERC) Assembly

The electronic range control (ERC) assembly is located inside the control panel and consists of a display board that plugs into the lower oven control board. Both boards are installed in a frame attached to the control panel.

#### To remove the ERC assembly:

1. Place the control panel in the service position. (See *Control Panel*.)

Note: In the following step, do not remove the relay jumper wires attached to the lower oven control board or the model selector harness attached to the display board. (See *Control Boards Connector Locator Views*.)

2. Mark and disconnect the wire harnesses, ribbon connectors, and the wiring from the range to the ERC assembly.



3. Remove the 4 Phillips-head screws that attach the ERC assembly frame to the control panel.



4. Remove the ERC assembly from the control panel and place it display side up on a protective surface.

**Caution**: The screws that attach the display board are slightly longer than the screws that attach the control board. To avoid damage to the ERC assembly, install screws in their original locations.

5. Remove the 7 Phillips-head screws that attach the display board to the ERC assembly frame.



**Note:** The display board is connected to the control board utilizing an 8-pin plug located between the boards.

6. Pull the display board straight out from the control board.



7. Turn the frame over and remove the 5 Phillipshead screws that attach the control board to the ERC frame.



**Note:** If replacing the ERC, transfer the model selector harness to the replacement ERC in the same location as on the original.

#### **Radiant Heating Elements**

The radiant heating elements consist of spiralwound resistance wire attached to micro porous insulation with molded ceramic fiber walls in a corrosion protected metal tray. A thermal limiter is attached to the tray.

The thermal limiter is a temperature limit/hot light switch attached to the heating element tray. The glass tube and metal rod extend across the center of the element. The rod's expansion and contraction operate the contacts inside the switch.

The temperature limit/hot light switch performs two functions:

- 1. Turns on the HOT LIGHT when the glass tube and metal rod temperature exceeds 150°F. The hot light will remain on until the glass tube and metal rod temperature has cooled below 150°F (even after the surface unit switch has been turned off).
- Detects when the glass temperature above a unit has exceeded its limit of approximately 1031°F and disconnects power to that unit. When the glass temperature cools below 1031°F, the unit will turn back on. The temperature limit/hot light switch cannot be calibrated.

Note: A surface unit pilot (element on indicator) light, located over the top of each surface unit selector knob, will turn on immediately when the surface unit is turned on. The light will remain on until the surface unit is turned off. The heating elements operate using 240 VAC and come in various sizes:

- 6"
- Tri-ring (Triple 6", 9", and 12")
- Bridge
- Warming Zone

Surface Element Ratings* - Model PB975			
Element	Wattage	Resistance	
RR	1500	38.4 Ω	
Tri-ring	3000	19.2 Ω	
Tri-ring-6"	1050	54.9 Ω	
Tri-ring-9"	900	64 Ω	
Tri-ring-12"	1050	54.9 Ω	
Bridge - both elements	2600	22.2 Ω	
Bridge - center element	800	72 Ω	
LR	1800	32 Ω	
Warmer	120	443 Ω	

\*Ratings are approximate.

Surface Element Ratings* - Model PB970			
Element	Wattage	Resistance	
RR	1500	38.4 Ω	
RF - both elements	3000	19.2 Ω	
RF - inner element	1950	29.5 Ω	
LF - both elements	2500	23 Ω	
Inner element	1000	57.6 Ω	
LR	1500	22.2 Ω	
Warmer	120	443 Ω	

\*Ratings are approximate.

#### To remove a radiant heating element:

1. Remove the cooktop assembly. (See *Cooktop Assembly*.) Place the cooktop upsidedown on a protective surface.

**Caution**: Routing of the wires is extremely critical. Care must be taken to ensure the wires are routed exactly the way they were originally.

2. Mark and remove the wires to the element.

Note the location and orientation of the element to its target location on the cooktop. Mark the location of the retention springs where they attach to the element.

3. Remove the Phillips-head screws and release the retention springs that hold the element to the cooktop.



**Note:** When installing a radiant element, make sure the element is firmly pressed against the glass and aligned in the target area.

#### Hot Surface Indicator Light Assembly

The hot surface indicator lights are contained in an assembly located under the cooktop.

Each hot surface indicator light is controlled by the thermal limiter attached to the radiant element. (See *Radiant Heating Elements*.)

The hot surface indicator light assembly is held to the underside of the cooktop with 2 notches on the left side and 2 tabs on the right side of the assembly.

To remove the hot surface indicator light assembly, it is necessary to raise and support the cooktop (See *Cooktop Assembly.*), and to mark and disconnect the wiring from the assembly. The assembly can then be released by using a small flat-blade screwdriver to press the 2 tabs towards the center of the assembly while lifting the right side of the assembly out of the cooktop.



#### Wire to Terminal Location



#### Lock Assembly

A motorized door lock assembly is located above each oven, and they are identical. The assembly consists of a lock motor and switch assembly, cam, lock hook, heat barrier, and mounting plate.

The lock motor is energized when the control is set for clean and clean time selected. The K1 relay contact will close and complete the circuit that supplies the voltage to the lock motor.





**Note:** Display of control will flash "LOCK DOOR" if the door switch is in the "C" to "NC" position (door open).

- The word "LOCKED DOOR" will flash on and off in the display while the lock motor is in motion. When the door is locked, the word "LOCKED DOOR" remains illuminated in the display.
- CAM The cam on the motor performs two functions:
- 1. Positions the lock hook in the door to prevent opening during clean operation.
- 2. Operates the lock switches which tell the control if the door is unlocked or locked and ready for clean operation.

Note: When the door is either being locked or unlocked, both lock switches will be in the open position.

The upper oven latch is controlled by the upper oven relay board located on the back of the range.

The lower oven latch is controlled by the ERC/lower oven control board located in the control panel assembly.

#### Door Locked

Hook Pulled In - Top Switch Closed -Bottom Switch Open





#### Door Unlocked

Hook Pushed Out - Top Switch Open - Bottom Switch Closed





#### Upper Oven Door Lock Assembly

#### To remove the upper oven door lock assembly:

Note: If only the lock motor and switch assembly and/or cam has failed, it may not be necessary to remove the door lock assembly from the range. It is possible to transfer these parts from a new door lock assembly. Verify proper operation of the lock assembly after transferring these parts.

- 1. Remove the rear cover. (See Rear Cover Removal.)
- 2. Open the upper oven door and remove the two ¼-in. hex-head screws that hold the front of the cooktop to the top brace.



3. Raise and support the cooktop.

**Caution**: To prevent damage to the cooktop or the control panel, do not raise the cooktop more than 45 degrees.

4. Remove the ¼-in. hex-head ground screw, ground wire, and the wire retainer from the mounting plate.



5. Remove the six ¼-in. hex-head screws that attach the top brace to the range. Remove the brace.



6. Remove the two T-15 Torx screws (first 300 units produced used ¼-in. hex-head screws) that attach the front of the mounting plate to the frame.



**Caution**: It is possible to reconnect the switch wiring incorrectly to the lock assembly. When reconnecting the wiring, make sure it is properly connected to the lock assembly before turning the power back on.

- 7. Disconnect the lock motor wire harness and mark and disconnect the switch assembly wire harnesses.
- 8. Remove the ¼-in. hex-head screw that attaches the lock assembly to the rear of the range.



9. Grasp the rear of the lock assembly. Lift and rotate it approximately 40 degrees clockwise and pull it out approximately 1 inch.



10. Lift the front of the mounting plate and guide it through the opening located under the rear of the cooktop.



#### Lower Oven Door Lock Assembly

Note: If only the lock motor and switch assembly and/or cam have failed, it may not be necessary to remove the door lock assembly from the range. It is possible to transfer these parts from a new door lock assembly. Verify proper operation of the lock assembly after transferring these parts.

The lower oven door lock assembly is located between the insulation blankets of each oven liner. It may be necessary to remove the upper oven liner to replace the lower oven door lock assembly. If necessary, remove the upper oven liner (See *Upper Oven Liner.*), then follow steps 3 and 5 through 9. (See *To remove the upper oven door lock assembly.*)

#### **ERC Failure Codes**

The ERC (electronic range control) has error (F) codes that can be utilized by the service technician in order to quickly identify failed or improper operation of certain oven components. The oven may stop operating but not give an F code on the display immediately. A fault must exist continuously for 5 minutes before an F code is recorded (F2, F8 are sooner). F codes are stored in nonvolatile EEPROM memory until the same fault occurs twice consecutively.

To access failure codes, simultaneously press the upper oven Start and Timer/Clock pads. Upper oven sensor codes appear on the left side and lower oven sensor codes appear on the right side of the display. To clear codes, press upper oven Cook Time and upper oven Delay Start. To exit failure code mode, press upper oven Start pad.

FAILURE CODE	MEANING	CORRECTION
FO	Open OFF key Supervisor jumper (there are 2)	<ul> <li>Open wire or terminal within keypad harness</li> <li>Bad solder on crystal mounted keypad board.</li> </ul>
F2	Over temperature Inside oven cavity as measured by sensor over 650°F unlatched or 915°F latched	<ul> <li>Welded relay contacts</li> <li>High resistance in oven sensor leads/connectors (especially at sensor in rear)</li> </ul>
F3	Open oven sensor (over 2950 ohms)	<ul> <li>Disconnect power.</li> <li>Disconnect sensor harness from control. Measure sensor resistance (white leads) to be ~ 1080 ohms at room temperature with 2 ohms per degree change.</li> <li>Look for damaged harness terminals if not bad sensor.</li> </ul>
F4	Shorted oven sensor (under 950 ohms)	<ul> <li>Disconnect power. Disconnect sensor harness from control. Measure sensor resistance (white leads) to be ~1080 ohms at room temperature with 2 ohms per degree change.</li> <li>Separate sensor from harness to determine fault.</li> </ul>
F7	Shorted key	Determine if problem is with Key Panel or Control by disconnecting keypad cable and power up control. If no, F7 code problem is with key circuit.
F8	EEPROM data shift failure	If repeated, replace control.
FF	Loss of latch motor safety circuit	Replace control.

#### Key Panel Test

To test the operation of the key panel:

- 1. Touch each pad on the Key Panel. (See *Control Features*.)
- 2. If the Key Panel is functioning properly the following should occur:
- Bake, Broil, Convection Bake, Convection Roast, Clean, Timer, Clock, Slow Cook, Pizza, Help, Stop Time, and Cook Time Modes–Audible tone plus display showing mode of operation selected.
- Clear/Off-Audible tone and display shows time of day.
- Number pads can only be used after another function has been selected.

#### **ERC-Control Voltage**

**Note:** Mode and temperature selection is necessary for operation of relay contacts. This model incorporates Double Line Break, meaning there is no voltage on the elements when the control is in standby.

		PB 975		
Terminals on ERC (element terminals are on top of large relays)	Voltage, standby	Voltage, Broil mode active (either oven)	Voltage, Bake Upper Oven	Voltage, Bake Lower Oven
	no relays should be energized in standby	only broil and DLB relay activate	While preheating: Broil (~120 sec.), then Bake (~60 sec.), then	While preheating: Broil (~120 sec.), then Conv (~120 sec.), then Broil (~60 sec.), then Bake (~100 sec.), then
J20 (pin 1 to pin 3)	120V (if not, harness may be bad)*			
J14 to J11	120V (if not, harness may be bad)*			
J14 to J20 (red wire)	240V (if not, harness may be bad)*			
J14 to Broil (violet wire on K3)		~0VAC	~0VAC (Broil on), ~240VAC (Broil off)	~0VAC (Broil on), ~240VAC (Broil off)
J14 to Conv (blue wire on K10, upper control only)		~240 VAC	N/A	~0VAC (Conv off), ~240VAC (Conv on)
J14 to Bake (yellow wire on K7)		~240VAC	~240VAC (Bake off), ~0VAC (Bake on)	~0VAC (Bake off), ~240VAC (Bake on)
J14 to DLB (orange wire on K14)		~240VAC	~240VAC	~240VAC

\* These wires supply the main power to the control. Check harness if these voltages are not present.

Wires on 12 pin connector below small relays		
Brown to White	0 ohms when OVEN LIGHT is on	
Blue to J11	120V when convection fan turns CW	L1 (K13)
Black jumper to J11	120V whenever convection fan is on	
Red to J11	120V when convection fan turns CCW	
Violet and white		
to J11	120V when broil element is on	BR WH BU R PR+W PR BK
Violet to J11	120V when CONTROL LOCK is on	BK
Black to J11	120V when oven door latch is activated	

Terminals on ERC (element terminals are on top of large relaus)	Voltage, standby	Voltage, Broil mode active (either oven)	Voltage, Bake Upper Oven	Voltage, Bake Lower Oven
	no relays should be energized in standby	only broil and DLB relay activate	While preheating: Broil (~120 sec.), then Bake (~60 sec.), then	While preheating: Broil (~120 sec.), then Bake (~60 sec.) then
J20 (pin 1 to pin 3)	120V (if not, harness may be bad)*			
J14 to J11	120V (if not, harness may be bad)*			
J14 to J20 (red wire)	240V (if not, harness may be bad)*			
J14 to Broil (violet wire on K3)		~0VAC	~0VAC (Broil on), ~240VAC (Broil off)	~0VAC (Broil on), ~240VAC (Broil off)
J14 to Bake (yellow wire on K7)		~240VAC	~240VAC (Bake off ~0VAC (Bake on)	, ~0VAC (Bake off) ~240VAC (Bake on)
J14 to DLB (orange wire on K14)		~240VAC	~240VAC	~240VAC

\* These wires supply the main power to the control. Check harness if these voltages are not present.

Wires on 12 pin connector below small relays	
Brown to White	0 ohms when OVEN LIGHT is on
Violet to J11	120V when CONTROL LOCK is on
Black to J11	120V when oven door latch is activated

#### **Oven Circuits**

BAKE/TIME BAKE–Bake, broil and convection elements cycle during preheat with one element on at a time. The convection fan also operates while preheating and will turn off once the set temperature is reached. Once bake preheat temperature is reached, the bake and broil elements cycle for the balance of the bake operation with one element on at a time.

CLEAN–Broil unit only on during first 30 minutes or until sensor reaches 750°F. During balance of clean, oven will cycle between bake and broil units.



#### **Element Strip Circuits With Power Applied**



Symptom	Possibility	Correction
Fan motor buzzes	Open capacitor	Harness, terminals or bad capacitor.
No fan operation	Open winding as indicated by ohm check red to black and blue to black. (approx. 60 ohms each)	Replace motor.
Fan loud	Loose shaft nut	Tighten shaft nut. Do not bend blade.
Fan loud	Convect cover screws loose or cavity screws	Tighten. Use larger screw if stripped.
No fan operation	Check voltage CCW to N when fan is counter- clockwise - should read 120VAC in Convection Bake. Also, CW to N when clockwise as indicated By ERC display.	<ul> <li>If no voltages, replace ERC.</li> <li>If voltages OK check harness or winding resistance.</li> </ul>
No fan operation	Shaft or blade rubbing on oven liner.	Loosen screws/readjust position/tighten.
No fan operation	Jamb switch NC to C is open.	Replace jamb switch or check harness.

#### Oven Sensor and Door Switch Test

Note: See Lock Assembly for door switch function explanation.

- 1. Remove power from oven.
- 2. Make resistance measurement from side of sensor and lock switch connector with exposed terminals.
- 3. The resistance measurements are made on the ERC with the control panel in the service position. (See *Control Panel*.) Test at connector J5 for the sensors and J16 for the lock switches. If abnormal reading is observed, wiggle leads at disconnect block. If any variation, replace.

COMPONENT TEST			
Circuit	Terminals	Ohms	
Upper Oven Sensor	3 to 4	1100 Ω @ Rm. Temp.	
Lower Oven Sensor	1 to 2	$2650 \Omega$ @ Clean Temp	
Door Latched	1 to 3 1 to 4	0Ω Open	
Door Unlatched	1 to 4 1 to 3	0Ω Open	



#### Door Locked



#### Door Unlocked



WARNING: Disconnect electrical power before servicing.

**Caution**: Label all wires prior to disconnection. Wiring errors can cause improper and dangerous operation. Verify operation after servicing.





- 72 -




## Warranty



All warranty service provided by our Factory Service Centers, or an authorized Customer Care® technician. To schedule service, on-line, 24 hours a day, visit us at ge.com, or call 800.GE.CARES (800.432.2737). Please have serial number and model number available when calling for service. Staple your receipt here. Proof of the original purchase date is needed to obtain service under the warranty.

## For The Period Of: GE Will Provide:

**One Year** From the date of the original purchase **Any part** of the range which fails due to a defect in materials or workmanship. During this *limited one-year warranty*, GE will also provide, *free of charge*, all labor and in-home service to replace the defective part.

## What GE Will Not Cover:

- Service trips to your home to teach you how to use the product.
- Improper installation, delivery or maintenance.
- Failure of the product if it is abused, misused, or used for other than the intended purpose or used commercially.
- Damage to the glass cooktop caused by use of cleaners other than the recommended cleaning creams and pads.
- Damage to the glass cooktop caused by hardened spills of sugary materials or melted plastic that are not cleaned according to the directions in the Owner's Manual.

- Replacement of house fuses or resetting of circuit breakers.
- Damage to the product caused by accident, fire, floods or acts of God.
- Incidental or consequential damage caused by possible defects with this appliance.
- Damage caused after delivery.
- Product not accessible to provide required service.

EXCLUSION OF IMPLIED WARRANTIES—Your sole and exclusive remedy is product repair as provided in this Limited Warranty. Any implied warranties, including the implied warranties of merchantability or fitness for a particular purpose, are limited to one year or the shortest period allowed by law.

This warranty is extended to the original purchaser and any succeeding owner for products purchased for home use within the USA. If the product is located in an area where service by a GE Authorized Servicer is not available, you may be responsible for a trip charge or you may be required to bring the product to an Authorized GE Service location for service. In Alaska, the warranty excludes the cost of shipping or service calls to your home.

Some states do not allow the exclusion or limitation of incidental or consequential damages. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state. To know what your legal rights are, consult your local or state consumer affairs office or your state's Attorney General.

## Warrantor: General Electric Company. Louisville, KY 40225