



TECHNICAL SERVICE GUIDE

30" Free-Standing Gas Range with "Gourmet Burner"

XL44 - "V" LINE MODELS

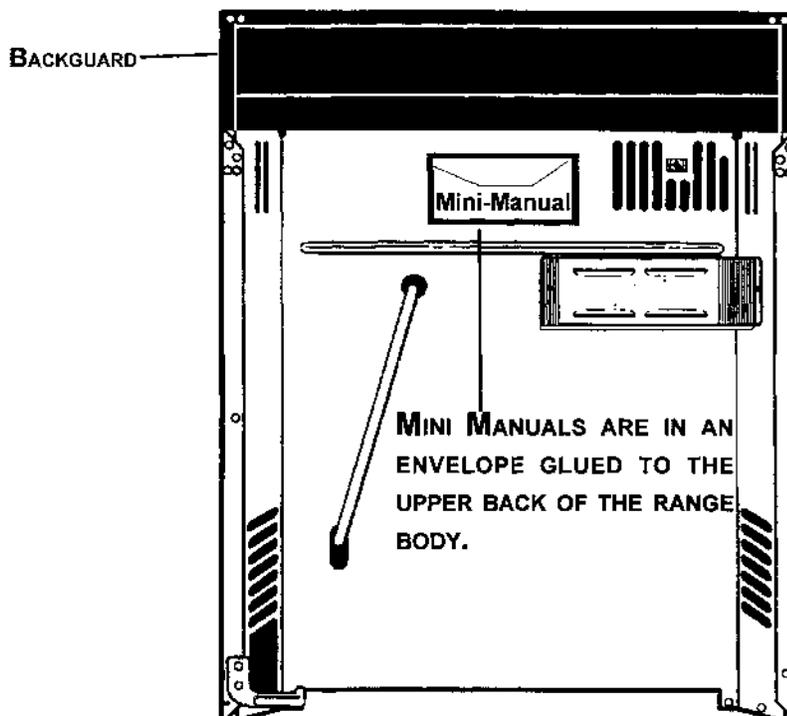


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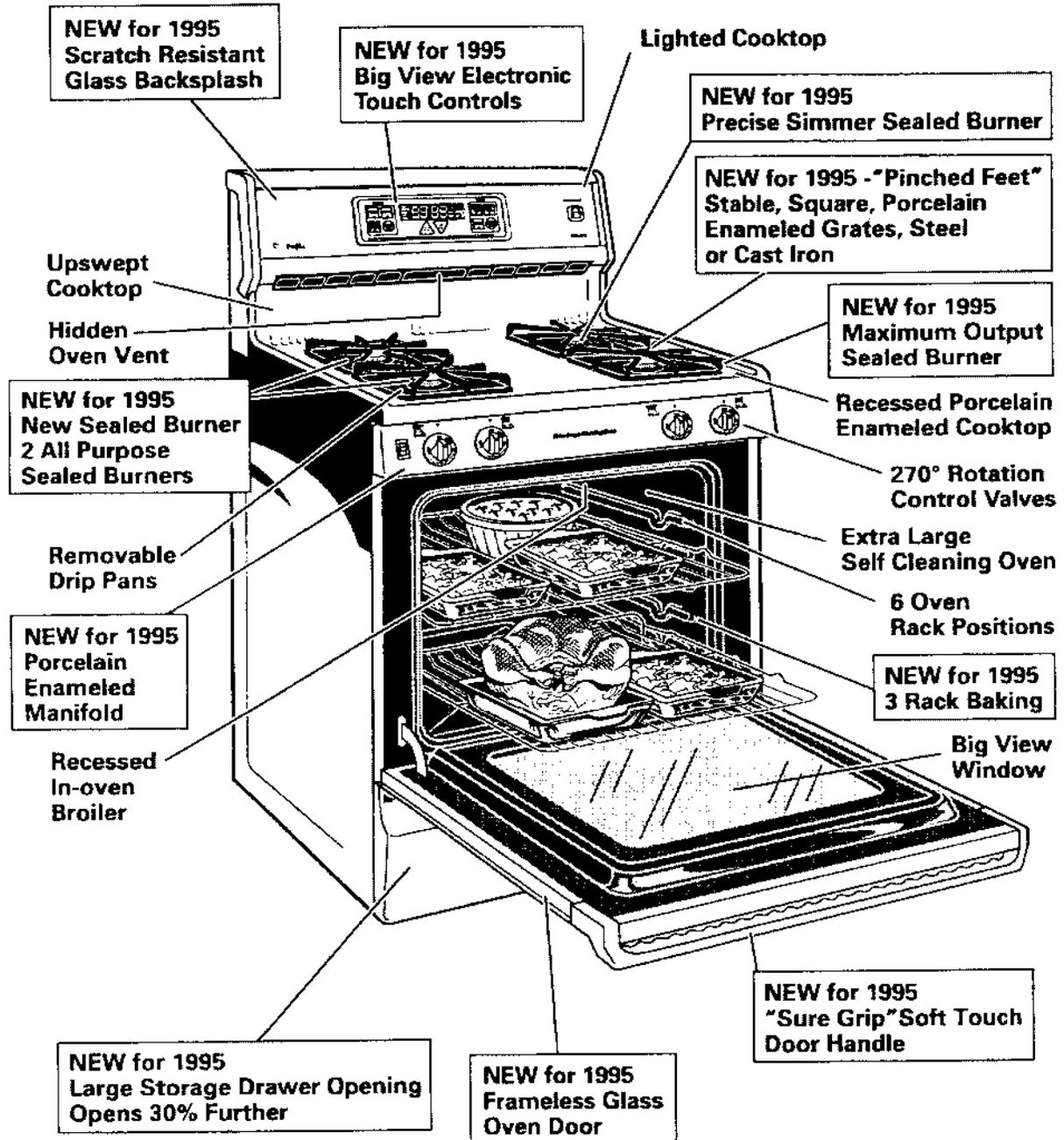
To update basic GAS knowledge see "GAS SYSTEMS" Pub. No. 31-1000

MINI MANUAL LOCATION ON 30" FREE-STANDING RANGES



GE XL44 "V" LINE OVERVIEW

PROFILE MODEL

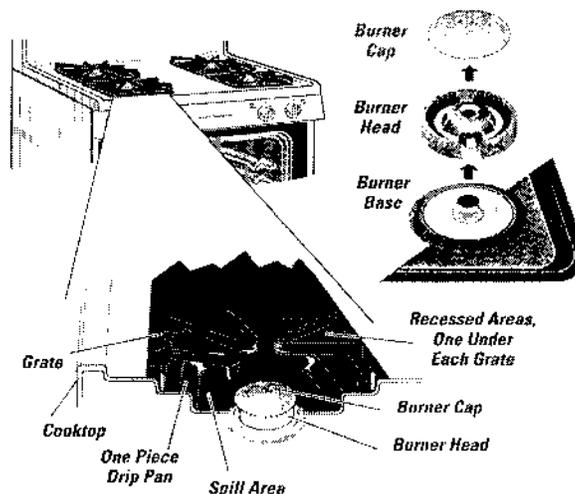


30" FREE STANDING GAS RANGE WITH "GOURMET BURNER"

GOURMET BURNER DESIGN

The new "Gourmet" spill proof burner design still carries on the tradition of the spill proof cooktop. Spills and boilovers are contained on the cooktop and stay out of the subtop. The recessed reservoir under each burner grate contains spills up to 32 ounces.

The burner head and burner cap are removable for easy washing in the sink. The burner head is constructed of stain and rust-resistant cast aluminum. The burner cap is cast iron with a procelain-enamel finish. No part of the New Gourmet burner is attached to the cooktop.



THREE BURNER TYPES:

SIMMER BURNER: (GE EXCLUSIVE)

- Designed for precise simmering the Simmer burner has an output of **5000 BTU** (natural gas) and a simmer rating of **600 BTU**. That's the lowest simmer setting of any other leading manufacturer's 30" freestanding range to date. This low simmer rate effectively melts chocolate and cooks white sauces without burning.

ALL-PURPOSE BURNER:

- These burners provide an output of **9500 BTU** (natural gas) for high temperature cooking such as frying with a simmer rate of **850 BTU** for simmering and warming.

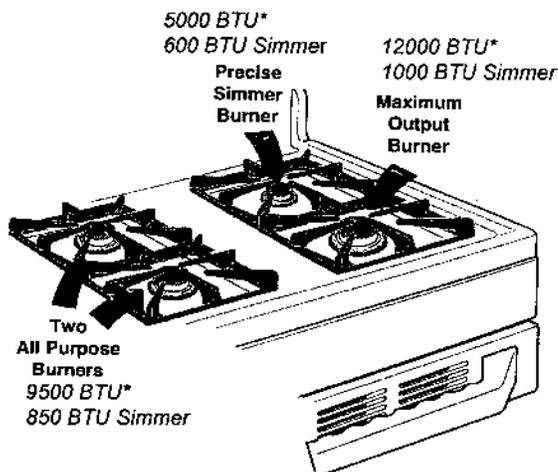
MAXIMUM OUTPUT BURNER:

- The Maximum output burner produces up to **12000 BTU** (natural gas) with a **1000 BTU** simmer rating. This burner combines maximum output for stir frying and quick boiling with a low simmer for a pot of soup, stew or chili.

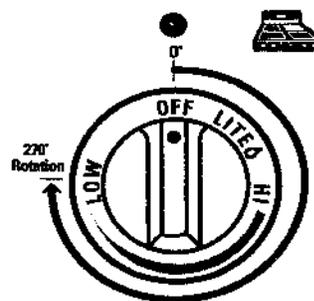
ALL FOUR "GOURMET" SEALED BURNERS, HAVE SIMMER CAPABILITIES.

Gourmet Burner Control Valve

All Gourmet Sealed Burners have a 270° rotation control valve. 270° valves allow precise, easy-to-set adjustments of the burner flame for the desired cooking performance.



* Natural Gas rating - see pg 5 for LP ratings and orifice sizes



30" FREE STANDING GAS RANGE WITH "GOURMET BURNER"

BURNER CONSTRUCTION

The Burner components beneath the range top rely on spring tension to hold them in place. The spring pushes the air/gas mixer tube up against the bottom of the range top. A flange around the air/gas mixer tube body is the mating surface between the range top and the air/gas mixer tube.

This mating surface serves several purposes:

- It keeps the alignment of the air/gas mixer tube straight so the gas is injected straight into the burner head.
- It serves as an electrical grounding path grounding the burner head to the range top. The path serves as ground for the spark electrode circuit.

BURNER ALIGNMENT

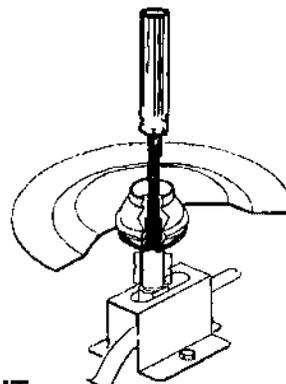
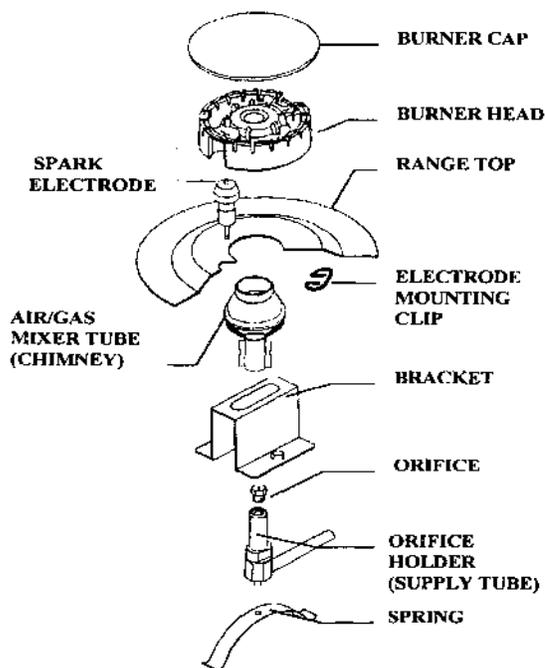
For proper operation of the burner, the alignment of the orifice holder, orifice and air/gas mixer tube **MUST** be correct.

The alignment can be checked by placing a 7 millimeter (mm) or 9/32" nutdriver over the orifice to exaggerate the angle (push down slightly to set the nutdriver over the orifice).

The nutdriver should stand straight up and down indicating the alignment and injection angle is correct. Angle adjustments can be made by carefully bending the supply tube (requires lifting the cooktop see p.6).

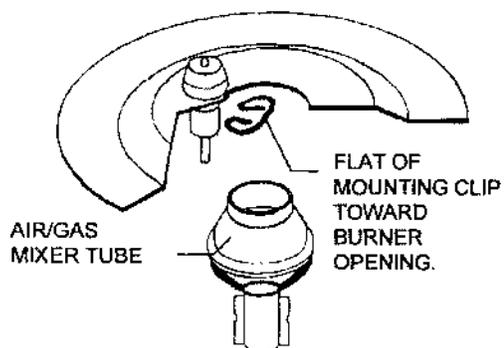
ELECTRODE MOUNTING CLIP

The Electrode Mounting Clip must be turned so the flat side of the clip is toward the burner. **If improperly positioned, the clip will be trapped between the air/gas mixer tube and the range top which will affect the mixer tube alignment.**



IMPORTANT:

MIS-ALIGNMENT WILL CAUSE AN UNEVEN FLAME AROUND THE BURNER HEAD.



30" FREE STANDING GAS RANGE WITH "GOURMET BURNER"

TOP BURNER ORIFICES

TOP BURNER ORIFICE IDENTIFICATION:

A series of marks (I, II, III) are engraved on the tops of the orifices to denote the location of the orifice as shown in the illustration.

The marks appear on both the Natural and LP gas orifices. The locations indicated by the marks are the same for both gases.

The orifice size and gas type are also engraved on the top of the orifice.

EXAMPLE: 1.75MM NATURAL GAS = 175N
.90MM LP GAS = 90L

BURNER BTU OUTPUT RATINGS

The BTU output of the surface unit will differ depending on the location, size of the burner and the type of gas the range is operated on.

The BTU rate of the burner is determined by the size of the opening in the orifice (spud) used with the burner.

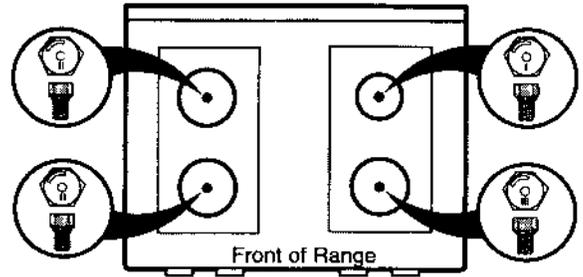
The Gourmet Spill Proof burner configuration uses 3 different orifices for Natural and LP installations.

- 1 - SIMMER BURNER, RR
Natural 5000 BTU/LP 3500 BTU
- 2 - ALL PURPOSE BURNERS, LF,LR
Natural 9500 BTU/LP 7000 BTU
- 1 - MAXIMUM OUTPUT BURNER, RF
Natural 12000 BTU/LP 9400 BTU

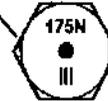
TOP BURNER ORIFICE REMOVAL:

The top burner orifices can be removed by removing the burner caps and burner heads. Use a 7 millimeter (mm) or 9/32" nutdriver to access the orifice through the burner air/gas mixer tube.

The orifices have spring loaded retaining rings around the hex head to hold the orifice in the nutdriver during installation and removal. A slight amount of force is required to push the nutdriver down over the ring.



BURNER OUTPUT RATINGS; BTU/HR		
NATURAL GAS, 4" WCP		
BURNER	BTU RATE	ORIFICE SIZE
LF	9500	1.52 MM (II)
LR	9500	1.52 MM (II)
RF	12,000	1.75 MM (III)
RR	5000	1.07 MM (I)
BAKE	16,000	#47 (.0785")
BROIL	12,000	#51 (.067")

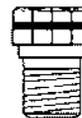


NATURAL GAS SURFACE ORIFICES ARE MARKED ON TOP AS SHOWN

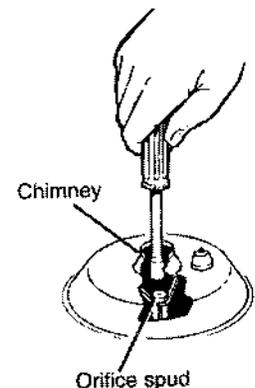
LP (PROPANE) GAS, 10" WCP		
BURNER	BTU RATE	ORIFICE SIZE
LF	7,000	.78L MM (II)
LR	7,000	.78L MM (II)
RF	9,400	.90L MM (III)
RR	3,500	.56L MM (I)
BAKE	16,000	#56 (.0465")
BROIL	12,000	#59 (.041")



LP GAS SURFACE ORIFICES ARE MARKED ON TOP AS SHOWN.



RETAINER RING



30" FREE STANDING GAS RANGE WITH "GOURMET BURNER"

TOP BURNER FLAME ADJUSTMENTS

The top burners do not have air shutters and the burners use fixed (non-adjustable) orifices. If the flames "blow off" the burner or has "yellow tips" check the following:

- Gas pressure: 4" natural, 10" LP
- Inspect the orifice to be sure it is drilled on center and free of debris or burrs.
- Be sure the correct size orifice is in the proper location (see "Orifice Identification" p.4)
- Make sure range was properly converted if on LP gas.
- Check the burner alignment per the "Burner Alignment" section (p.2).
- If the cause cannot be found in the above checks, replace the orifice with one having a smaller diameter opening as listed in the next column.

SMALLER ORIFICES FOR <u>NATURAL GAS</u>		
BURNER	SIZE	PART NUMBER
LF & LR	1.44 mm	WB06X0094
RF	1.65 mm	WB02X9841

SMALLER ORIFICES FOR <u>LP GAS</u>		
BURNER	SIZE	PART NUMBER
LF & LR	.73 mm	WB19K5006
RF	.84 mm	WB28K0022

LOW FLAME (SIMMER) ADJUSTMENTS

The top burner valves have low flame adjustment screws in the center of the control valve shafts. A flashlight may be required to locate the screw. A thin, flat blade screwdriver is needed to access the screw.

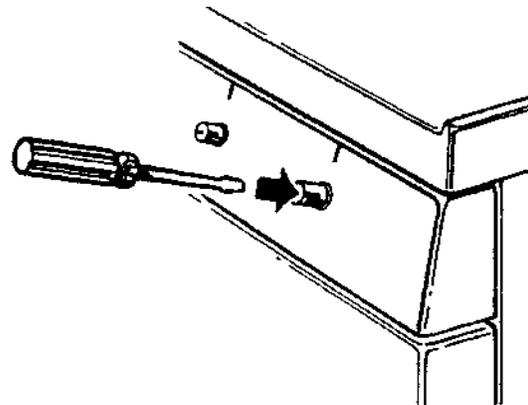
To ADJUST THE SIMMER SETTING ON THE BURNER:

- Light the burner and turn the knob to "LOW"
- Remove the knob and insert a screwdriver into the valve shaft.
- Turn the adjustment screw until the flame reaches the desired size
- Perform a flame stability test

TESTING FLAME STABILITY:

TEST 1 - Turn the knob from "HI" to "LOW" quickly. If the "LOW" flame goes out, increase the flame size and test again.

TEST 2 - With the burner on the "LOW" setting, open and close the oven door quickly. If the flame is extinguished by the air currents created by the door movement, increase the flame height and test again.



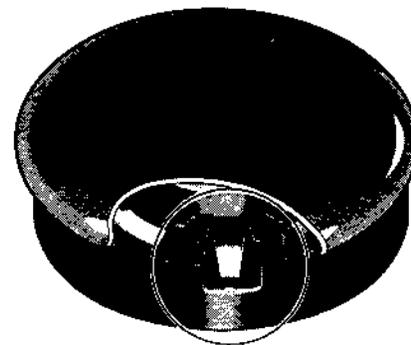
30" FREE STANDING GAS RANGE WITH "GOURMET BURNER"

FLAME STABILITY CHAMBER

The Gourmet burner has a "Flame Stability Chamber" located on the burner head opposite the Spark Ignitor chamber.

At a low setting the flame is susceptible to being blown out by a sudden draft from an open window, door, or even closing of the oven door.

Under most conditions, if there is a flame outage, re-ignition occurs because of a small pocket of flame within a protected chamber inside the burner head called the "Flame Stability Chamber."

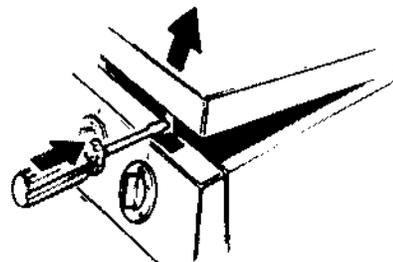


FLAME STABILITY CHAMBER

TO RAISE OR REMOVE COOKTOP

RAISING THE COOKTOP:

- Remove the burner grates, pans, caps and heads (lift off).
- Disengage 2 front "Spring Clips" using a flat bladed screwdriver (see illustration).
- Lift top up at the front and lock in front support rods.



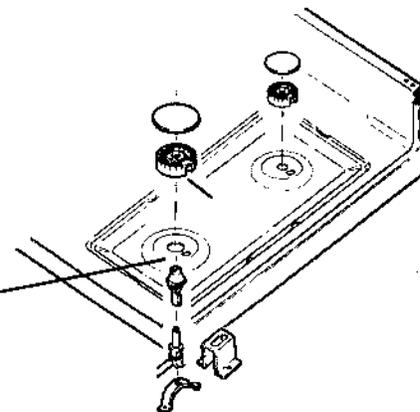
REMOVING THE COOKTOP:

- Perform the above steps under raising cooktop.
- Disconnect the 4 electrode leads.
- Disengage support rods from the range side panels.
- Lower top approximately 1/2 way down.
- Shift top left or right to disengage the hinge pins at the rear of the cooktop.

RE-INSTALLATION NOTES:

When re-installing the cooktop, position the top to be the equivalent of 1/2 way lowered before attempting to insert the top hinge pins into the corresponding slots on the backguard.

IMPORTANT: BEFORE LOWERING THE COOKTOP ONTO THE FRONT CLIPS, POSITION THE BURNER "AIR/GAS MIXER TUBES" (CHIMNEY) INTO THE BURNER OPENINGS IN THE TOP.



30" FREE STANDING GAS RANGE WITH "GOURMET BURNER"

ELECTRONIC SPARK IGNITION

The Sparking system works the same as it has in the past on spill proof models. The "Gourmet" Burner system consist of a spark module, 4 spark electrodes, and four spark switches.

SPARK MODULE LOCATION AND REMOVAL

The spark module is mounted on the back of the range as shown in the illustration. Two tabs are used to mount the module to the metal box.

Remove the spark module cover (metal box) by removing (2) 1/4" hex head screws that attach the metal box to the range back. To remove the spark module from its mounting, use a small, flat blade screwdriver to bend the mounting tabs, freeing the tabs from their corresponding slots.

On models with a flourescent light the ballast is also inside the spark module cover.

SPARK SWITCH LOCATION AND REMOVAL

A Spark Switch is mounted to the front of each of the 4 surface burner valves. To remove the Spark Switch:

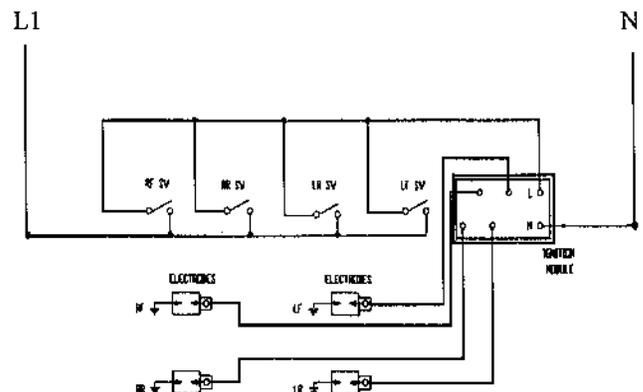
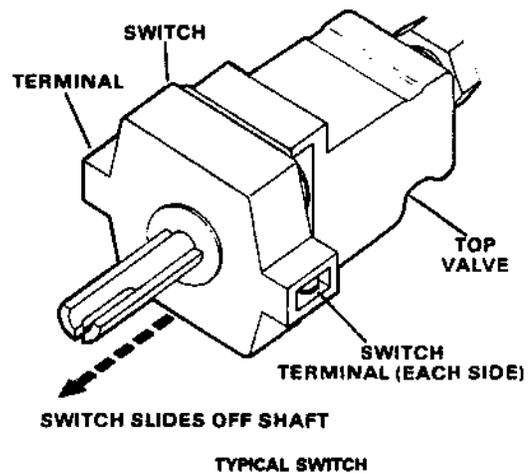
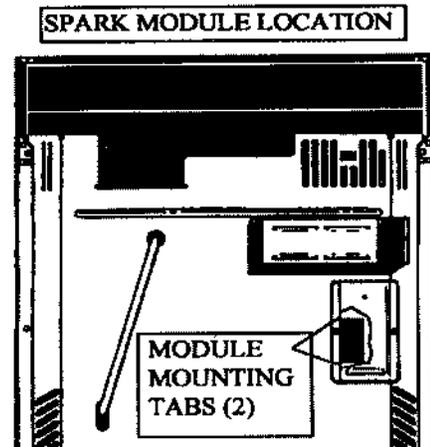
- Remove the 4 knobs
- Remove the screws that hold the manifold panel in place, (2) Phillips head screws in each corner at the top and (4) 1/4" hex head screws across the bottom.
- Remove the manifold panel
- Slide the switch off the burner control valve

Note: There is a retaining washer in the center of the spark switch that holds it snug to the valve. Slight forward pressure may be required to release the switch from the valve.

ELECTRONIC SPARK IGNITION OPERATION

When a valve is turned to the "LITE" position, the spark switch on the valve closes, completing a 120 volt circuit to the primary of the spark module.

The spark module transforms the 120 volt input voltage into a 15,000 volt DC output and releases this output in pulses at the rate of two per second.



30" FREE STANDING GAS RANGE WITH "GOURMET BURNER"

ELECTRONIC SPARK IGNITION OPERATION - CONTINUED

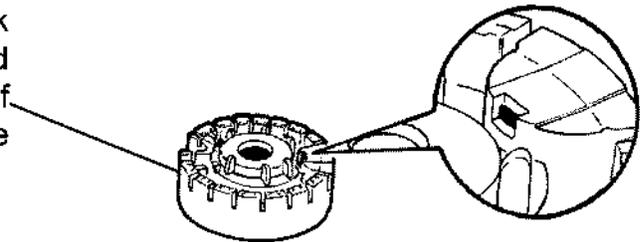
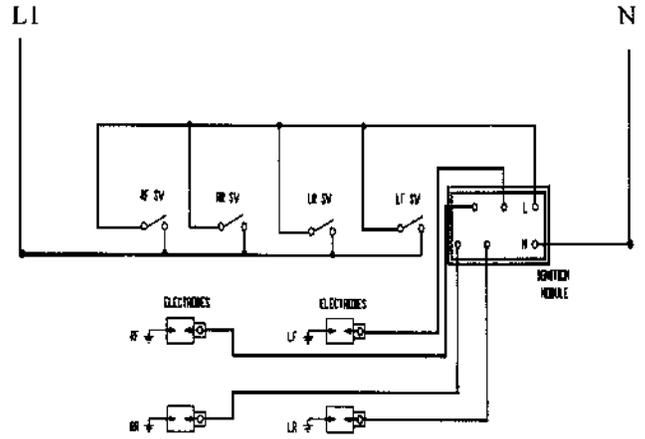
The 15,000 volt pulses travel through high voltage wires to the spark electrodes.

Each electrode fits into an opening in the burner head. The burner head surrounds the electrode concealing the spark. At the top of the chamber of the electrode there is a positive spark point that ensure proper spark path.

As discussed earlier, the mating surface between the cooktop and the air/mixer tube becomes the ground path for the electrode circuit. **Note: If spark is intermittent, check for debris between cooktop and mixer tube.**

As each 15,000 volt pulse is released, a spark jumps across the gap between the electrode and the burner head. A small opening in the top of spark chamber of the burner head allows the gas to reach the spark and ignition occurs.

Sparking will occur at all 4 electrodes regardless of which burner valve is turned to "LITE."



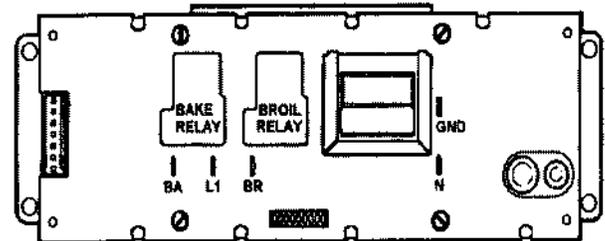
ELECTRONIC RANGE CONTROL (ERC)

The ERCIIC has replaced the ERCII in the 1994-95 model year (GE, Hotpoint, and RCA).

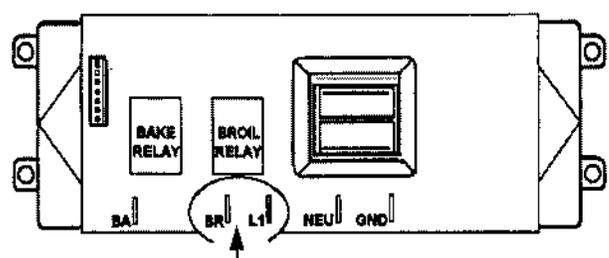
WHAT'S DIFFERENT ABOUT THE "C" VERSION ERCII:

- **12 HR SHUTOFF** - If the oven is left on accidentally, it will turn itself off after 12 hrs (this feature was first introduced on the "Quick Set" electric range controls).
- **TERMINALS L1 AND BR ARE REVERSED** - This is important especially when the ERCIIC is used as a replacement part for the ERCII. When replacing an ERCII with an ERCIIC observe the terminal configuration and replace the wires observing terminal designation rather than the terminal layout.

ERCII



ERCIIC



NOTE: THESE TWO TERMINALS ARE REVERSED IN POSITION BETWEEN THE ERCII AND ERCIIC

30" FREE STANDING GAS RANGE WITH "GOURMET BURNER"

ELECTRONIC RANGE CONTROL - CONTINUED

- **HOUSING CHANGE-** The ERCII has a metal housing and the ERCIIC has a plastic housing. This fact will help you recognize the ERCIIC, especially in a replacement part situation.
- **NEW '95 GRAPHICS -** Graphics are larger and easier to read and the layout is more convenient for the consumer.

THE FUNCTION SETUP AND OPERATION OF BAKE, BROIL, TIMEBAKE, CLEAN, ETC.; ARE THE SAME ON THE "ERCII" AND THE "ERCIIC."

BIG ERC

GE Profile models are designed with large, easy to use, electronic touchpad controls that provide the consumer simple oven operation.

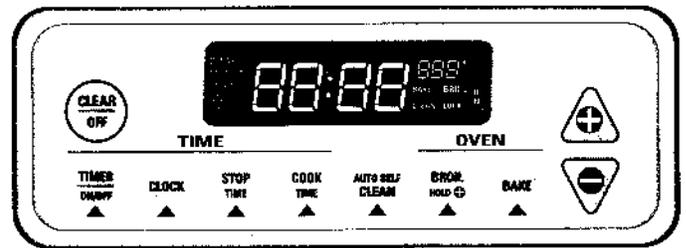
The electronic touchpads are separate from the ERCIIC and are connected to the ERCIIC circuit board by a ribbon connector.

The touchpads are part of the crystal overlay on the backguard. If the touchpads would ever fail or if the ribbon connector were damaged, a complete "Crystal and Overlay Assembly" would be needed.

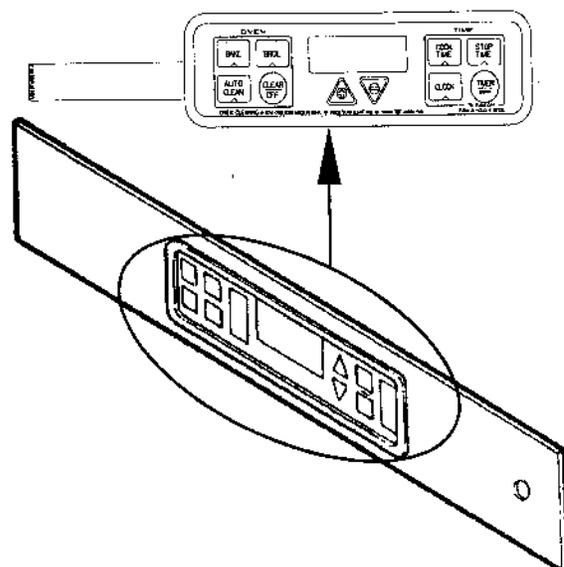
TOUCHPAD TROUBLESHOOTING

A tone will sound when any of the touchpads are depressed except for the "+" and "-" pads. To help isolate a problem to either the control or the touchpads, depress each pad on the "Overlay" and observe the following:

- *Bake, Broil, Auto Clean, Cook Time, Stop Time, Clock, and Timer on/off* modes will sound an audible tone plus show the mode of operation selected.
- *Clear/Off* will sound an audible tone and the display returns to the time of day.
- "+"/"-" pads, No audible sound will be heard. "+"/"-" pads can only be used after another function pad has been selected.



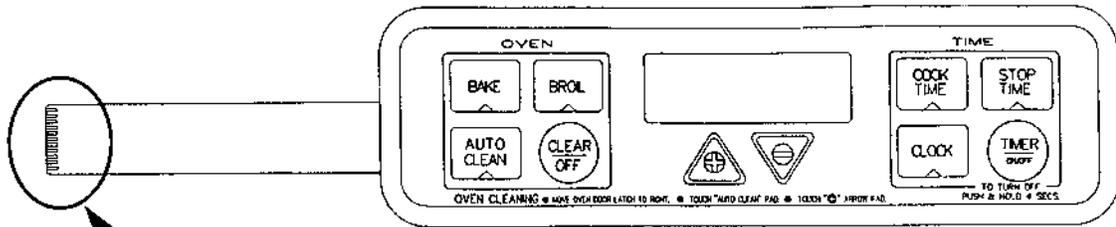
"Big ERC" face plate is approx. 12 7/8" (W) and 3 3/4" (H)



30" FREE STANDING GAS RANGE WITH "GOURMET BURNER"

TOUCHPAD TROUBLESHOOTING - CONTINUED

If some of the pads work and some don't, the problem is probably with the touchpad. To verify that the touchpad is the problem, check the ribbon connector for proper insertion of the ribbon and perform the Ohm Test (listed in the chart below). If the ohmmeter reads "open" when depressing the pad or shows resistance without depressing the pad, the touchpad is defective.

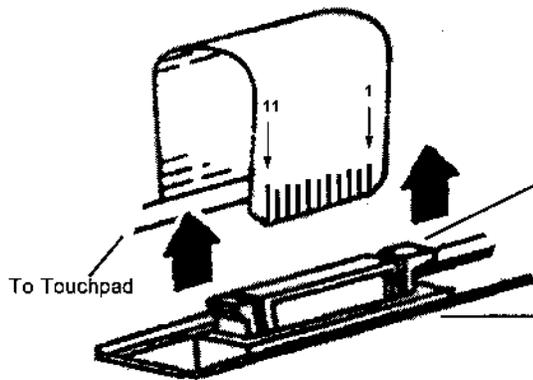


Function	Test Points	Function	Test Points
Bake	4 to 9	Cook Time	5 to 8
Broil	4 to 5	Stop Time	6 to 8
Auto Clean	4 to 6	Clock	7 to 8
Clear/Off	10 to 11	Timer On/Off	8 to 9
"+" Arrow	1 to 3	"-" Arrow	1 to 2

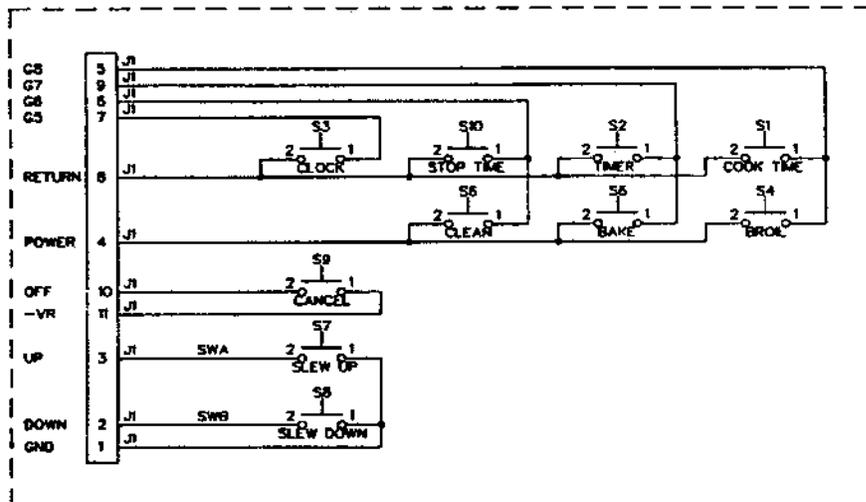
Note: A pair of "Alligator clip leads" is recommended to aid you in performing these test. Make sure the leads are making proper contact to the ribbon.

Ohmmeter readings - looking for readings between 0-150 ohms while depressing the appropriate touchpad.

Grab "Tabs" at both ends of the connector with your thumb and finger and pull upward. Then, remove the ribbon from the connector.



View is the back of the ERCIIC with the backguard laying on the cooktop. The ribbon connector is on the left side of the board while standing at the front of the range.

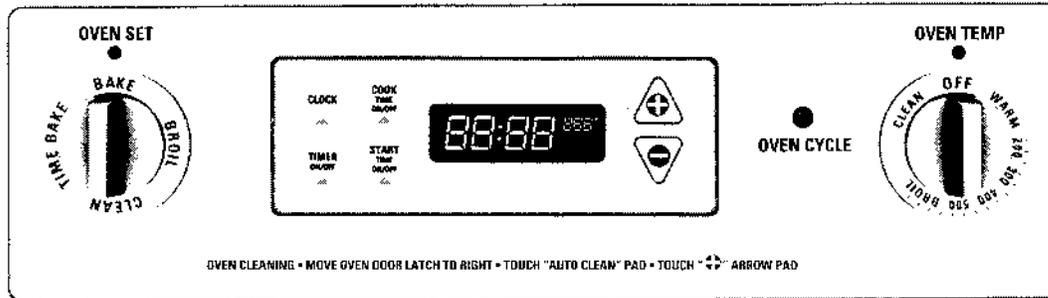


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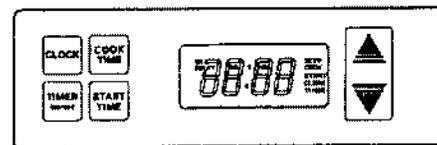
ELECTRONIC RANGE TIMER (ERT)

This section covers the **ERT2000** Control. The ERT2000 system is also known by the name "**EasySet Controls**" and performs the same basic function as the old "Three Knob" timer but with the convenience of electronic controls.

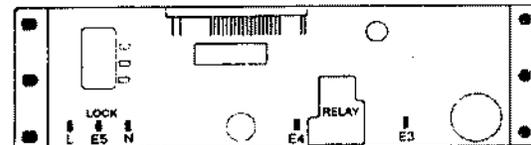
The overlay appearance will vary from model to model. The overlay is not supplied with replacement controls.



The ERT2000 turns the oven on or off at the selected time through the use of a relay mounted on the back of the control. The relay contacts are in the circuit that supplies power to the thermostat. **The thermostat and selector switch are part of the ERT Programming Circuit. If the ERT does not Program, check the thermostat and selector switch before replacing the clock. E4 on the ERT must see 120 volts before programming can occur.**



ELECTRONIC RANGE TIMER - BACK VIEW

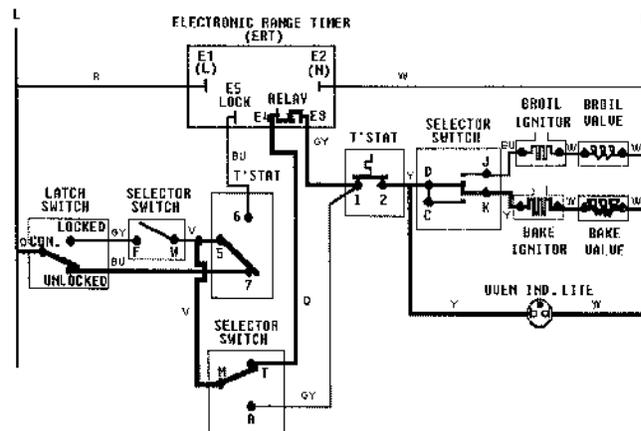


The Electronic Range Timer performs the following functions:

- **Time Bake** - The "OVEN SET" knob **MUST** be in the "TIME BAKE" setting before the control will accept *TIME BAKE* programming. With the oven set knob in "TIME BAKE", 120 volts is placed on ERT terminal E4 which allows the control to be programmed.
- Press "COOK TIME" and enter the desired amount of cooking time.
- Press "START TIME" and enter the desired starting time.
- Turn "OVEN TEMP" knob to the desired temperature.

For *TIMED BAKE*, the ERT will automatically turn the oven on at the selected time, cook for the desired amount of time and automatically turn the oven off.

TIME BAKE CIRCUIT



30" FREE STANDING GAS RANGE WITH "GOURMET BURNER"

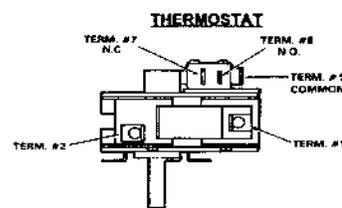
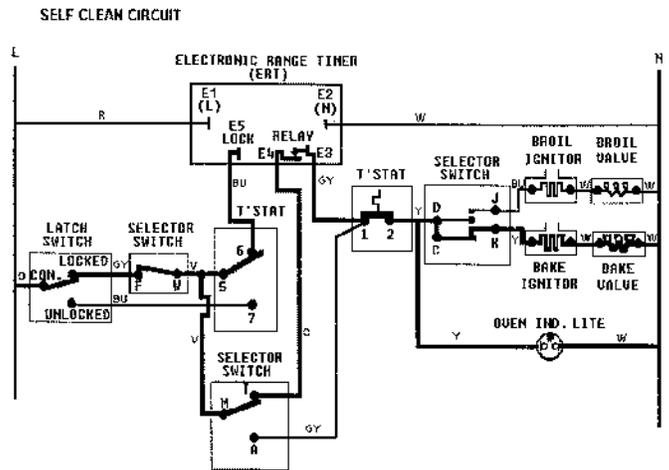
ELECTRONIC RANGE TIMER - CONTINUED

Self Clean - The "OVEN SET" and "OVEN TEMP" knobs **MUST** be in the "CLEAN" position and the door must be latched before the control can be programmed for a clean cycle. With the controls and latch set for clean, 120 volts is placed on ERT terminals E4 and E5 which allows the control to start the clean cycle.

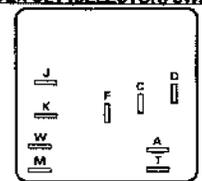
With the controls in the proper positions, the ERT will display the pre-set 3 hour clean time which can be lowered to 2 hours or raised to 4 hours by holding the appropriate up or down arrows. The clean cycle can also be set to come on at a delayed start time. Only the bake burner operates during the clean cycle. The oven temperature will average 825 degrees during clean.

Timer and Clock

The ERT has a timer (which does not control the oven) that can be set for up to 24 hours. It also serves as a time of day clock.



OVEN SET (SELECTOR) SWITCH



THERMOSTAT SWITCH CONTACTS				
CONTACTS	BAKE	TIME BAKE	BROIL	CLEAN
1 TO 2	*	*	*	*
5 TO 7	X	X	X	X
5 TO 6				X

* = CYCLING CONTACTS
X = CLOSED CONTACTS

OVEN SET SELECTOR SWITCH CONTACTS				
CONTACTS	BAKE	TIME BAKE	BROIL	CLEAN
M TO T		X		X
M TO A	X		X	
W TO F				X
J TO D			X	
K TO C				X
K TO D	X	X		

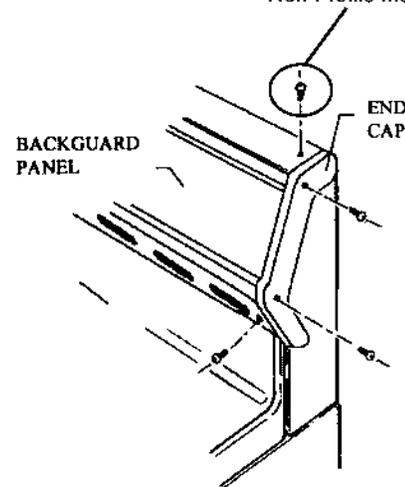
X = CLOSED CONTACTS

BACKGUARD DISASSEMBLY

Backguards without fluorescent tube / Non-Profile

- Place a towel or other protective padding on the range top.
- Remove the (4) T-15 torx mounting screws from each end of the backguard as shown in the illustration.
- Remove the end caps. Note: There is a plastic tab at the bottom of each end cap that hooks into the backguard. The tab holds the end cap in place at the bottom.
- Gently pull the backguard panel out at the bottom and rotate the panel upward.
- Push the panel backward at the top, freeing the panel mounting tabs from the slots in the top of the backguard frame.
- Lower the panel onto the protected range top.

This screw may be eliminated in the march '95 production on Non-Profile models.



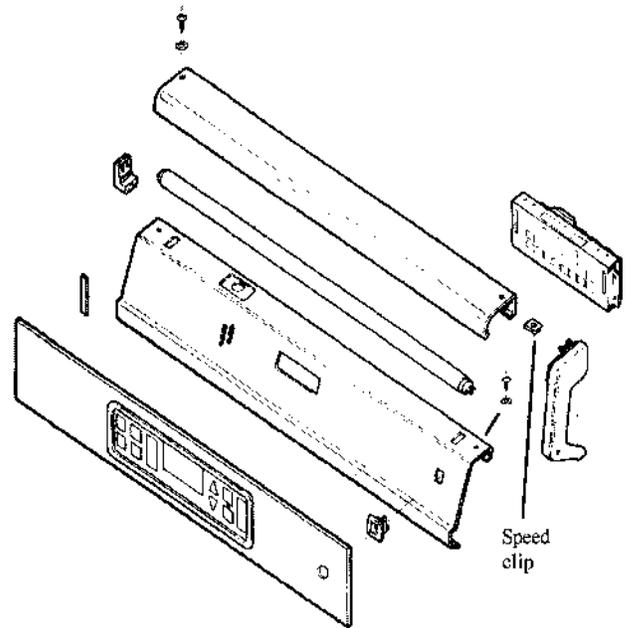
30" FREE STANDING GAS RANGE WITH "GOURMET BURNER"

BACKGUARD DISASSEMBLY - CONTINUED

Profile models with fluorescent lamp and "Big ERC"

Many Profile model ranges have a fluorescent light and "Big ERC." Disassembly of the backguard is slightly different on models with a light.

- Remove (2) phillips head screws holding down the hood for the lamp.
- Remove the (2) T-15 Torx screws at the top of the backguard (under the fluorescent tube). It will be necessary to slide the speed clip out of its position to remove these 2 screws (see illustration).
- All other disassembly is the same for both model styles. See page 12.



Note: Some backguard screws have plastic washers on them. These washers are to prevent chipping of the painted surface and should be returned to the location from which they were removed.

On color matched models the screws on the backguard are painted. Care in removing these screws will minimize the chipping of the paint on the screw head.

OVEN GAS SHUT OFF VALVE LOCATION

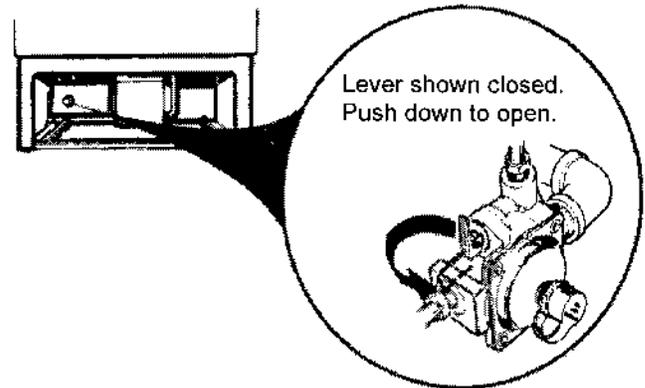
The Oven Gas Shut Off Valve is now part of the new pressure regulators.

To check the oven gas shut off valve on sealed burner models, remove the storage drawer and look for the shut off lever at the back of the storage drawer compartment. On some models an access cover may have to be removed (see illustration)

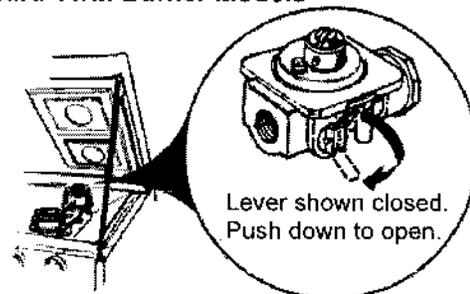
Note: On standard burner models the regulator/ shutoff valve is under the "lift up" cooktop in the extreme right corner.

At the time this manual was printed all other oven components and their functions have not changed on 30" free-standing gas ranges (See Pub. No. 31-0303 for Oven information).

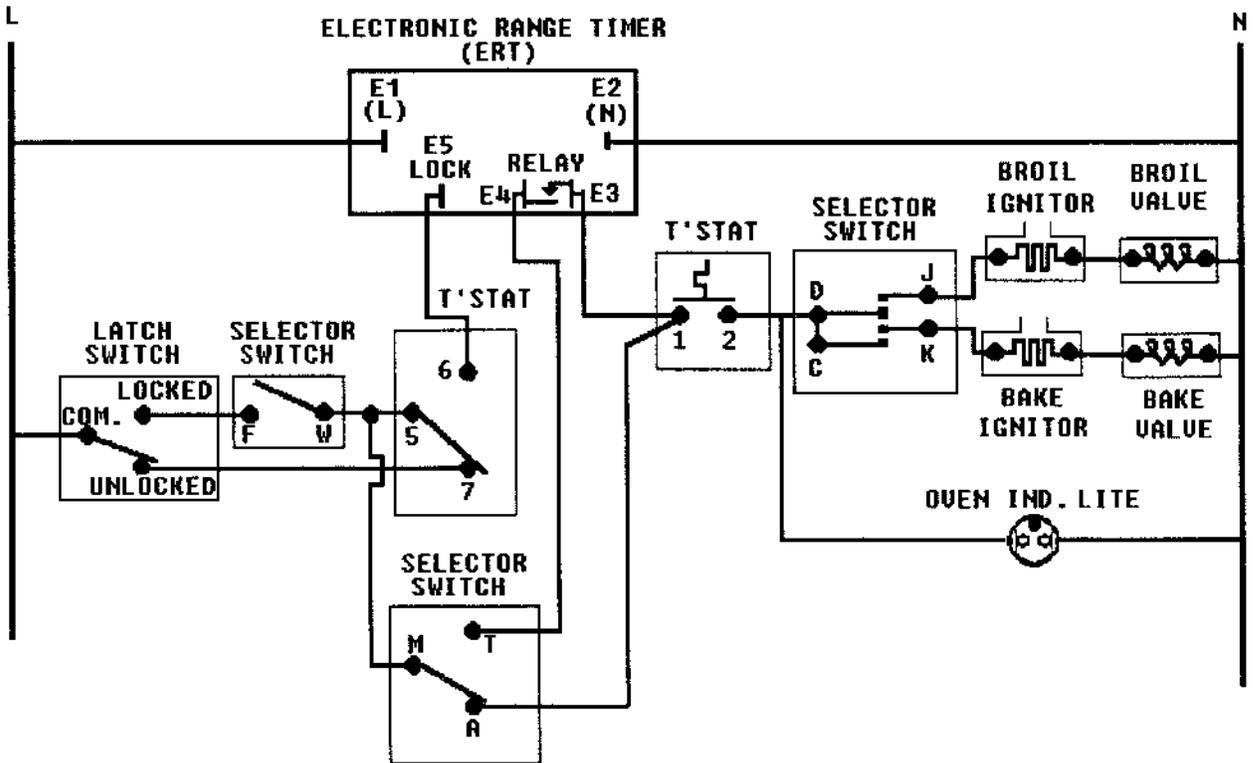
Sealed Burner Models



Standard Twin Burner Models



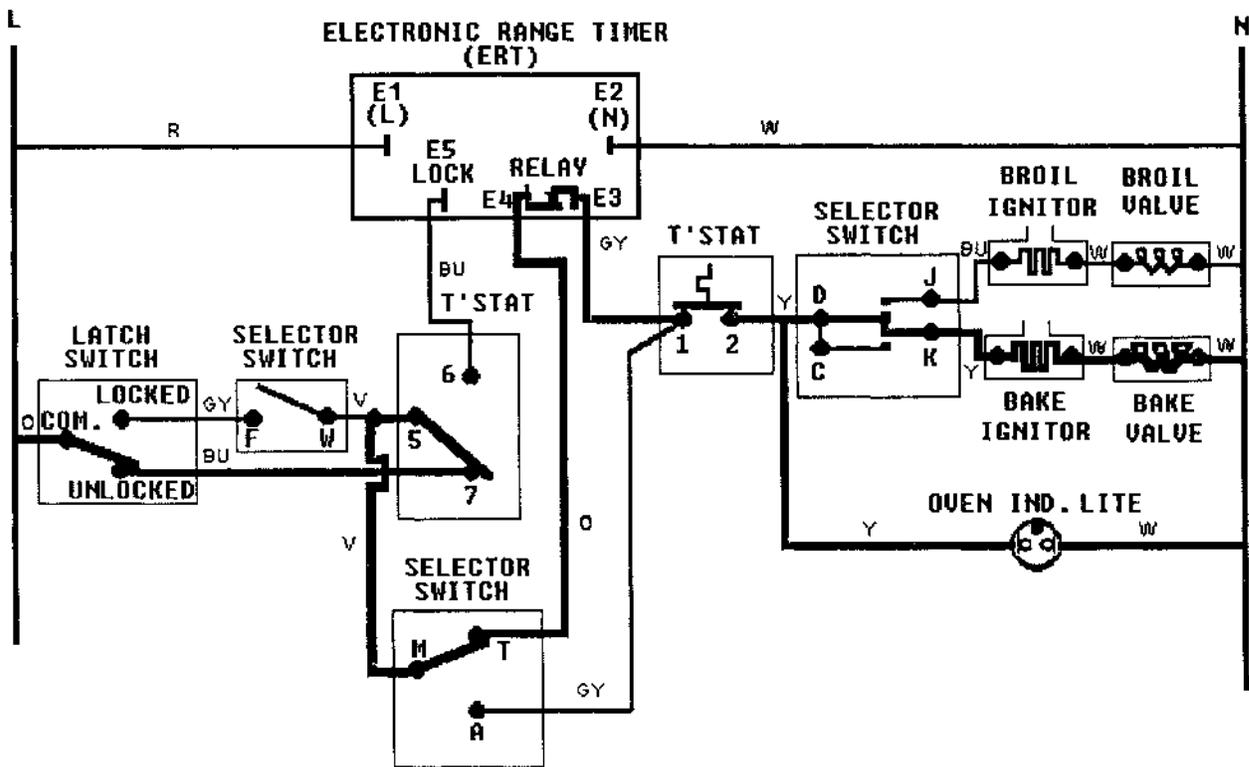
ERT SYSTEM SCHEMATIC



CONDITIONS: OFF

ERT CONTROL SYSTEM

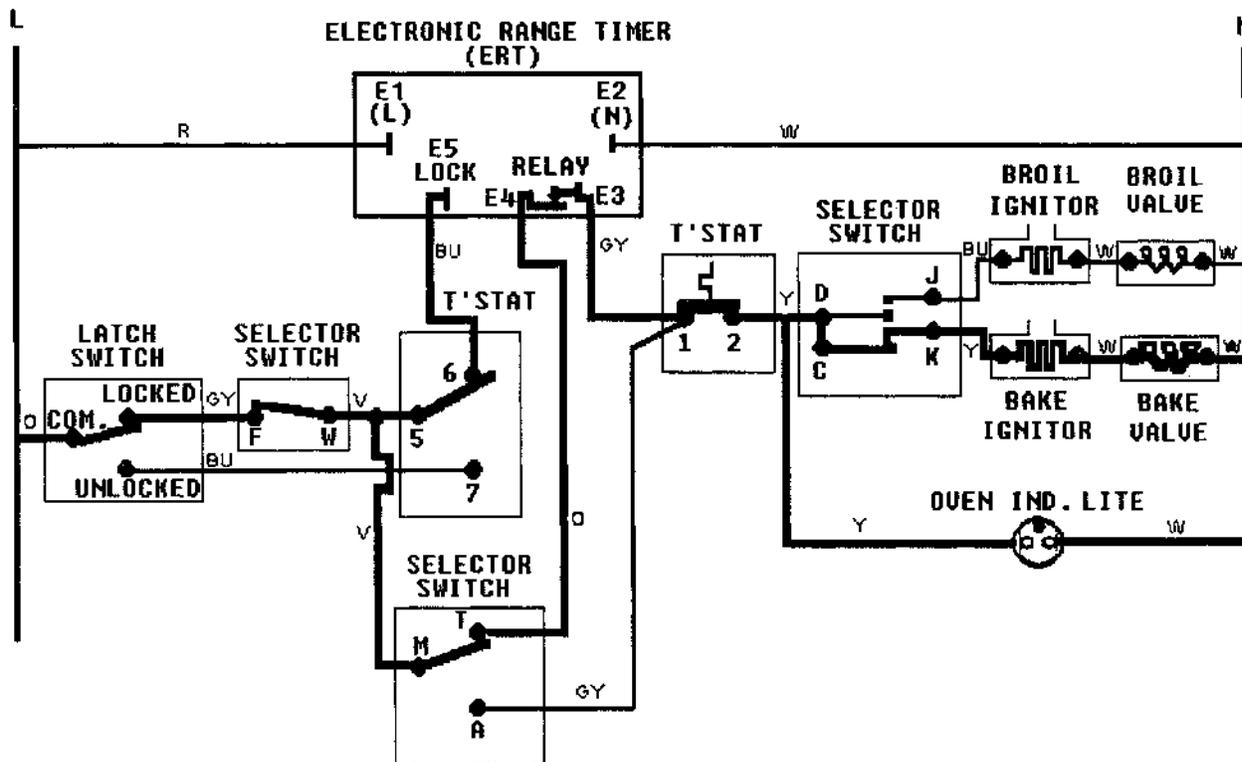
TIME BAKE CIRCUIT



NOTE: 120 VOLTS MUST BE APPLIED TO CONTROL TERMINAL E4 BEFORE CONTROL WILL ACCEPT A TIME BAKE PROGRAM. (OVEN SET KNOB MUST BE IN TIME BAKE.)

ERT CONTROL SYSTEM

SELF CLEAN CIRCUIT



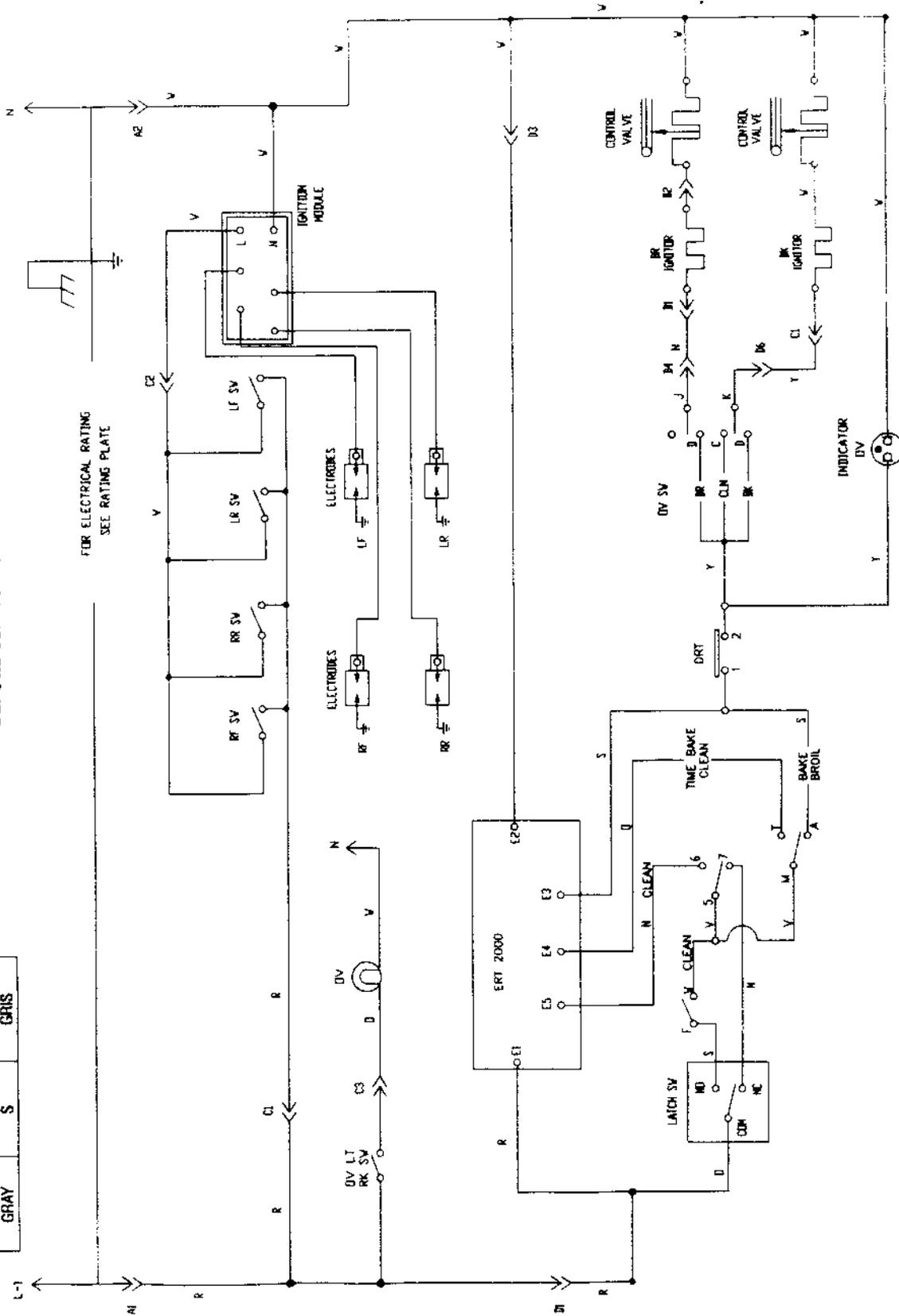
NOTE: 120 VOLTS MUST BE APPLIED TO CONTROL TERMINALS E4 & E5 BEFORE CLEAN CYCLE CAN BEGIN.

COLOR	SYMBOL	COLOR
RED	R	ROJO
WHITE	W	BLANCO
ORANGE	O	NARANJA
GREEN	G	VERDE
YELLOW	Y	AMARILLO
VIOLET	V	VIOLETA
BLUE	N	AZUL
GRAY	S	GRIS

SCHEMATIC DIAGRAM

WARNING

**POWER MUST BE DISCONNECTED
BEFORE SERVICING THIS APPLIANCE**



COLOR	SYMBOL	COLOR
RED	R	ROJO
WHITE	W	BLANCO
ORANGE	O	NARANJA
GREEN	G	VERDE
YELLOW	Y	AMARILLO
VIOLET	V	VIOLETA
BLUE	N	AZUL
GRAY	S	GRIS

SCHEMATIC DIAGRAM

WARNING

POWER MUST BE DISCONNECTED
BEFORE SERVICING THIS APPLIANCE

