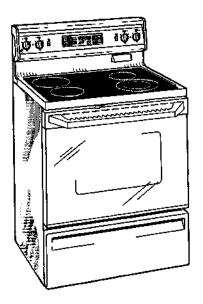
GE Consumer Service Training

## **Technician Manual**

GE Profile & Monogram Cooktops & Ranges with Halogen Units

REF94 Pub. No. 31-20106

During the second quarter of 1994 a new series of models were introduced featuring Halogen Heating Units. Currently the halogen units are available on one 30" Free Standing family and a series of Cooktop families. All models feature a combination of both halogen and radiant heating units.



30" Free -standing Range

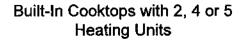
#### Halogen Heating Unit Design:

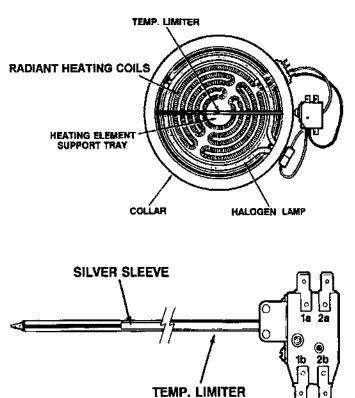
The unit consists of a Quartz Tube, vacuum sealed and filled with Halogen gas surrounding a tungsten wire heating element. The lamp produces a virtually instantaneous brightly glowing light and heat. The quartz tube is frosted to help diffuse the bright light from the lamp. The halogen units also contain radiant coils that help to farther distribute the heat. The quartz tube and radiant coils are attached to micro porous insulation with molded ceramic fibre walls in a corrosion protected metal dish. (Similar construction to the radiant heating units.)

NOTE: Do not touch the glass tube are heating coils with your hands to avoid possible damage.

#### Temperature Limit / Hot Light Switch:

The halogen heating units have the same temperature limit / hot light switch as the radiant units. With the introduction of the halogen units a silver sleeve was added inside the limiter glass tube to help prevent early tripping due to the bright light.

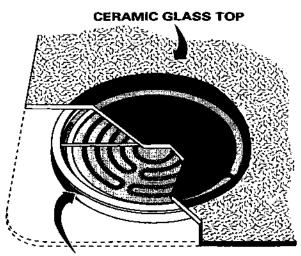




#### **Ceramic Glass Top:**

The ceramic glass top is the same material and construction as used on the radiant models. The Warranty and Cleaning of the glass surface is also the same as that of the radiant models.

Note: All models have a combination of radiant and halogen units. None have all halogen units.

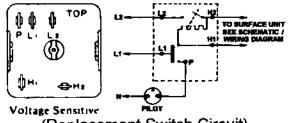


HALOGEN HEATING ELEMENT

#### Two types of systems exist:

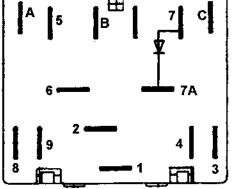
- 30" Free- Standing Range models (JBP95 Series), contain two halogen units and two radiant units. All of the units are controlled by infinite heat switches. The halogen units will cycle on and off like the radiant units with the main difference being the instant bright glow as soon as the halogen unit cycles on.
- Built-In Cooktops These units can come with various combinations of heating elements. They can have one halogen and one radiant or two halogen and two radiant. The halogen cooktop units are controlled by a 10 position switch (plus off). The switch supplies a constant voltage to the halogen unit (does not cycle) witch produces various wattage outputs depending upon the circuit. The wattage ranges between 100 watts at the very lowest setting to 1800 watts at setting 10.

#### SURFACE UNITS & CONTROLS



(Replacement Switch Circuit)

# HALOGEN UNIT

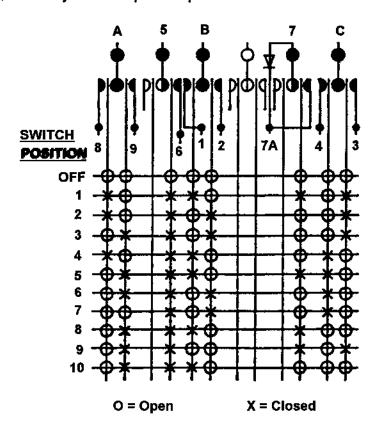


#### Halogen Unit Wattages, Contact Operation and Strip Circuits:

The Following Charts and Strip Circuits show the switch contact operation and approximate wattage for each setting. A variety of circuits are used to obtain the different heat settings. The circuits can operate off 240 volts, combination 240 & 120 volts or 120 volts. Some of the 120 volt circuits operate off L1 and while others use L2 side of the line. A diode in some of the circuits is used to limit the voltage to some of the heating coils. The current can range from approximatly 7.5 amps on high to .8 amps on lowest setting.

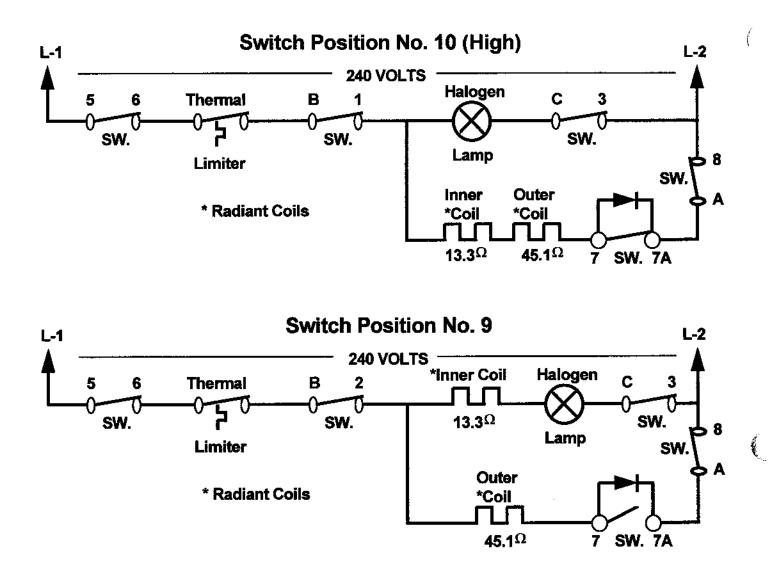
| OFF OFF 0   1 Invisible 5%   2 Invisible 8%   3 Invisible 11%   4 Low 16%   5 Low 23%   6 Medium 30%   7 Medium 41%   8 High 56% | Power<br>Output<br>(Watts) | % of Full<br>Power* | Visual<br>Response | Control<br>Setting |
|--|----------------------------|---------------------|--------------------|--------------------|
| 2 Invisible 8%   3 Invisible 11%   4 Low 16%   5 Low 23%   6 Medium 30%   7 Medium 41%   | 0                          | 0                   | OFF                | OFF                |
| 3 Invisible 11%   4 Low 16%   5 Low 23%   6 Medium 30%   7 Medium 41%  | 100                        | 5%                  | Invisible          | 1                  |
| 4 Low 16%   5 Low 23%   6 Medium 30%   7 Medium 41%  | 150                        | 8%                  | Invisible          | 2                  |
| 5 Low 23%   6 Medium 30%   7 Medium 41%  | 200                        | 11%                 | Invisible          | 3                  |
| 6 Medium 30%<br>7 Medium 41%   | 290                        | 16%                 | Low                | 4                  |
| 7 Medium 41%   | 410                        | 23%                 | Low                | 5                  |
|  | 540                        | 30%                 | Medium             | 6                  |
| 8 High 56%   | 740                        | 41%                 | Medium             | 7                  |
|  | 1000                       | 56%                 | High               | 8                  |
| 9 High 76%   | 1370                       | 76%                 | High               | 9                  |
| 10 Full 100%   | 1800                       | 100%                | Full               | 10                 |

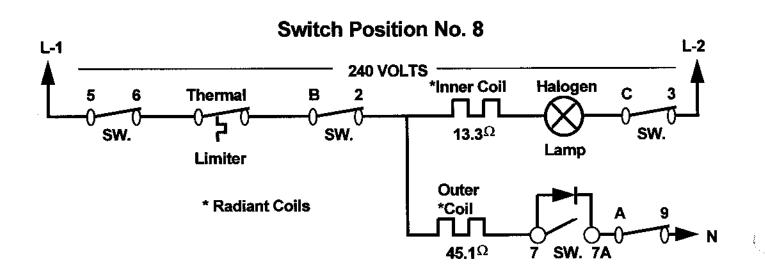
(table above from "Cermaspeed Ltd.Specs)

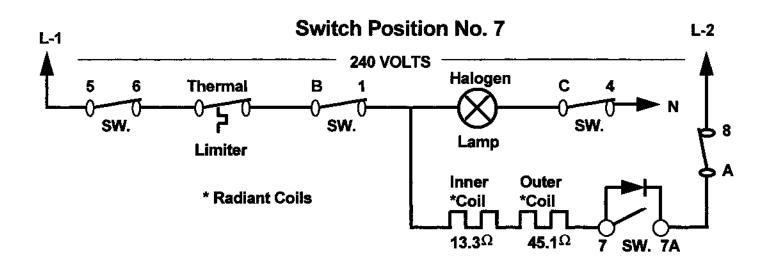


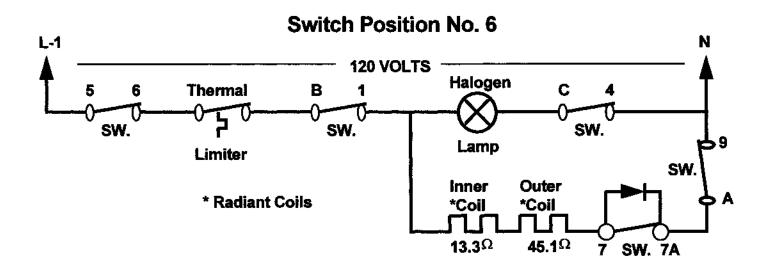
\* %'s rounded

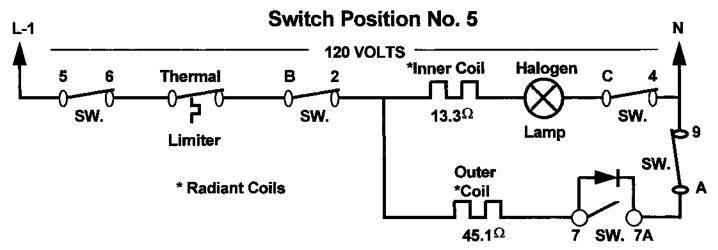
#### 10 POSITION SWITCH CONTACT OPERATION

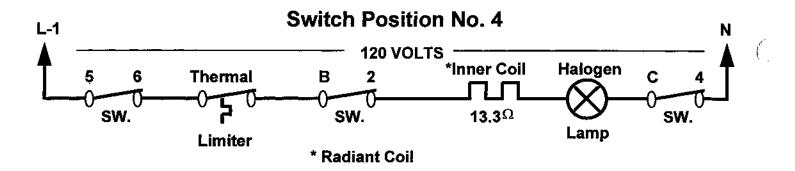




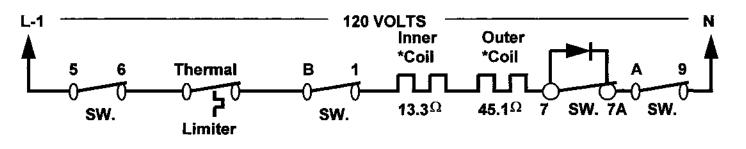




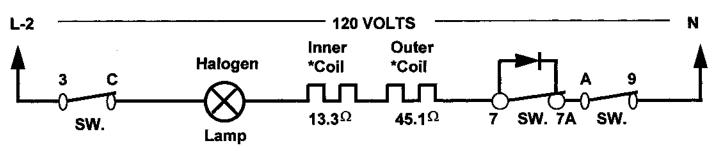




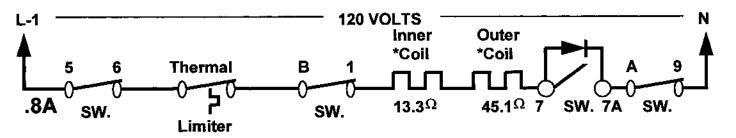
#### **Switch Position No. 3**

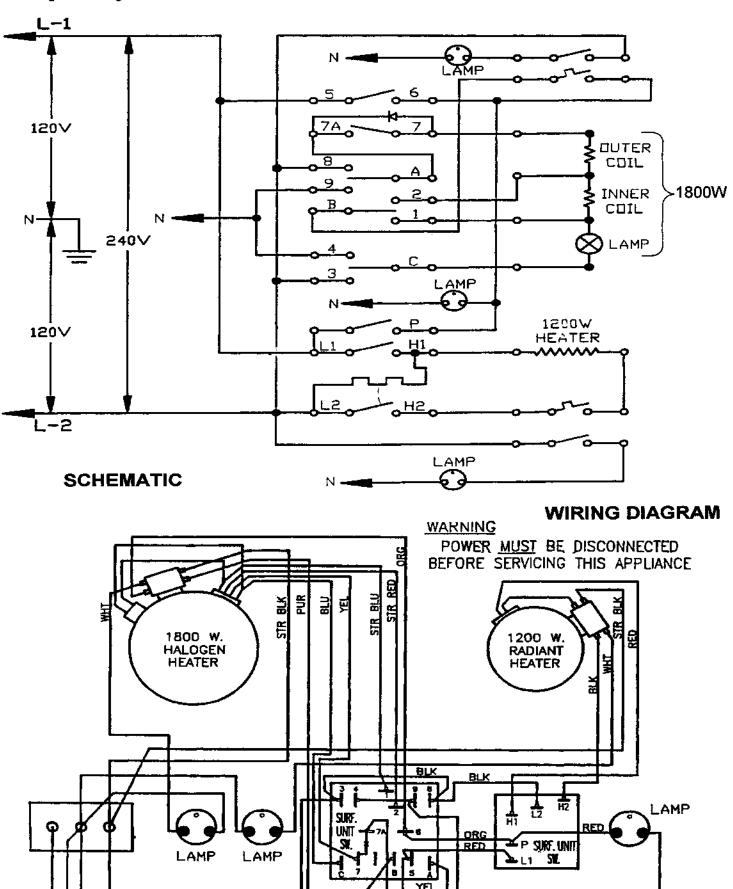


**Switch Position No. 2** 



#### **Switch Position No. 1**





NOTE: FOR SERVICE REPLACEMENT USE 16 GA. 250°C WIRE EXCEPT AS INDIVIDUALLY NOTED ON LEADS.

RED

14GA WHT

WHIT

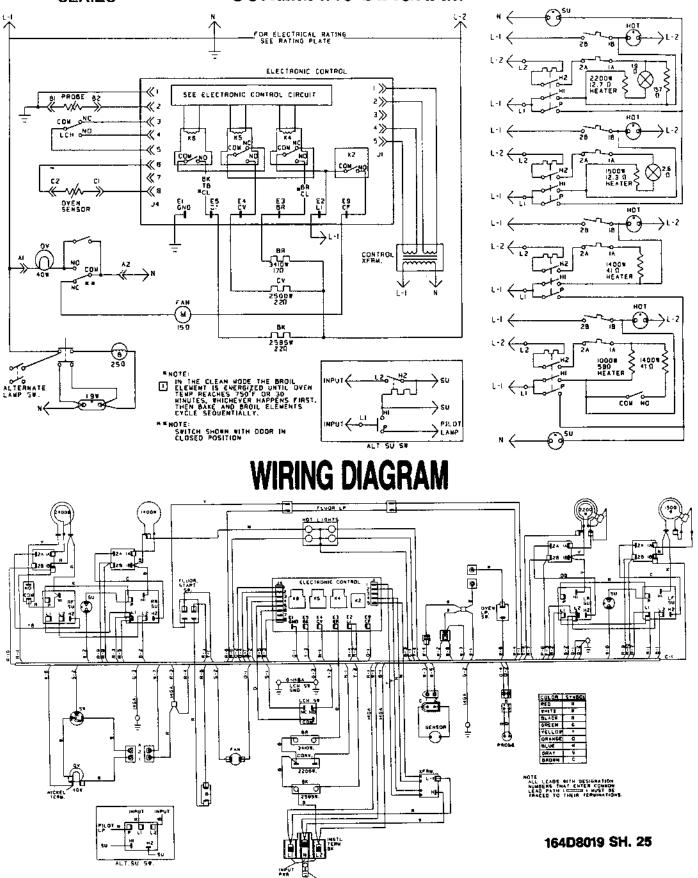
14GA

14GA BLK

JBP95 SERIES



164D8665P001



NOTE: FOR SERVICE REPLACEMENT ON ALL RADIANT HEATING ELEMENT LEADS USE 16 GA. 250 C WIRE. FOR SERVICE REPLACEMENT ON ALL OTHER LEADS USE 16 GA. 150 C WIRE EXCEPT AS NOTED ON INDIVIDUAL LEADS