

Electric Freestanding Range—Technical Information

AER5712BA* MER5751BA* MER5752BA* MERH752BA* MERM752BA*

- Due to possibility of personal injury or property damage, always contact an authorized technician for servicing or repair of this unit.
- Refer to Service Manual 16026784 for detailed installation, operating, testing, troubleshooting, and disassembly instructions.



CAUTION

All safety information must be followed as provided in Service Manual 16026784.



WARNING

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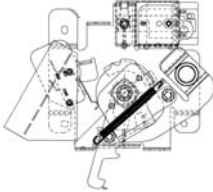
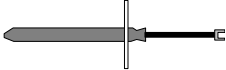

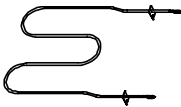
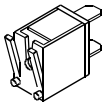
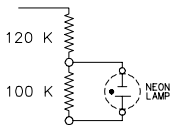
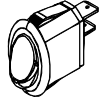
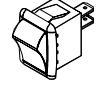
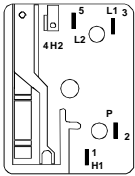
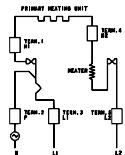
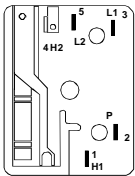
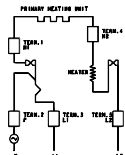
Model	AER5712BA*	MER5751BA*	MER5752BA*	MERH752BA*	MERM752BA*
Power Source					
Electrical rating, 240 V	10.7 kW	10.7 kW	10.7 kW	10.7 kW	10.7 kW
Electrical rating, 208 V	8.1 kW	8.1 kW	8.1 kW	8.1 kW	8.1 kW
Amperage	40 Amp	40 Amp	40 Amp	40 Amp	40 Amp
Frequency	60 Hz	60 Hz	60 Hz	60 Hz	60 Hz
Element Wattage @ 240 V					
Ribbon element, dual	2,500*	2,500*	2,500*	2,500*	2,500*
Ribbon element, 6 inch	1,200*	1,200*	1,200*	1,200*	1,200*
Ribbon element, ceramas	N/A	N/A	2,700*	2,700*	N/A
Oven Wattage @ 240 V (208 V)					
Bake 4 pass	2,600 (1950)	2,600 (1950)	2,600 (1950)	2,600 (1950)	2,600 (1950)
Broil 4 pass	3,000 (2250)	3,000 (2250)	3,000 (2250)	3,000 (2250)	3,000 (2250)
Oven Interior Dimensions in. (cm)					
Height	16.5 (41.9)	16.5 (41.9)	16.5 (41.9)	16.5 (41.9)	16.5 (41.9)
Width	23 (58.4)	23 (58.4)	23 (58.4)	23 (58.4)	23 (58.4)
Depth	18.125 (46)	18.125 (46)	18.125 (46)	18.125 (46)	18.125 (46)
Product Exterior Dimensions in. (cm)					
Height overall	46.75 (118.75)	46.75 (118.75)	46.75 (118.75)	46.75 (118.75)	46.75 (118.75)
Width	29.875 (75.9)	29.875 (75.9)	29.875 (75.9)	29.875 (75.9)	29.875 (75.9)
Depth, excluding handle	25 (63.5)	25 (63.5)	25 (63.5)	25 (63.5)	25 (63.5)
Features					
Oven capacity (cubic feet)	4.9	4.9	4.9	4.9	4.9
Manual oven light	Incandescent	Incandescent	Incandescent	Incandescent	Incandescent
Oven window	Large	Standard	Large	Large	Large
Oven racks	Yes	Yes	Yes	Yes	Yes
Timer	Yes	Yes	Yes	Yes	Yes
Delay start	Yes	Yes	Yes	Yes	Yes
Storage drawer	Removable	Removable	Removable	Removable	Removable
Handle	Standard	Standard	Standard	Standard	Standard
Weight lbs. (kg)					
Crated	166 (75.3)	166 (75.3)	166 (75.3)	166 (75.3)	166 (75.3)

*Rating of 208 VAC is approximately 80% of 240 VAC value.

Component Testing Procedures

⚠ WARNING

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Illustration	Component	Test Procedure	Results												
	Oven light socket	Measure voltage at oven light Remove one wire from receptacle and test resistance of terminals	120 VAC, see wiring diagram for terminal identification. Continuity with bulb inserted. If voltage is not present at oven light, check wiring or light switches.												
	Manual latch assembly with switch	Disconnect wires and test for continuity per wiring diagram.....	See wiring diagram for schematic layout. Refer to Parts Manual for replacement components. NOTE: If latched is moved to LOCK position during Bake or Broil, the control cancels the function.												
	Oven temperature sensor	Measure resistance.....	Approximately 1000 Ω at room temperature 80° F.												
	Bake element	Disconnect wire leads to element and measure resistance of terminals Measure voltage at bake element	Approximately 20.6 to 22.6 Ω . 240 VAC, see wiring diagram for terminal identification. If voltage is not present at bake element, check wiring.												
	Broil element	Disconnect wire leads to element and measure resistance of terminals Measure voltage at broil element	Approximately 17.7 to 19.5 Ω . 240 VAC, see wiring diagram for terminal identification. If voltage is not present at broil element, check wiring.												
 	Indicator light	Measure voltage at indicator light.....	240 VAC If voltage is present and light does not work, replace light. If voltage is not present at indicator light, check wiring.												
	Rocker switch (MER5751BA*, MER5752BA*, MERH752BA*, MERM752BA*)	Measure continuity of switch positions: Closed Open.....	Continuity Infinite												
	Rocker switch (AER5712BA*)	Measure continuity of switch positions: Closed Open.....	Continuity Infinite												
 	Infinite switch	Connect volt-ohms meter to H1 and H2. Measure the following for voltages at LO, MED, HI: H1 to H2.....	Approximate												
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Component Testing Procedures



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Illustration	Component	Test Procedure	Results		
			Approximate Time On	Approximate Time Off	
	Infinite switch (MER5752BA*) 	Connect volt-ohms meter to H1 and H2. Measure the following for voltages at LO, MED, HI: H1 to H2	240 VAC. If not, replace switch.	LO 5% MED (4-5) 35% HI 100%	95% 65% 0%
	Infinite switch (MER5752BA*) 	Connect volt-ohms meter to H1 and H2. Measure the following for voltages at LO, MED, HI: H1 to H2	240 VAC. If not, replace switch.	LO 6% MED (4-5) 40% HI 100%	94% 60% 0%
	Ribbon element, 2500W	Disconnect wire leads to element and measure cold resistance of terminals ... Measure voltage at element.....	Approximately 21.3 to 23.5 Ω . 240 VAC. If voltage is not present, check wiring.		
	Ribbon element, ceramas, 2700W (MER5752BA*, MERH752BA*)	Disconnect wire leads to element and measure cold resistance of terminals ... Measure voltage at element.....	Approximately 19.4 to 22 Ω . 240 VAC. If voltage is not present, check wiring.		
	Ribbon element, 1200W	Disconnect wire leads to element and measure cold resistance of terminals ... Measure voltage at element.....	Approximately 44.3 to 48.9 Ω . 240 VAC. If voltage is not present, check wiring.		

Control Testing Procedures



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Control	Feature	Test Procedure	Results
M1	Oven temperature adjustment	<p>Press Bake pad. Enter 550 on the digit-pad. Immediately press and hold Bake pad for 3 to 5 seconds.</p> <p>Oven can be adjusted from -35 to +35 degrees in 5-degree increments by pressing More + or Less - pads. To avoid over adjusting the oven, move temperature 5 degrees each time. Wait 4 seconds for the data entry timer to expire to accept the change. Temperature adjustment will be retained even through a power failure.</p>	While increasing or decreasing oven temperature, this does not affect self-cleaning temperature.
M1	Temperature display	Press and hold Cancel and Bake pads for 3 to 5 seconds. Press More + or Less - pads to change.	This mode enables the user to indicate °F or °C on the display.
M1	Clock display	Press and hold Cancel and Clock pads for 3 to 5 seconds.	Allows clock to be toggled on or off.
M1	24-hour clock	Press and hold Cancel and Delay pads for 3 to 5 seconds. Press More + or Less - pads to change.	Allows the time on the clock to be toggled from 12-hour or 24-hour display.
M1	Factory default	Press and hold Cancel and Keep Warm pads for 3 to 5 seconds until beep sounds.	Allows the clock to be reset to factory settings.
M1	12-hour off	Control automatically cancels cooking operations and removes relay drives 12 hours after the last pad touch.	See Sabbath mode to disable.
M1	Sabbath mode	<p>Hold Clock pad for 3 to 5 seconds to activate Sabbath mode.</p> <p>Hold Clock pad for 3 to 5 seconds to disable Sabbath mode.</p> <p>Initiate desire bake function before entering Sabbath mode.</p>	<p>"SAb" flashes for 5 seconds then remain on until timed-out or cancelled. The status "SAb" is NOT fault code 5A6. All pad inputs are disabled except for CANCEL and CLOCK pads. This mode disables the normal 12 hour shutoff to allow operation of the bake mode for a maximum of 72 hours. The oven light is not disabled.</p>
M1	Child lockout	<p>Press and hold Cancel and Cook & Hold pads for 3 to 5 seconds until beep sounds.</p> <p>To reactivate the control, press and hold Cancel and Cook & Hold pads for 3 to 5 seconds.</p>	<p>This safety feature is used to prevent children from accidentally programming the oven (the electronic range control is completely disabled).</p> <p>Child lockout features must be reset after a power failure.</p>
M1	Diagnostic code display	<p>Press and hold More + pad within 30 seconds of powering up the unit.</p> <p>Cycle through the codes using the More + or Less - pads.</p>	<p>The last 5 diagnostic codes will be stored in the non-volatile memory.</p> <p>See "Description of Error Codes" for explanation.</p>

Control Testing Procedures



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"Quick Test" Mode for Electronic Range Control

Follow the procedure below to access the quick test mode. Entries must be made within 32 seconds of each other or the control will exit the quick test mode.

1. Press and hold **Cancel** and **Broil** pads for 3 to 5 seconds.
2. Once the control has entered the "Quick Test" mode, release both pads.
3. Press each of the following pads indicated in the table below.

NOTE: Press one of the following pads once to activate the response.

Press the pad a second time to deactivate the response.

NOTE: This mode must be entered within the first 5 minutes after power up.

NOTE: If the temperature sensor is greater than 400° F or if the temperature sensor reaches 400° F while under test, the Quick Test mode will be disabled.

Display will indicate the following:

Key	Operation
[Bake]	Bake relay activated, DLB relay activated
[Broil]	Broil relay activated, DLB relay activated
[Keep Warm]	DLB relay activated
[Cook&Hold]	Last Diagnostic Code displayed
[Clean]	MDL relay activated (lock and unlock)
[Delay] (M1)	EEPROM Version Number displayed
[Timer]	Main Code Version Number displayed
[Clock]	All Segments on
[More +]	Even Segments on
[Less -]	Odd Segments on
[Cancel]	End Factory Test Mode

Description of Error Codes

Error diagnostic codes can only be viewed by entering the Diagnostic Code Display Mode. Each error code consists of four digits and each digit is described in the following table.

Digit	Description
1 st	Primary System: 1 – Local to the control circuit board 3 – Sensor or meat probe 4 – Control input 9 – Door lock
2 nd	Measurable: d – Diagnostic: measurable parameter c – Control related, replace control
3 rd	Secondary System: Sequential numbering
4 th	Oven Cavity: 1 – Upper oven (or single cavity oven) 2 – Lower oven c – Control specific

Diagnostic Code Display Mode must be accessed within 30 seconds of powering-up the control.

Control Testing Procedures



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Diagnostic Code Checking

Code	Description	When Checked	Detection
1c1c	Shorted key	Always	1 minute
1c31	Cancel key circuit problem	Always	1 minute
1c4c	Micro communication failure	Serial communications	5 tries
1c5c	Vcc or ground	Cook or clean active	1 minute
1c6c	EEPROM error	Cook or clean active	5 tries
1c7c	Control not calibrated	Always	5 seconds
1c8c	Cooking program error	Cook or clean active	5 tries
1d11	Runaway temp (650° F), door unlocked	Latch unlocked	5 seconds
1d21	Runaway temp (950° F), door locked	Latch locked	5 seconds
3d11	Sensor open	Cook or clean active	5 seconds
3d21	Sensor shorted	Cook or clean active	5 seconds
4d11	Door position switch not closed when door locked	Clean active	1 minute
4d51	Door switch circuit failure-neither open or closed	Always	1 minute
9d11	Latch will not lock	Latch should be locked	1 minute
9d21	Latch will not unlock	Latch should be unlocked	1 minute
9d31	Unlock state unknown, both locked and unlocked	Always	1 minute
9d41	Unlock state unknown, neither locked or unlocked	Always	1 minute

Diagnostic Code Handling

Code	Measurable	Displayed	Action Taken By Control
1c1c	Keypress	Nothing	Disables audible for key depression Disables key
1c31	Cancel key improper value	Nothing	Disables all outputs ¹
1c4c	Checksum invalid	Nothing	Disables all outputs ¹
1c5c	Vcc/Gnd at test point	Nothing	No action
1c6c	No response from EEPROM	Nothing	Disables all outputs ¹
1c7c	Calibration value out of range	Nothing	No action
1c8c	CRC invalid	Nothing	Cancels active cook functions
1d11	Sensor resistance > 2293 Ohms	Nothing	Disables all outputs
1d21	Sensor resistance > 2662 Ohms	Nothing	Disables all outputs
3d11	Sensor resistance > Infinite Ohms	BAKE flashes ²	Disables all cook functions for cavity
3d21	Sensor resistance > 0 Ohms	BAKE flashes ²	Disables all cook functions for cavity
4d11	Door switch not closed when door locked	Nothing	Disables Clean function ⁴
4d51	Door switch not open or closed	LOCK flashes ²	Disables Clean function ^{3, 4}
9d11	Lock switch not closed (Clean activated)	LOCK flashes ²	Ignore soil level selection, disables clean ⁵
9d21	Lock switch closed (Clean not activated)	LOCK on steady	Disables cooking functions ⁵
9d31	Unlock switch both locked and unlocked	Nothing	No action ⁵
9d41	Unlock switch neither locked or unlocked	Nothing	No action ⁵
9d51	Lock switch not locked or unlocked	Nothing	Disables Clean function ⁵

Control Testing Procedures

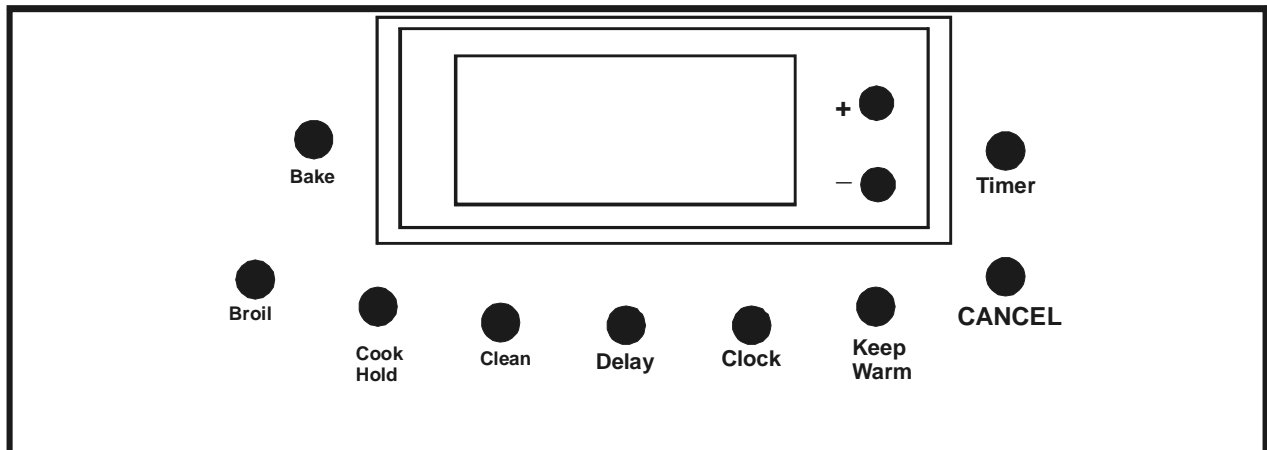


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NOTES:

- 1 "Action Taken" applies as long as the condition exists. If the condition is corrected, the control recovers.
- 2 Flash rate: 0.2 seconds on, 0.1 second off. Pressing any key clears the display until the fault clears and is re-triggered.
- 3 "Action Taken" applies until there is a POR (Power On Reset ["hard reset"]).
- 4 If the control believes the door is locked, unlock it when the function cancels and the cavity temperature cools.
- 5 Special conditions for latch faults (9dxx):
 - A known good **unlock** position is defined as when the unlock switch reads closed and lock switch reads open.
 - A known good **lock** position is defined as when the unlock switch reads open and lock switch reads closed.
 - A **faulted switch** means the switch input is reading an invalid state, neither open nor closed.
 - If at POR, the latch is not at a known good unlock position.
 - Affected DLBs (Double Line Breaks) and loads are disabled during detection.
 - If the control is in a known good unlock position and the lock switch becomes faulted:
 - The control will not fault.
 - If a function requiring latch movement is attempted while the lock switch is faulted, the control will sound an error tone and the function will be disabled.



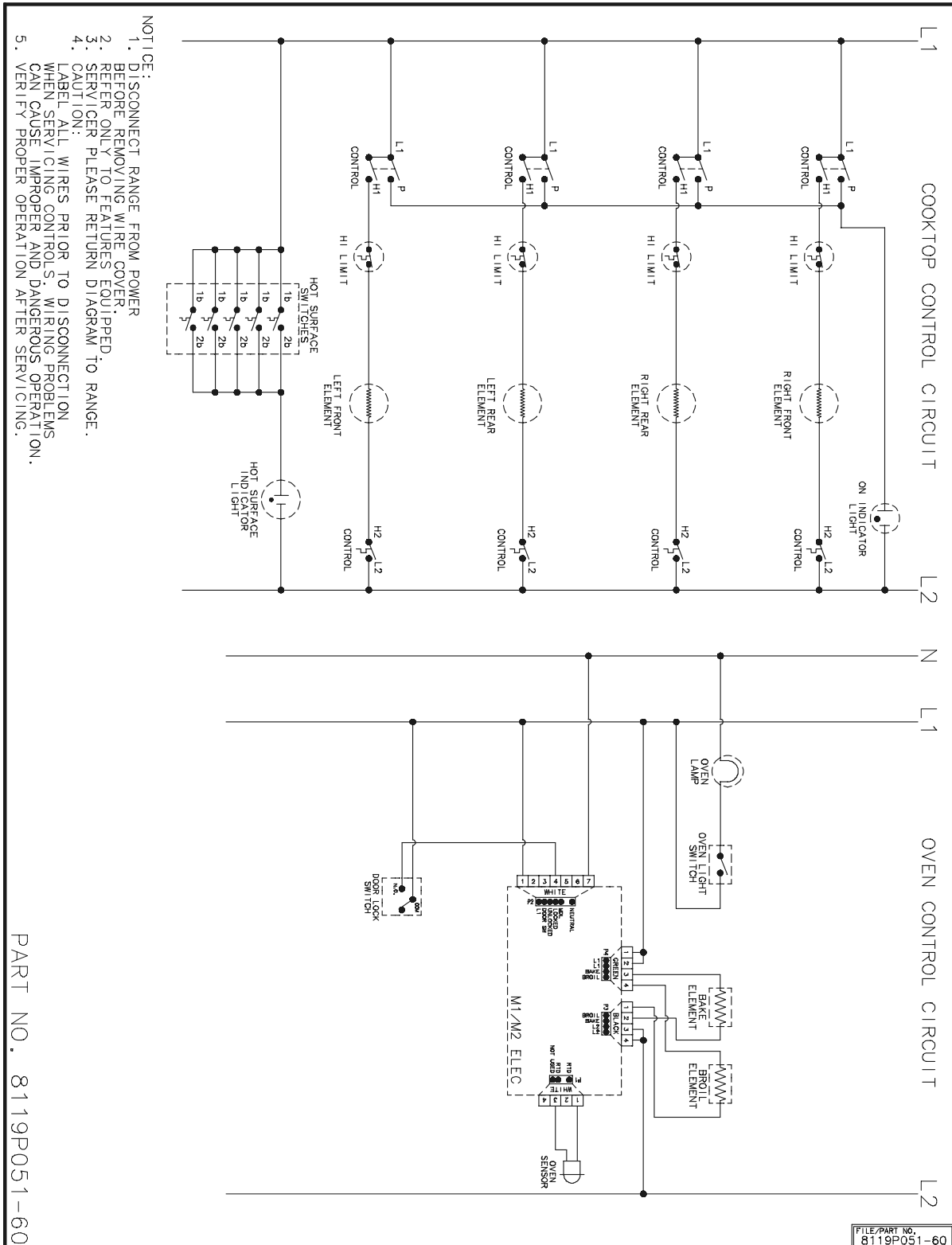
M1 Control

Wiring Diagram and Schematic



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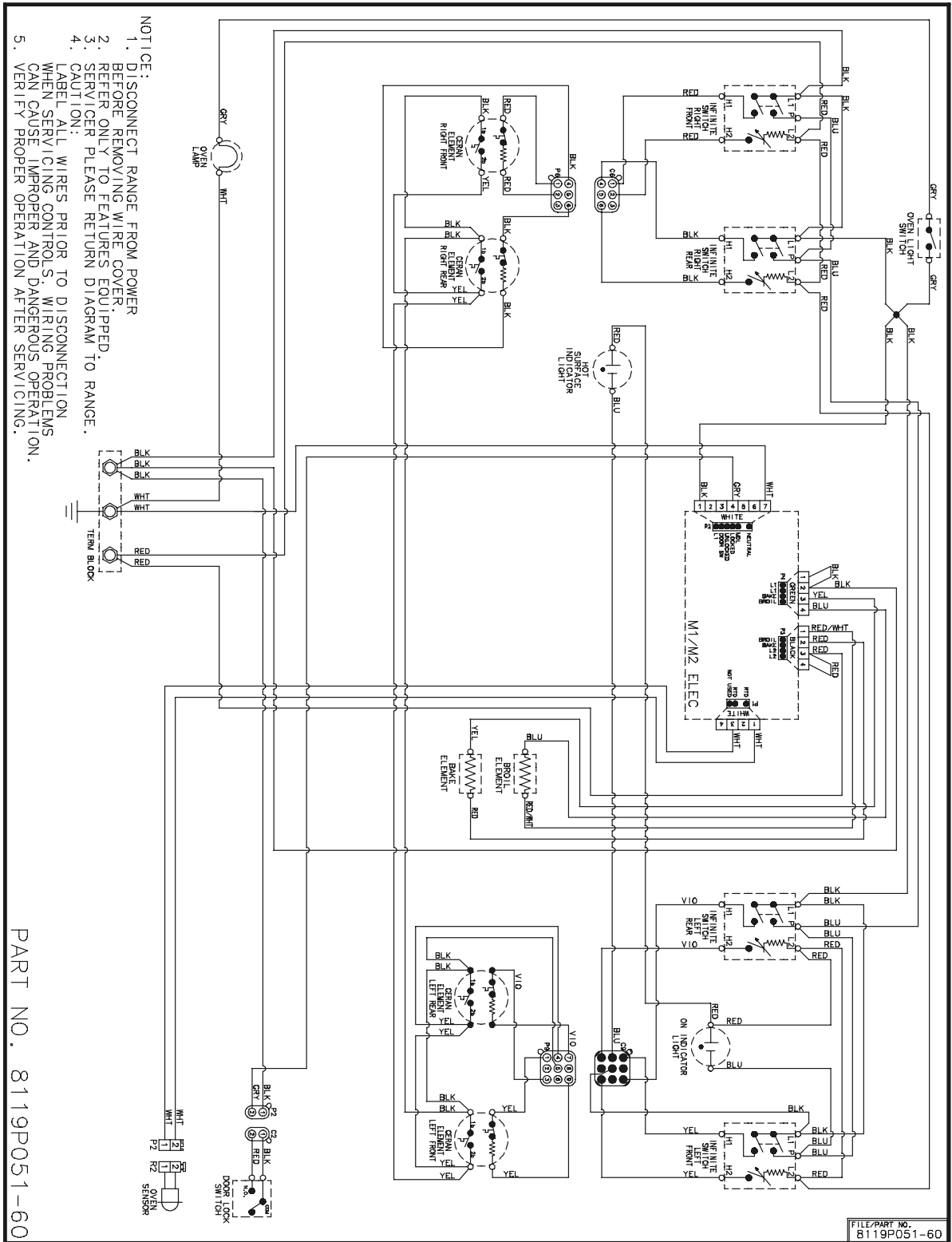
Control Circuits

Wiring Diagram and Schematic



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Wiring Diagram