FOR SERVICE TECHNICIAN'S USE ONLY

Tech Sheet **Do not discard**

⚠ DANGER



Electrical Shock Hazard

Only authorized technicians should perform diagnostic voltage measurements.

After performing voltage measurements, disconnect power before servicing.

Failure to follow these instructions can result in death or electrical shock.

⚠ WARNING



Electrical Shock Hazard

Disconnect power before servicing.

Replace all parts and panels before operating.

Failure to do so can result in death or electrical shock.

Voltage Measurement Safety Information

When performing live voltage measurements, you must do the following:

- **Verify the controls are in the off position so that the appliance does not start when energized.**
- **Allow enough space to perform the voltage measurements without obstructions.**
- **Keep other people a safe distance away from the appliance to prevent potential injury.**
- **Always use the proper testing equipment.**
- **After voltage measurements, always disconnect power before servicing.**

IMPORTANT: Electrostatic Discharge (ESD) Sensitive Electronics

ESD problems are present everywhere. ESD may damage or weaken the electronic control assembly. The new control assembly may appear to work well after repair is finished, but failure may occur at a later date due to ESD stress.

- Use an antistatic wrist strap. Connect wrist strap to green ground connection point or unpainted metal in the appliance

  -OR-

  Touch your finger repeatedly to a green ground connection point or unpainted metal in the appliance.
- Before removing the part from its package, touch the antistatic bag to a green ground connection point or unpainted metal in the appliance.
- Avoid touching electronic parts or terminal contacts; handle electronic control assembly by edges only.
- When repackaging failed electronic control assembly in antistatic bag, observe above instructions.

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PRECAUTIONS TO BE OBSERVED BEFORE AND DURING SERVICING TO AVOID POSSIBLE EXPOSURE TO EXCESSIVE MICROWAVE ENERGY

a. Do not operate or allow the oven to be operated with the door open.

b. Make the following safety checks on all ovens to be serviced before activating the magnetron or other microwave source, and make repairs as necessary:

1. Interlock Operation
2. Proper Door Closing
3. Seal and Sealing Surfaces (Arcing, Wear and Other Damage)
4. Damage to or Loosening of Hinges and Latches
5. Evidence of Dropping or Abuse

c. Before turning on microwave power for any service test or inspection within the microwave generating compartments, check the magnetron, waveguide or transmission line, and cavity for proper alignment, integrity and connections.

d. Any defective or misadjusted components in the interlock, monitor, door seal, and microwave generation and transmission systems shall be repaired, replaced, or adjusted by procedures described in service manual before the oven is released to the owner.

e. A microwave leakage check to verify compliance with the CSA should be performed on each oven prior to release to the owner.

f. Do not attempt to operate the oven if the door glass is broken.

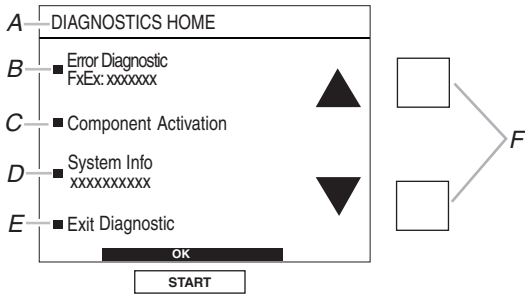
Diagnostics

Unplug oven or disconnect power before performing the following checks:

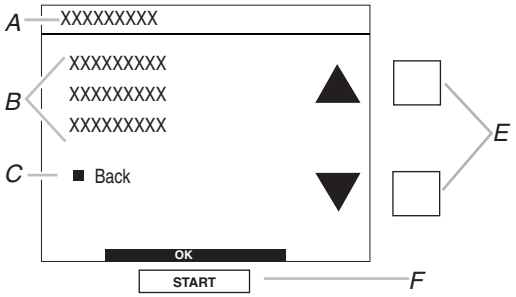
- A potential cause of a control not functioning is corrosion on connections. Observe connections and check for continuity with an ohmmeter.
- All tests/checks should be made with a VOM or DVM having a sensitivity of 20,000Ω per volt DC or greater.
- Check all connections before replacing components, looking for broken or loose wires, failed terminals, or wires not pressed into connectors far enough. Damaged harness must be entirely replaced. Do not rework a harness.
- Resistance checks must be made with power cord unplugged from outlet, and with wiring harness or connectors disconnected.

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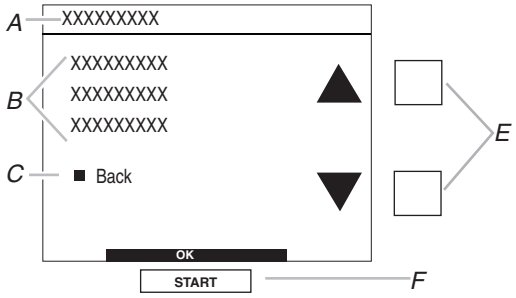
Diagnostics Menu



A. Screen title
B. Error diagnostic
C. Component activation
D. System information
E. Exit diagnostic
F. Up/down navigation button



A. Screen title
B. Troubleshooting tips, Error history, List of Components, List of information with some editable values
C. Back
D. Home
E. Up/down navigation buttons
F. Start button



A. Screen title
B. Checks, List, Component information, Off/On for the selected component, Edit values screen
C. Back
D. Home
E. Up/down navigation arrows
F. Start button

To Enter Diagnostics Mode:

Before proceeding with any corrective action, perform the following steps to enter the Diagnostics mode.

1. Enter Diagnostics mode and verify error codes by pressing any 3 keys 3 times within 8 seconds.
2. If control does not enter Diagnostics, repeat Step 1.

General Procedure: Diagnostic Tests

1. Plug in oven or connect power.
2. Enter Diagnostics Home Menu.
3. Press the Up/Down navigation buttons to highlight the Component Activation feature. Press START.
4. Press the Up/Down navigation buttons to highlight the Bake element. Press START.
5. Check the information referring to the component.
6. Press the Up/Down navigation buttons to highlight the Back function, and select it by pressing START to recall the previous menu.
7. Repeat steps 4 - 6 for the other components.
8. From the Diagnostics Home Menu, press the Up/Down navigation buttons to highlight the Error Diagnostic feature. Press START.
9. Select Error History by pressing the Up/Down navigation buttons and then START. Use the Up/Down navigation buttons to check all the recorded errors.
10. Press the Up/Down navigation buttons to highlight the Back function. Press START to recall the previous menu.
11. Select the System Information feature by pressing the Up/Down navigation buttons and START.
12. System Information allows modification to the oven model and size.
13. Press the Up/Down navigation buttons to highlight the Back function, and select it by pressing START to return to the Diagnostic Home Menu.

Programming Model Number After User Interface Replacement

Service Part (If control has not been programmed with a model number):

1. Unplug oven or disconnect power.
2. Replace User Interface.
3. Replace all parts and panels before operating.
4. Plug in oven or reconnect power.
5. The System Information Menu will automatically appear with a list of model numbers.
6. Identity and select the correct model number from the menu list.
7. Use the up and down arrow keys to navigate to the correct model number and press OK once highlighted.
8. Selection is saved.
9. Unplug oven or disconnect power.
10. Wait for at least 30 seconds.
11. Plug in oven or reconnect power.
12. New Model number is saved.

To Verify new model number:

1. Enter Diagnostics Mode.
2. Navigate to the System Info menu and press ok.
3. Model Number will appear in the menu list.
4. Exit diagnostics by highlighting the back button to the main menu and then highlighting Exit Diagnostics and pressing OK.

To Change Model number previously saved:

1. Enter Diagnostics Mode.
2. Navigate to the System Info menu and press OK.
3. Model Number will appear in the menu list.
4. Highlight Model Number and press OK.
5. Exit diagnostics by highlighting the back button to the main menu and then highlighting Exit Diagnostics and pressing OK.
6. Selection is saved.
7. Unplug oven or disconnect power.
8. Wait for at least 30 seconds.
9. Plug in oven or reconnect power.
10. New Model number is saved.

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Failure/Error Display Codes

FAILURE (Leftmost 2 Clock Digits)	ERROR (Rightmost 2 Clock Digits)	LIKELY FAILURE CONDITION
F0 Default	**E0**	No error(s) found
SUGGESTED CORRECTIVE ACTION PROCEDURE		
(Good) No corrective action required		
F1 Internal	**E0**	Check oven user interface
MESSAGE: The oven is experiencing a problem and can no longer be used.		
SUGGESTED CORRECTIVE ACTION PROCEDURE		
PROCEDURE: Before proceeding, press any three keys three times within 8 seconds to enter the Diagnostic Mode. When in Diagnostic Mode, press ERROR DIAGNOSTIC to verify the error codes. **1.** Check for proper voltage input at the user interface board connection J900-11 to J900-1 by completing the following steps. **2.** Unplug oven or disconnect power. **3.** Connect voltage measurement equipment. **4.** Plug in oven or reconnect power and measure voltage. Confirm voltage reading is +14 VDC. If it is, unplug oven or disconnect power and go to Step 7. If it is not, go to Step 5. **5.** Unplug oven or disconnect power. **6.** Replace oven user interface board. **7.** Replace all parts and panels before operating. **8.** Plug in oven or reconnect power. **9.** Program model ID. **10.** Program cavity size. **11.** Verify operation is normal. Re-enter the Diagnostics Mode and complete checks.		
F1 Internal	**E1**	Oven appliance manager (not applicable for lower oven on double oven models)
MESSAGE: The Oven is experiencing a problem and can no longer be used.		
SUGGESTED CORRECTIVE ACTION PROCEDURE		
PROCEDURE: Before proceeding, press any three keys three times within 8 seconds to enter the Diagnostic Mode. When in Diagnostic Mode, press ERROR DIAGNOSTIC to verify the error codes. **1.** Check for proper voltage input at the appliance manager connection P6-4 to P6-5 by completing the following steps. **2.** Unplug oven or disconnect power. **3.** Connect voltage measurement equipment. **4.** Plug in oven or reconnect power and measure voltage. Confirm voltage reading is +14 VDC. If it is, unplug oven or disconnect power and go to Step 7. If it is not, go to Step 5. **5.** Unplug oven or disconnect power. **6.** Replace oven user interface board. **7.** Replace all parts and panels before operating. **8.** Plug in oven or reconnect power. **9.** Program model number. **10.** Power unit down for 30 seconds and allow normal power up. **11.** Verify operation is normal. Re-enter the Diagnostics Mode and complete checks and verify model number.		
F1 Internal	**E2**	Check microwave oven user interface manager
MESSAGE: The microwave oven is experiencing a problem and can no longer be used.		
SUGGESTED CORRECTIVE ACTION PROCEDURE		
PROCEDURE: Before proceeding, press any three keys three times within 8 seconds to enter the Diagnostic Mode. When in Diagnostic Mode, press ERROR DIAGNOSTIC to verify the error codes. **1.** Unplug oven or disconnect power. **2.** Replace microwave oven user interface board. **3.** Replace all parts and panels before operating. **4.** Plug in oven or reconnect power. **5.** Verify operation is normal. Re-enter the Diagnostics Mode and complete checks.		

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FAILURE (Leftmost 2 Clock Digits)	ERROR (Rightmost 2 Clock Digits)	LIKELY FAILURE CONDITION
F1 Internal	**E3**	Check microwave oven appliance manager

MESSAGE: The microwave oven is experiencing a problem and can no longer be used.

SUGGESTED CORRECTIVE ACTION PROCEDURE

PROCEDURE: Before proceeding, press any three keys three times within 8 seconds to enter the Diagnostic Mode. When in Diagnostic Mode, press ERROR DIAGNOSTIC to verify the error codes.

1. Unplug oven or disconnect power.
2. Replace microwave oven appliance manager.
3. Replace all parts and panels before operating.
4. Plug in oven or reconnect power.
5. Verify operation is normal. Re-enter the Diagnostics Mode and complete checks.

F1 Internal	**E4**	Check microwave oven power relay

MESSAGE: The microwave oven is experiencing a problem and can no longer be used.

SUGGESTED CORRECTIVE ACTION PROCEDURE

PROCEDURE: Before proceeding, press any three keys three times within 8 seconds to enter the Diagnostic Mode. When in Diagnostic Mode, press ERROR DIAGNOSTIC to verify the error codes.

1. Unplug oven or disconnect power.
2. Replace microwave oven power relay.
3. Replace all parts and panels before operating.
4. Plug in oven or reconnect power.
5. Verify operation is normal. Re-enter the Diagnostics Mode and complete checks.

F1 Internal	**E5**	Check microwave oven inverter

MESSAGE: The microwave oven is experiencing a problem and can no longer be used.

SUGGESTED CORRECTIVE ACTION PROCEDURE

PROCEDURE: Before proceeding, press any three keys three times within 8 seconds to enter the Diagnostic Mode. When in Diagnostic Mode, press ERROR DIAGNOSTIC to verify the error codes.

1. Check for proper voltage input at the two wires in connector CN702 by completing the following steps.
2. Unplug oven or disconnect power.
3. Connect voltage measurement equipment.
4. Plug in oven or reconnect power and measure voltage. Confirm voltage reading is 120V. If it is, unplug oven or disconnect power and go to Step 7. If it is not, go to Step 5.
5. Unplug oven or disconnect power.
6. Replace microwave oven inverter.
7. Replace all parts and panels before operating.
8. Plug in oven or reconnect power.
9. Verify operation is normal. Re-enter the Diagnostics Mode and complete checks.

F1 Internal	**E6**	Check microwave oven wave guide thermistor

MESSAGE: The microwave oven is experiencing a problem and can no longer be used.

SUGGESTED CORRECTIVE ACTION PROCEDURE

PROCEDURE: Before proceeding, press any three keys three times within 8 seconds to enter the Diagnostic Mode. When in Diagnostic Mode, press ERROR DIAGNOSTIC to verify the error codes.

1. Unplug oven or disconnect power.
2. Replace microwave oven wave guide thermistor.
3. Replace all parts and panels before operating.
4. Plug in oven or reconnect power.
5. Verify operation is normal. Re-enter the Diagnostics Mode and complete checks.

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FAILURE (Leftmost 2 Clock Digits)	ERROR (Rightmost 2 Clock Digits)	LIKELY FAILURE CONDITION
F2 Keypad	**E0**	Keypad disconnected
	E1	Stuck key/Shorted key

MESSAGE: The oven is experiencing a problem and can no longer be used.

SUGGESTED CORRECTIVE ACTION PROCEDURE

PROCEDURE: Before proceeding, press any three keys three times within 8 seconds to enter the Diagnostic Mode. When in Diagnostic Mode, press ERROR DIAGNOSTIC to verify the error codes.

1. Check for proper voltage input at the user interface board connection J900-11 to J900-1 by completing the following steps.
2. Unplug oven or disconnect power.
3. Connect voltage measurement equipment.
4. Plug in oven or reconnect power and measure voltage. Confirm voltage reading is +14 VDC. If it is, unplug oven or disconnect power and go to Step 25. If it is not, go to Step 5.
5. Unplug oven or disconnect power.
6. Check that the keypad is firmly connected.
7. Replace all parts and panels before operating.
8. Plug in oven or reconnect power.
9. Observe for longer than 1 minute.
10. If error remains, then go to Step 11.
11. Unplug oven or disconnect power.
12. Replace keypad.
13. Replace all parts and panels before operating.
14. Plug in oven or reconnect power.
15. Observe for longer than 1 minute.
16. If error remains, then go to Step 17.
17. Unplug oven or disconnect power.
18. Replace keypad communication harness.
19. Replace all parts and panels before operating.
20. Plug in oven or reconnect power.
21. Observe for longer than 1 minute.
22. If error remains, go to Step 23.
23. Unplug oven or disconnect power.
24. Replace oven user interface.
25. Replace all parts and panels before operating.
26. Plug in oven or reconnect power. Wait for 1 minute.
27. Verify operation is normal. Re-enter the Diagnostics Mode and complete checks.

F2 Internal	**E2**	LED error

1 LED: Call for service

2 LED: The oven is experiencing a problem and can no longer be used.

F3 Sensors	**E3**	Meat probe shorted

MESSAGE: The meat probe is experiencing a problem and can no longer be used. Other features will work normally.

SUGGESTED CORRECTIVE ACTION PROCEDURE

PROCEDURE: Before proceeding, press any three keys three times within 8 seconds to enter the Diagnostic Mode. When in Diagnostic Mode, press ERROR DIAGNOSTIC to verify the error codes.

1. Verify temperature reading on sensor in Diagnostic Mode oven/upper oven/lower oven appliance manager.
2. From the diagnostic main menu, press STATUS SCREEN and then OVEN SENSORS. If dashes appear in "T. Sensor reading" or if "T. Sensor status" displays "Out of Range," proceed to Step 3.
3. Unplug oven or disconnect power.
4. Remove back panels and ensure the indicated temperature sensor is plugged in properly and fully inserted.
   If it is not, plug it into the connector and go to Step 11.
   If it is plugged in, go to Step 5.
5. Check connector P2 on the oven/upper oven/lower oven appliance manager. Make sure it is plugged in and fully seated.

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FAILURE (Leftmost 2 Clock Digits)	ERROR (Rightmost 2 Clock Digits)	LIKELY FAILURE CONDITION

6. Visually inspect the wires between P2 on the oven/upper oven/lower oven appliance manager and the indicated temperature sensor. Make sure the wires are not cut or pinched. If the wires appear to be intact, unplug the P2 connector on the oven/upper oven/lower oven appliance manager. Go to Step 7.
7. Measure indicated temperature sensor resistance value (measure between appropriate P2 connector pins). For the following sensors, the resistance value should read:

   Upper Oven Sensor - Between 931 and 2869Ω (Approximately 1080Ω at room temperature)

   Lower Oven Sensor - Between 931 and 2869Ω (Approximately 1080Ω at room temperature)

   Meat Probe Sensor - Between 1,300 and 103,000Ω (Approximately 59,000Ω at room temperature) (Insert meat probe into meat probe jack located inside the oven cavity prior to reading resistance.)

   If the indicated temperature sensor does not meet these requirements, go to Step 8.

   If the temperature sensor does meet the requirements, go to Step 11.
8. For UPPER and LOWER sensors:

   Replace appropriate temperature sensor. Repeat Step 7.

   If the requirements are not met, replace sensor harness. Repeat Step 7.

   For MEAT PROBE sensor:

   If the requirements are not met, replace sensor harness. Repeat Step 7.

   If the requirements are still not met, replace the meat probe jack. Repeat Step 7.

   If the meat probe sensor is still not meeting the requirements, go to Step 9.
9. Replace the oven/upper oven/lower oven appliance manager. Ensure all connectors are properly placed and firmly connected.
10. Ensure all wiring connections are made.
11. Replace all parts and panels before operating.
12. Plug in oven or reconnect power.
13. Observe for longer than 1 minute.
14. Enter the Diagnostics Mode and read sensor for upper oven sensor and meat probe on immediate display.

F4 **Microwave sensors**	**E1**	Convection thermistor
	E2	Internal temperature sensor
	E4	Humidity sensor

SUGGESTED CORRECTIVE ACTION PROCEDURE

PROCEDURE: Before proceeding, press any three keys three times within 8 seconds to enter the Diagnostic Mode. When in Diagnostic Mode, press ERROR DIAGNOSTIC to verify the error codes.

1. While in Diagnostics Mode, press STATUS SCREEN and SENSOR.
2. Verify in Diagnostics the temperature readings on sensor.
3. If a sensor reading ("CONV. THERMISTOR," "INT. TEMP. DOOR AND SENSOR," "HUMIDITY SENSOR") on the display shows (---) dashes, the sensor is not connected or is ... otherwise inoperable. Proceed to Step 4. If sensor that shows dashes is the ambient sensor, proceed to Step 14.
4. Unplug microwave oven or disconnect power.
5. Remove top panel to gain access to the microwave control system.
6. Ensure the convection thermistor (P6) and the humidity sensor (P4) are plugged in properly to the appliance manager. If not, plug in the connector and proceed to Step 15. If connectors are plugged in, proceed to Step 7.
7. Visually inspect the wires between P6 and convection thermistor from the appliance manager to the back of the unit to ensure they are not pinched or cut. If wires appear to be intact, unplug connector and proceed to Step 8.
8. Measure indicated sensors resistance value from the P6 connector. For this sensor, the resistance value should read 231kΩ at 77°F (25°C).
9. Visually inspect the wires between P4 and humidity sensor from the appliance manager to the front of the unit to ensure they are not pinched or cut. If wires appear to be intact, unplug connector and proceed to Step 10.
10. Measure indicated sensors resistance value from the P4 connector. For this sensor, the resistance value should read 2.8kΩ at 77°F (25°C) (between pins 3 and 1 or between pins 3 and 2).
11. If indicated temperature sensor meets these requirements, proceed to Step 12. If indicated temperature sensor does not meet these requirements, proceed to Step 13.
12. Replace convection thermistor. Ensure the convection thermistor is properly inserted and plugged into P6. Continue to Step 15.
13. Replace humidity sensor. Ensure the humidity sensor is properly inserted and plugged into P4. Continue to Step 15.
14. Replace the microwave appliance manager. Ensure all connectors are properly placed and firmly connected.
15. Replace all parts and panels before operating.
16. Plug in microwave oven or reconnect power.
17. Observe for longer than 1 minute.
18. Enter into the Diagnostics mode and press key "6" to scroll to the sensor display. Read the sensor reading for the 3 sensors, ensuring they are reading correctly.

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FAILURE (Leftmost 2 Clock Digits)	ERROR (Rightmost 2 Clock Digits)	LIKELY FAILURE CONDITION
F4 Sensor	**E5**	Weight sensor not within normal value

MESSAGE: The microwave oven is experiencing a problem and can no longer be used.

SUGGESTED CORRECTIVE ACTION PROCEDURE

PROCEDURE: Before proceeding, press any three keys three times within 8 seconds to enter the Diagnostic Mode. When in Diagnostic Mode, press ERROR DIAGNOSTIC to verify the error codes.

1. Unplug oven or disconnect power.
2. Replace microwave oven weight sensor.
3. Replace all parts and panels before operating.
4. Plug in oven or reconnect power.
5. Verify operation is normal. Re-enter the Diagnostics Mode and complete checks.

F4 Sensor	**E6**	Microwave wave-guide heat sensor failure

MESSAGE: The microwave oven is experiencing a problem and can no longer be used.

SUGGESTED CORRECTIVE ACTION PROCEDURE

PROCEDURE: Before proceeding, press any three keys three times within 8 seconds to enter the Diagnostic Mode. When in Diagnostic Mode, press ERROR DIAGNOSTIC to verify the error codes.

1. Unplug oven or disconnect power.
2. Replace microwave oven wave guide thermistor.
3. Replace all parts and panels before operating.
4. Plug in oven or reconnect power.
5. Verify operation is normal. Re-enter the Diagnostics Mode and complete checks.

F4 Sensor	**E7**	Microwave probe failure

MESSAGE: The microwave oven is experiencing a problem and can no longer be used.

SUGGESTED CORRECTIVE ACTION PROCEDURE

PROCEDURE: Before proceeding, press any three keys three times within 8 seconds to enter the Diagnostic Mode. When in Diagnostic Mode, press ERROR DIAGNOSTIC to verify the error codes.

1. Unplug oven or disconnect power.
2. Replace microwave oven probe.
3. Replace all parts and panels before operating.
4. Plug in oven or reconnect power.
5. Verify operation is normal. Re-enter the Diagnostics Mode and complete checks.

F5	**EO**	Door and latch switch do not agree
	E1	Door latch not operating

MESSAGE: The oven is experiencing a problem and can no longer be used.

SUGGESTED CORRECTIVE ACTION PROCEDURE

PROCEDURE: Before proceeding, press any three keys three times within 8 seconds to enter the Diagnostic Mode. When in Diagnostic Mode, press ERROR DIAGNOSTIC to verify the error codes.

To Verify Door Switch:

1. While in Diagnostics, press STATUS SCREEN, then DOOR&LATCH on the oven/upper oven/lower oven display. Open the oven/upper oven/lower oven door. The "Door Switch" status on the display should toggle between "OPEN" and "CLOSED" as the door opens and closes.

   If the status on the display did not toggle, go to Step 2.

   If the status did not toggle after replacing the door switch, go to Step 4.

   If the status did not toggle after replacing the door switch harness, go to Step 10.

   If the status did toggle, door switch is operating correctly.
2. Check for proper voltage input at the user interface board connection J900-11 to J900-1 by completing the following steps.
3. Unplug oven or disconnect power.
4. Connect voltage measurement equipment.
5. Plug in oven or reconnect power and measure voltage. Confirm voltage reading is +14 VDC. If it is, unplug oven or disconnect power and go to Step 12. If it is not, go to Step 6.
6. Unplug oven or disconnect power.

FOR SERVICE TECHNICIAN'S USE ONLY

FAILURE (Leftmost 2 Clock Digits)	ERROR (Rightmost 2 Clock Digits)	LIKELY FAILURE CONDITION

7. Replace door switch. (If door switch is integral to the door/latch motor assembly, replace the entire door/latch motor assembly.) Go to Step 12.
8. Unplug oven or disconnect power.
9. Check integrity of all harness wires and connections between the appliance manager and the door/latch assembly. Ensure no shorted wires to chassis.
   If the wiring is pinched or damaged, replace the door switch harness. Go to Step 12.
   If the wiring is good, go to Step 12.
10. Unplug oven or disconnect power.
11. Replace oven/upper oven/lower oven appliance manager. Go to Step 12.
12. Replace all parts and panels before operating.
13. Plug in oven or reconnect power.
14. Enter into Diagnostics Mode and complete checks. Repeat Step 1 above.

To Verify Door Latch Switch/Motor Assembly:

1. While in Diagnostics, on the oven/upper oven/lower oven display, press COMPONENT ACTIVATION, LATCH MOTOR, and TURN ON within the first 120 seconds of powering up to cycle the latch motor to the locked position. "CLOSED" should be displayed in the "Latch Switch" row when locked. Press TURN OFF to cycle the latch motor to the unlocked position. The "Latch Switch" row should toggle to "OPEN" when door is unlocked.
   If the display did not toggle, go to Step 2.
   If motor runs continuously, wait until motor reaches the unlocked position, open the door, press the BACK key, go to Step 2.
   If motor did not run, go to Step 13.
   If the display did not toggle after replacing the door latch motor assembly, go to Step 4.
   If the display did not toggle after replacing the door latch switch harness, go to Step 10.
   If the display did toggle, door latch switch is operating correctly.
2. Check table for proper voltage input at P1-5 to P1-4 (latch switch) and Neutral to P8-5 (latch motor) when latch motor should be running (within 20 seconds of pressing Self Clean key) by completing the following steps.
3. Unplug oven or disconnect power.
4. Connect voltage measurement equipment.
5. Plug in oven or reconnect power and measure voltage and confirm voltage reading is 120V, for both measures. If it is not, go to Step 6.
6. Unplug oven or disconnect power.
7. Replace door latch motor assembly. Go to Step 12.
8. Unplug oven or disconnect power.
9. Check integrity of all harness wires and connections between the oven/upper oven/lower oven appliance manager and the door latch switch. Ensure no wires are pinched or damaged.
   If the wiring is damaged, replace the door latch switch harness. Go to Step 12.
   If the wiring is good, go to Step 17.
10. Unplug oven or disconnect power.
11. Replace oven/upper oven/lower oven appliance manager. Go to Step 17.
12. Unplug oven or disconnect power.
13. Check integrity of latch mechanism, ensuring alignment of latch assembly and door slot. Correct any mechanical malfunction.
14. Check continuity of the latch motor and electrical connections between the oven/upper oven/lower oven appliance manager P8 and motor.
15. If continuity is present, replace appliance manager. Go to Step 17.
16. If continuity is not present, go to Step 17.
17. Replace all parts and panels before operating.
18. Plug in oven or reconnect power.
19. Enter into Diagnostics Mode and complete checks. Repeat Step 1 above.

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FAILURE (Leftmost 2 Clock Digits)	ERROR (Rightmost 2 Clock Digits)	LIKELY FAILURE CONDITION
F6	**EO**	Lost communication

MESSAGE: The oven is experiencing a problem and can no longer be used.

SUGGESTED CORRECTIVE ACTION PROCEDURE

PROCEDURE: Before proceeding, press any three keys three times within 8 seconds to enter the Diagnostic Mode. When in Diagnostic Mode, press ERROR DIAGNOSTIC to verify the error codes.

While in the Diagnostic Mode, press Component Activation. Ensure AM software, USIF software and EEPROM versions appear on the display. If AM software version does not appear, USIF and AM may not be communicating.

Verify this for the lower oven UI and for the microwave (upper oven) UI.

The display will show the AM software version for the lower oven appliance manager and for the microwave appliance manager, as well as EEPROM version for the microwave appliance manager.

If the display is not displaying the lower oven AM Software, go to "Display Is Not Displaying the Oven AM Software Version."

If the display is not displaying the microwave (upper oven) AM software version and EEPROM, go to "Display Is Not Displaying the Microwave Oven AM Software and EEPROM Versions."

If the display is displaying an error, go to "Display Is Displaying an Error."

Display Is Not Displaying the Oven AM Software Version:

1. Check for proper voltage input at P6-4 to P6-5 by completing the following steps.
2. Check for proper voltage input at the user interface board connection J900-11 to J900-1 by completing the following steps.
3. Unplug oven or disconnect power.
4. Connect voltage measurement equipment.
5. Plug in oven or reconnect power and measure voltage. Confirm voltage reading is +14 VDC. If it is, unplug oven or disconnect power and go to Step 16. If it is not, go to Step 6.
6. Unplug oven or disconnect power.
7. Check both fuses in the microwave module and the fuse located next to the appliance manager. If either is open or disconnected, it will break contact for the communication line and cause this error.
8. Check microwave module appliance manager for damage on corners of board. Broken traces can cause communications failure.
9. Check the harness and probe jack for a short to ground.
10. Replace all parts and panels. Unplug meat probe and plug in oven or reconnect power. If error goes away, the meat probe sensing line is grounded.
11. Unplug oven or disconnect power.
12. Open the back panels and make sure the P6 connector on the appliance manager and the P2 connector on the user interface are fully inserted.

    If not, plug in connectors and go to Step 14.

    If fully plugged in, go to Step 13.
13. Visually inspect all of the wires between P6 on the appliance manager and P2 on the user interface. Make sure the wires are not cut or pinched. If the wires appear to be intact, perform a continuity check between P6-1 of the appliance manager and P2-1 of the user interface board. Do the same for P6-2 (AM) to P2-2 (UI), P6-4 (AM) to P2-4 (UI), and P6-5 (AM) to P2-5 (UI). All of the checks should result in a reading of less than 5Ω.

    If any of these checks fail, go to Step 15.

    If these checks pass, reconnect P2, then go to Step 16.
14. Replace the appliance manager. Ensure all wiring connections are made. Go to Step 16.
15. Replace the wiring harness (signal). Ensure all wiring connections are made. Go to Step 16.
16. Replace all parts and panels before operating.
17. Plug in oven or reconnect power.
18. Observe for longer than 1 minute.
19. If the error does not appear, initiate a Bake cycle. Let the cycle run at least 1 minute.

    If no error occurs, cancel the cycle. The problem has been repaired.

    If the error occurs again, restart the troubleshooting procedure at Step 1 (except in Step 4 replace the user interface board if the appliance manager has already been replaced).

FOR SERVICE TECHNICIAN'S USE ONLY

FAILURE (Leftmost 2 Clock Digits)	ERROR (Rightmost 2 Clock Digits)	LIKELY FAILURE CONDITION

Display Is Not Displaying the Microwave Oven AM Software and EEPROM Versions:

1. Check for proper voltage input at 1P1 and 2P1 on Microwave Oven Appliance Manager module by completing the following steps. Verify if operation is normal.
2. Unplug oven or disconnect power.
3. Connect voltage measurement equipment.
4. Plug in oven or reconnect power and measure voltage. Confirm voltage reading is +14 VDC. If it is, unplug oven or disconnect power and go to Step 12. If it is not, go to Step 5.
5. Unplug oven or disconnect power.
6. Open the back panels and make sure the P2 and U3 connectors are fully inserted on the user interface and the wide interface board. Make sure the P1 connector on the wide interface board and the P10 connector on the microwave oven appliance manager are inserted.

   If the P2 (MWO UI) and U3 (wide interface board) are plugged in, go to Step 7.

   If the P2 (MWO UI) and U3 (wide interface board) connectors are not connected, plug in the connectors and go to Step 10.

   If the P1 (wide interface board) to P10 (MWO appliance manager) connectors are not connected, plug in the connectors and go to Step 10.

   If the P1 (wide interface board) to P10 (MWO appliance manager) are plugged in, go to Step 8.
7. Visually inspect all wires between P2 on the microwave users interface and U3 on the wide interface board. Make sure the wires are not cut or pinched. If the wires appear to be intact, perform a continuity check between P2-1 and U3-1 of the user interface and the wide interface board. Complete for P2-2 (UI) to U3-2 (wide interface board), P2-4 (UI) to U3-4 (wide interface board), and P2-5 (UI) to U3-5 (wide interface board). All measurements should be less than 5Ω.

   If any of these checks fail, go to Step 10.

   If these checks pass, reconnect P2 and go to Step 8.
8. Visually inspect all wires between P1 on the wide interface board and P10 on the microwave appliance manager. Make sure the wires are not cut or pinched. If the wires appear to be intact, perform a continuity check between P1-1 on the wide interface board to P10-1 on the microwave appliance manager, continuing for P1-2 (wide interface board) to P10-2 (microwave appliance manager), P1-3 to P10-3, P1-4 to P10-4, P1-5 to P10-5 and finally P1-6 to P10-6. All the measurements should be less than 5Ω.

   If any of these checks fail, go to Step 10.

   If these checks pass, reconnect P1 and to Step 9.
9. Replace the wide interface board. Ensure all connectors are properly inserted. Go to Step 8. If the wide interface board has already been replaced and the error has not been corrected, go to Step 11.
10. Replace wiring harness (between P1 and P10) and go to Step 12.
11. Replace the microwave appliance manager. Ensure all connectors are properly inserted. Go to Step 12.
12. Replace all parts and panels before operating.
13. Plug in oven or reconnect power.
14. Observe for longer than 1 minute to determine if error has been repaired.
15. If error does not appear, initiate a microwave cycle. Let the cycle run for at least 1 minute.

    If no error occurs, cancel the cycle, the problem has been repaired.

    If error occurs, restart the troubleshooting procedure at Step 1. At Step 9, replace the microwave user interface board if the wide interface board and/or microwave appliance manager have already been replaced.

    If both are replaced, the problem has been repaired.

Display Is Displaying an Error:

1. Unplug oven or disconnect power.
2. Open the back panels and make sure the P2 connector on the UI is fully inserted.

   If it is not, plug the connectors in and go to Step 4.

   If it is plugged in, go to Step 3.
3. Replace the UI. Ensure all connectors are properly inserted. Go to Step 5.
4. Replace the wiring harness (signal) and proceed to Step 5.
5. Replace all parts and panels before operating.
6. Plug in oven or reconnect power.
7. Observe for longer than 1 minute to determine if error has been repaired.

FOR SERVICE TECHNICIAN'S USE ONLY

FAILURE (Leftmost 2 Clock Digits)	ERROR (Rightmost 2 Clock Digits)	LIKELY FAILURE CONDITION
F6	**E1**	Cook oven over temperature
	E2	Clean oven over temperature
	E3 **Not for built-in ovens**	Mini oven/warm drawer over temperature

MESSAGE: The oven is experiencing a problem and can no longer be used.

SUGGESTED CORRECTIVE ACTION PROCEDURE

PROCEDURE: Before proceeding, press any three keys three times within 8 seconds to enter the Diagnostic Mode. When in Diagnostic Mode, press ERROR DIAGNOSTIC to verify the error codes.

1. If oven is off, turn oven on and inspect all of the elements, convect, bake and broil. Visually inspect all elements to ensure they are not operating.
2. While in Diagnostics Mode, cycle the bake element. Press COMPONENT ACTIVATION, BAKE, TURN ON/TURN OFF. Ensure bake relay energizes by inspecting the bake element.
   - If bake relay does not turn on and off, go to Step 11.
   - If the element does not cycle with the relay, go to Step 5.
   - If the element does cycle on and off, go to Step 3.
3. While in Diagnostics Mode, cycle the broil element. Press COMPONENT ACTIVATION, BROIL, TURN ON/TURN OFF. Ensure broil relay energizes by inspecting the broil element.
   - If broil relay does not turn on and off, go to Step 11.
   - If the element does not cycle with the relay, go to Step 5.
   - If the element does cycle on and off, go to Step 4.
4. While in Diagnostic Mode, cycle the convect element. Press COMPONENT ACTIVATION, CONVECT, TURN ON/TURN OFF.
   - If convect relay does not turn on and off, go to Step 11.
   - If the element does not cycle with the relay, go to Step 5.
5. Check for proper voltage input at P6-4 to P6-5 by completing the following steps.
6. Unplug oven or disconnect power.
7. Connect voltage measurement equipment.
8. Plug in oven or reconnect power and measure voltage. Confirm voltage reading is +14 VDC. If it is, unplug oven or disconnect power and go to Step 15. If it is not, go to Step 9.
9. Unplug oven or disconnect power.
10. Check integrity of all harness wires and connections between the appliance manager and the electric elements. Ensure all wiring and connections between the appliance manager and elements, and the appliance manager and user interface are intact and properly seated and that no wires are shorted or damaged.
    - If the wiring is good, go to Step 12.
    - If the wiring connections are damaged, go to Step 14.
11. Unplug oven or disconnect power.
12. Replace the appliance manager. Go to Step 13.
13. Replace user interface board. go to Step 14.
14. Replace the harness.
15. Replace all parts and panels before operating.
16. Plug in oven or reconnect power.
17. Verify operation is normal. Re-enter Diagnostics Mode and complete checks.

F6	**E4**	User interface/appliance manager mismatch

MESSAGE: The oven is experiencing a problem and can no longer be used.

SUGGESTED CORRECTIVE ACTION PROCEDURE

PROCEDURE: Before proceeding, press any three keys three times within 8 seconds to enter the Diagnostic Mode. When in Diagnostic Mode, press ERROR DIAGNOSTIC to verify the error codes.

1. Press COMPONENT ACTIVATION.
2. Press BAKE, TURN ON/TURN OFF to cycle the bake element. Ensure bake relay energizes by inspecting the bake element.
3. Press the Up/Down navigation arrows to highlight Back and select it by pressing OK.
4. Press Broil, TURN ON/TURN OFF to cycle the broil element. Ensure broil element energizes by inspecting the broil element.
5. Press the Up/Down navigation arrows to highlight Back and select it by pressing OK.
6. Press Latch Door, TURN ON/TURN OFF to drive door latch to lock door. Press ON/OFF again to reset the door latch to normal state.
7. Press the Up/Down navigation arrows to highlight Back and select it by pressing OK.

FOR SERVICE TECHNICIAN'S USE ONLY

FAILURE (Leftmost 2 Clock Digits)	ERROR (Rightmost 2 Clock Digits)	LIKELY FAILURE CONDITION

8. Press Cooling Fan, TURN ON/TURN OFF to cycle cooling fan though low/high speed.
9. If all functions are working, the Appliance Manager and User Interface are working properly.
10. Exit Diagnostics by pressing Exit Diagnostics.
11. Press BAKE and ensure that the Bake relay energizes and the control enters the Bake Preheat. Wait up to 1 minute to ensure error has been resolved. If error returns, proceed to Step 12.
12. Unplug oven or disconnect power.
13. Remove covers for access to oven controls.
14. Replace the appliance manager. Ensure all connections are properly seated. Go to Step 15.
15. Replace all parts and panels before operating.
16. Plug in oven or reconnect power.
17. Press BAKE and ensure that Bake relay energizes and the control enters into Bake/Preheat. Wait up to 1 minute to ensure error has been resolved. If error returns, go to Step 18.
18. Unplug oven or disconnect power.
19. Replace the user interface. Ensure all connections are properly seated. Go to Step 20.
20. Replace all parts and panels before operating.
21. Plug in oven or reconnect power.
22. Press BAKE and ensure the Bake relay energizes and the control enters into Bake/Preheat. Wait up to 1 minute to ensure error has been resolved.

F6	**E5**	Cavity size is incorrect

MESSAGE: The oven is experiencing a problem and can no longer be used.

SUGGESTED CORRECTIVE ACTION PROCEDURE

PROCEDURE: Before proceeding, press any three keys three times within 8 seconds to enter the Diagnostic Mode. When in Diagnostic Mode, press ERROR DIAGNOSTIC to verify the error codes.

1. Press System Info, Model and Size. Screen should identify cavity size for unit being programmed. If this is incorrectly shown, press Edit Cavity Size, select the correct cavity size then press Back or Home.
If error is corrected, the problem has been repaired.
If error returns, go to Step 2.
2. Unplug oven or disconnect power.
3. Replace user interface oven control ensuring all connections are properly seated and go to Step 4.
4. Replace all parts and panels before operating.
5. Plug in oven or reconnect power.
6. Control may power up in model ID and cavity size select mode. Set model ID and cavity size as outlined in Step 1 by locating proper cavity size and pressing START once located.
7. Wait for at least 1 minute to ensure error has been corrected.

F8	**E0**	Low fan speed underspeed
	E1	Low fan speed overspeed
	E2	High fan speed underspeed
	E3	High fan speed overspeed

LOW FAN SPEED MESSAGE: Fan RPM for Upper, Lower or Both has fallen below the Fan RPM low speed limit. Fan RPM for Upper, Lower or Both has exceeded the Fan RPM Low speed limit.

HIGH FAN SPEED MESSAGE: Fan RPM for Upper, Lower or Both has fallen below the Fan RPM High speed limit. Fan RPM for Upper, Lower or Both has exceeded the Fan RPM High speed limit.

SUGGESTED CORRECTIVE ACTION PROCEDURE

PROCEDURE: Before proceeding, press any three keys three times within 8 seconds to enter the Diagnostic Mode. When in Diagnostic Mode, press ERROR DIAGNOSTIC to verify the error codes.

1. Unplug oven or disconnect power.
2. Wait for at least 30 seconds.
3. Plug in oven or reconnect power.
4. Enter Diagnostics and navigate to the component Activation list.
5. Turn on the Cooling Fan Low Speed.
6. Navigate to the "More Information" Screen.

FOR SERVICE TECHNICIAN'S USE ONLY

FAILURE (Leftmost 2 Clock Digits)	ERROR (Rightmost 2 Clock Digits)	LIKELY FAILURE CONDITION

7. Navigate to the Upper or Lower Information Screen (Screen 4 and 5).
Information shown (Screen 4):

Plat1A Upper
Plat2 Upper
Cavity Upper
Meat Probe Upper
Plat1B Upper
Target Upper
Fan RPM Upper: READ FAN SPEED.

Information shown (Screen 5):

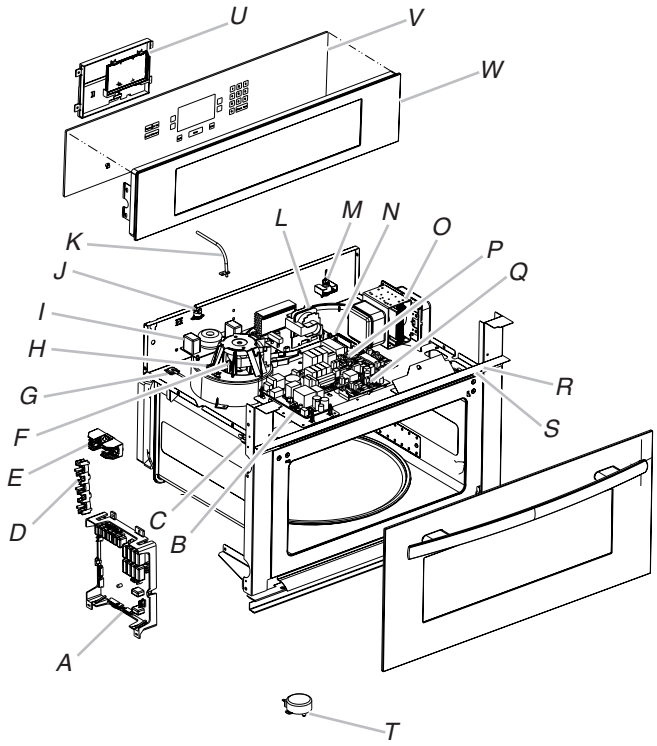
Plat1A Lower
Plat2 Lower
Cavity Lower
Meat Probe Lower
Plat1B Lower
Target Lower
Fan RPM Lower: READ FAN SPEED.

Once Fan speed is completed navigate back to the load screen and activate the Cooling Fan High Speed and return to "More Information" screen for fan speed.

Combo Oven Components

Component Locations

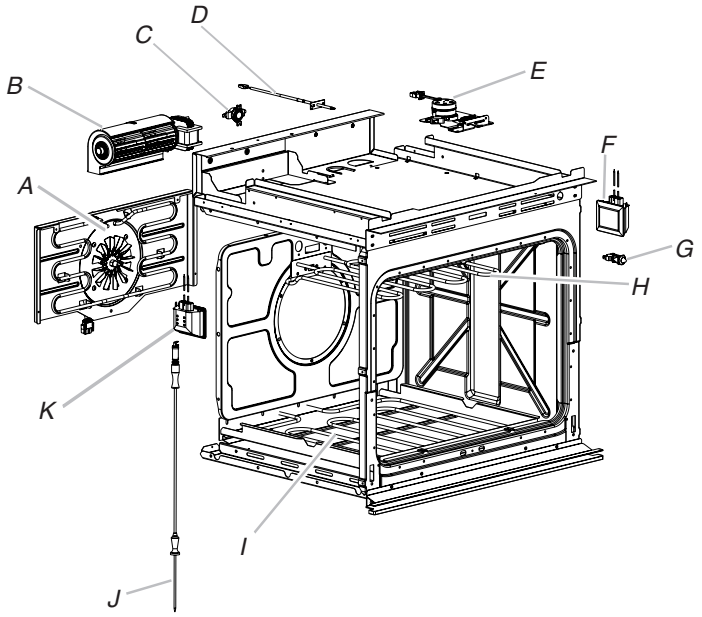
Upper Microwave Oven



A. Lower oven appliance manager
B. Control power supply
C. Secondary interlock switch
D. Terminal block
E. Line fuse
F. Magnetron fan motor
G. Humidity sensor
H. Fuse holder
I. Line filter L1
J. Magnetron thermistor
K. Cavity thermostat
L. MW inverter
M. Cavity halogen lamp
N. Microwave light transformer
O. Magnetron
P. Microwave appliance manager
Q. Wide interface board
R. Monitor interlock switch
S. Primary interlock switch
T. Turntable motor
U. User interface assembly
V. Keyboard assembly
W. Control panel assembly (keyboard assembly and user interface assembly)

FOR SERVICE TECHNICIAN'S USE ONLY

Lower Oven



A. Twin convect kit
B. Blower
C. Thermal cutoff
D. Oven temperature sensor
E. Door lock latch
F. Light assembly
G. Door switch
H. Broil element
I. Hidden bake assembly
J. Kit probe: meat probe and receptacle
K. Light assembly

Relay Logic - Upper Microwave Oven

Modes								
	Magnetron	**Grill Element**	**Conv Ring**	**Conv Fan**	**Cooling Fan**	**Turntable**	**Lamp**	**Blower**
Microwave (Full Power)	X	X	O	O	X	O	O	O
Microwave (Variable Power)	X	X	O	O	X	O	O	O
Custom Reheat	X	X	O	O	X	O	O	O
Custom Defrost	X	X	O	O	X	O	O	O
Soften	X	X	O	O	X	O	O	O
Melt	X	X	O	O	X	O	O	O
Popcorn	X	X	O	O	X	O	O	O
Boil and Simmer	X	X	O	O	X	O	O	O
Crisp	X	X	O	O	X	O	O	O
Easy Convect	O	©	O	O	X	O	O	O
SpeedCook	X	©	O	O	X	O	O	O
Steam	X	X	O	O	X	O	O	O
Keep Warm	X	X	O	O	X	O	O	O
Cook	X	X	O	O	X	O	O	O
CBake	O	X	X	X	X	O	O	O
CRoast	O	X	X	X	X	O	O	O
Grill	X	X	O	O	X	O	O	O

FOR SERVICE TECHNICIAN'S USE ONLY

Modes								
	Magnetron	**Grill Element**	**Conv Ring**	**Conv Fan**	**Cooling Fan**	**Turntable**	**Lamp**	**Blower**
Browning Pan	O	X	O	O	X	O	O	O
Cool Down	X	X	O	O	X	X	X	X
Off (Door Closed)	X	X	O	O	X	X	X	X
Cool Down (Door Open)	X	X	O	O	X	X	X	X
Door Open	X	X	O	O	O	X	X	X

Relay Logic - Upper Oven

Modes	Relays									
	Bake	**Broil**	**Conv Ring 1**	**Conv Ring 2**	**Conv Fan High Speed Ring 1**	**Conv Low Speed Ring 1**	**Conv Fan High Speed Ring 2**	**Conv Low Speed Ring 2**	**Upper Blower**	**Lower Blower**
Pyrolitic (Self-Clean) (Pre A/B, SS)	©	©	X	X	X	X	X	X	H	H
Bake (Pre A/B, SS)	©	X	X	X	X	X	X	X	L	L
Bake Plus Pre A/B	©	©	©	©	©	©	©	©	L	L
Bake Plus SS	X	©	X	X	X	X	X	X	L	L
Broil Pre A/B	X	©	X	X	X	X	X	X	L	L
Broil SS	©	©	©	©	©	©	©	©	L	L
Keep Warm (Pre A/B, SS)	©	©	©	©	©	©	©	©	L	L
All Convection Modes (Pre A/B, SS)	©	©	©	©	©	©	©	©	L	L
Proof and Rapid Proof (Pre A/B, SS)	©	©	©	©	©	©	©	©	L	L
Culinary Center (Pre A/B, SS)	©	©	©	©	©	©	©	©	L	L

LEGEND				
On	**Off**	**On or Off**	**On - Low Speed**	**On - High Speed**
X	O	©	L	H

FOR SERVICE TECHNICIAN'S USE ONLY

Strip Circuit Table - Upper Microwave Oven

NOTE:
Some components are available only on Convection models.

Microwave Oven Components	Top/ Bottom/ Front/Rear/ Side Serviceable	Procedure	Results - Resistance	Component Location
Appliance Manager	Top			P
Halogen light	Top	**1.** Unplug microwave oven or disconnect power. **2.** Remove wire leads. **3.** Measure resistance.	Normal = 3Ω Abnormal = Infinite	M
Inverter	Rear/top	**NOTE:** Do not try to repair the inverter board or try to make any adjustments to the board.	Check wiring to MW inverter: **1.** Unplug the microwave oven or disconnect power. **2.** Visually inspect 4 connectors on the MW inverter boards, CN701, CN702, CN703 and E701 to see whether there are signs of overheating or any signs of failure due to loose wires, bad crimping, etc.	L
WIDE interface board	Front	**1.** Power up unit. **2.** Enter Diagnostics Mode. **3.** Navigate to the System Information screen and press OK. **4.** Navigate to MW information.	If MW has information other than 0.0.0, the two boards are communicating and the WIDE Interface Board is working appropriately.	Q
Line filter (L1) PCB	Top	**1.** Unplug microwave oven or disconnect power. **2.** Remove wire leads. **3.** Measure resistance.	P31 and P32, P33 and P34 Normal = Greater than or equal to 300kΩ Abnormal = Less than or equal to 100kΩ P31 and P34, P32 and P33 Normal = 0Ω Abnormal = Greater than or equal to 100kΩ	I
Magnetron	Top	**1.** Unplug microwave oven or disconnect power. **2.** Remove wire leads. Check that the seal is in good condition. **3.** Measure resistance.	Filament Terminals Normal = Less than 1Ω Filament chassis Normal = Infinite	O
Humidity Sensor	Front	**1.** Unplug microwave oven or disconnect power. **2.** Remove the 3-pin connector from Relay Control Board. **3.** Measure resistance across pins 1 and 3 and across pins 2 and 3.	Normal = 2.8kΩ (approximately) at 77°F +/- 10°F (25°C +/- 10°C) Abnormal = Infinite.	G
Magnetron thermistor	Top	**1.** Unplug microwave oven or disconnect power. **2.** Remove wire leads. **3.** Measure resistance.	Normal = Continuity Abnormal = Infinite	J

FOR SERVICE TECHNICIAN'S USE ONLY

Microwave Oven Components	Top/ Bottom/ Front/Rear/ Side Serviceable	Procedure	Results - Resistance	Component Location
Cavity thermostat	Top	**1.** Unplug microwave oven or disconnect power. **2.** Remove wire leads. **3.** Measure resistance.	Normal = Continuity Abnormal = Infinite	K
Magnetron fan motor	Top	**1.** Unplug microwave oven or disconnect power. **2.** Remove wire leads. **3.** Measure resistance (ohmmeter scale: Rx1)	Normal = 11Ω Abnormal = Infinite	F
Turntable motor	Bottom	**1.** Unplug microwave oven or disconnect power. **2.** Remove wire leads. **3.** Measure resistance (ohmmeter scale: Rx1)	Turntable Motor Normal = 2450Ω (approximately) Abnormal = Infinite	T
Monitor fuse	Front	**1.** Unplug microwave oven or disconnect power. **2.** Remove wire leads. **3.** Measure resistance.	Normal = Continuity Abnormal = Infinite	Not shown
MW light transformer	Front	**1.** Unplug microwave oven or disconnect power. **2.** Remove wire leads. **3.** Measure resistance (ohmmeter scale: Rx1)	Primary Winding 45Ω (approximately) Secondary Winding 0.6Ω (approximately)	N
Line fuse	Side	**1.** Unplug microwave oven or disconnect power. **2.** Remove wire leads. **3.** Measure resistance.	Normal = Continuity Abnormal = Infinite	E
Primary interlock switch	Top	**1.** Unplug microwave oven or disconnect power. **2.** Disconnect the wires at the Primary Interlock Switch. **3.** Check from the common terminal (brown wire) to the normally open terminal (yellow wire). **1.** Unplug microwave oven or disconnect power. **2.** Disconnect the wires at the Primary Interlock Switch. **3.** Check from the common terminal (brown wire) to the normally open terminal (blue wire).	Door Open: No Continuity. Door Closed: Continuity. Door Open: Continuity. Door Closed: No Continuity.	S

FOR SERVICE TECHNICIAN'S USE ONLY

Microwave Oven Components	Top/ Bottom/ Front/Rear/ Side Serviceable	Procedure	Results - Resistance	Component Location
Secondary interlock switch	Top	**1.** Unplug microwave oven or disconnect power. **2.** Disconnect the wires at the Secondary Interlock Switch. **3.** Check from the common terminal (blue wire) to the normally open terminal (white wire).	Door Open: Continuity. Door Closed: No Continuity.	C
Monitor interlock switch	Top	**1.** Unplug microwave oven or disconnect power. **2.** Disconnect the wires at the Monitor Interlock Switch. **3.** Check from the common terminal (red wire) to the normally closed terminal (blue wire).	Door Open: Continuity. Door Closed: No Continuity.	R
Measure oven input current		Connect an ammeter (Valhalla Scientific 2101 or equivalent recommended) to measure the input current of microwave oven when the power level is set to Level 10 at the touch panel. If more than 0.5A: The MW inverter is probably OK. Check the magnetron. See MagnetronTest in "Component Tests." If less than 0.5A: There is no input to the MW inverter.	Check the following: **1.** Unplug the microwave oven or disconnect power. **2.** No AC voltage supply. Check relay control board and wiring. **3.** No control signal. Check relay control board and wiring. **4.** Replace all parts and panels before operating. **5.** Plug in microwave oven or reconnect power.	Not shown

Strip Circuit Table - Lower Oven

NOTE:
Some components are available only on Convection models.

Lower Oven Components	Top/ Bottom/ Front/Rear/ Side Serviceable	Check points	Results - Resistance	Results - Voltage	Component Location
Appliance manager	Top	P6-5 (BL) to P6-4 (Y)		+14 VDC	F
User interface board	Front	J900-1 to J900-11		+14 VDC	Not shown
Control power SMPS	Top	P1-3 (BK) to P1-4 (W)		120 VAC	D
	Top	P2-1 (V) to P2-4 (Y)		+14 VDC	D
	Top	P2-2 (BL) to P2-5 (Y)		+14 VDC	D

FOR SERVICE TECHNICIAN'S USE ONLY

Lower Oven Components	Top/ Bottom/ Front/Rear/ Side Serviceable	Check points	Results - Resistance	Results - Voltage	Component Location
	Top	P2-3 (BL) to P2-6 (Y)		+14 VDC	D
Control panel assembly	Front	J4-12 (BL) to J4-11(Y)		+14 VDC	DD
Lights	Front	P8-6 (BL) to Neutral (W)		120V Lights on	I
Latch switch	Front	P1-4 (T) to P1-5 (BR)	Door Unlocked = Open Circuit (1MΩ) Door Locked = Closed Circuit (0.01Ω)	Door Unlocked = 120 V Door Locked = 0.01 V	G
Door switch	Front	P1-7 (OR/BK) to P1-5 (BR)	Door Unlocked = Open Circuit (1MΩ) Door Locked = Closed Circuit (0.01Ω)	Door Open = 120 V Door Closed = 0.01 V	J
Latch motor	Front	P8-5 (Y) to Neutral (W)	Approximately 2450Ω	120V Motor running	G
Oven temperature sensor	Front	P2-1 (V) to P2-2 (V)	1080Ω at 21°C (70°F) 1654Ω at 177°C (350°F)		A
Meat probe sensor	Probe - front Jack - top	P2-5 (Y) to P2-6 (Y)	78kΩ at 15.6°C (60°F) 37kΩ at 32.2°C (90°F)		Not shown
Blower motor low speed	Rear	P9-2 (GY) to Neutral (W)	Approx. 163Ω at 21°C (70°F)	120V Motor running	C
Blower motor high speed	Rear	P8-4 (GY/BK) to Neutral (W)	Approx. 117Ω at 21°C (70°F)	120V Motor running	C
Thermal cut off	Rear	T1-1 (R/W) to L2 (R)	Closed = Closed Circuit (0.01Ω)	Closed = Closed Circuit (0.01V)	B
Thermal cut off (Convection fan)	Rear	T3-4 (Y/BL) to T1-1 (R)	10.2Ω to 18.2Ω	Open Relay Contacts = 240V Closed Relay Contacts = 0V	B
Low speed convection fan	Front	P9-1 (OR) to Neutral (W)	Approx. 182Ω at 21°C (70°F)	120V Motor running	M
High speed convection fan motor	Front	P8-3 (OR/W) to Neutral (W)	Approx. 111Ω at 21°C (70°F)	120V Motor running	M
Oven convection element	Front	T2-2 (R) to T3-4 (BK)	12.5Ω to 15.6Ω	240V Relay On / DLB On	M
Bake element	Rear	T1-2 (R) to T3-3 (BK)	10.5Ω to 14Ω	240V Relay On / DLB On	L

FOR SERVICE TECHNICIAN'S USE ONLY

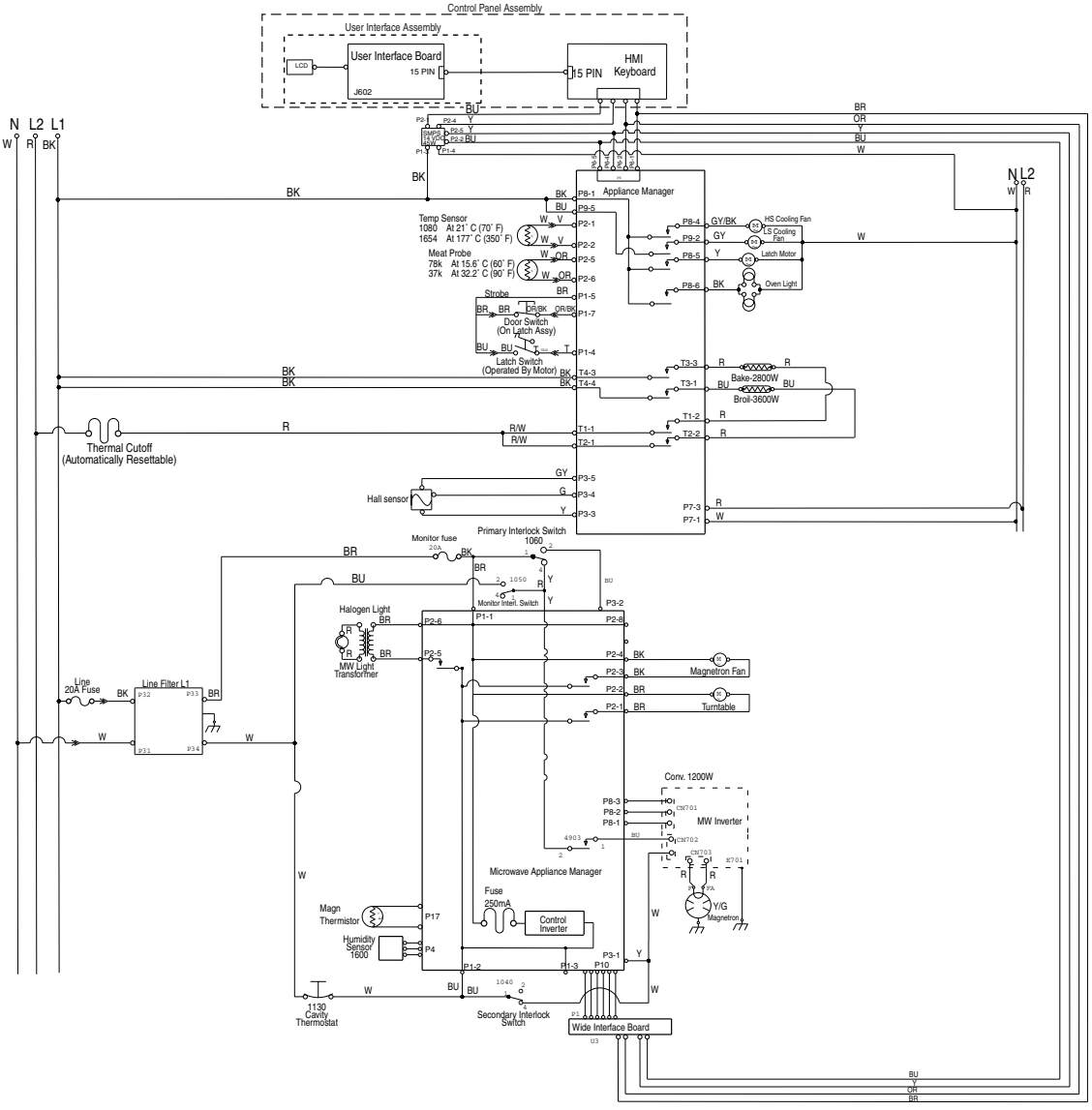
Lower Oven Components	Top/ Bottom/ Front/Rear/ Side Serviceable	Check points	Results - Resistance	Results - Voltage	Component Location
Broil element	Front	T2-2 (R) to T3-1 (BK)	13.5Ω to 16.5Ω	240V Relay On / DLB On	K

Wiring Diagrams

NOTES:

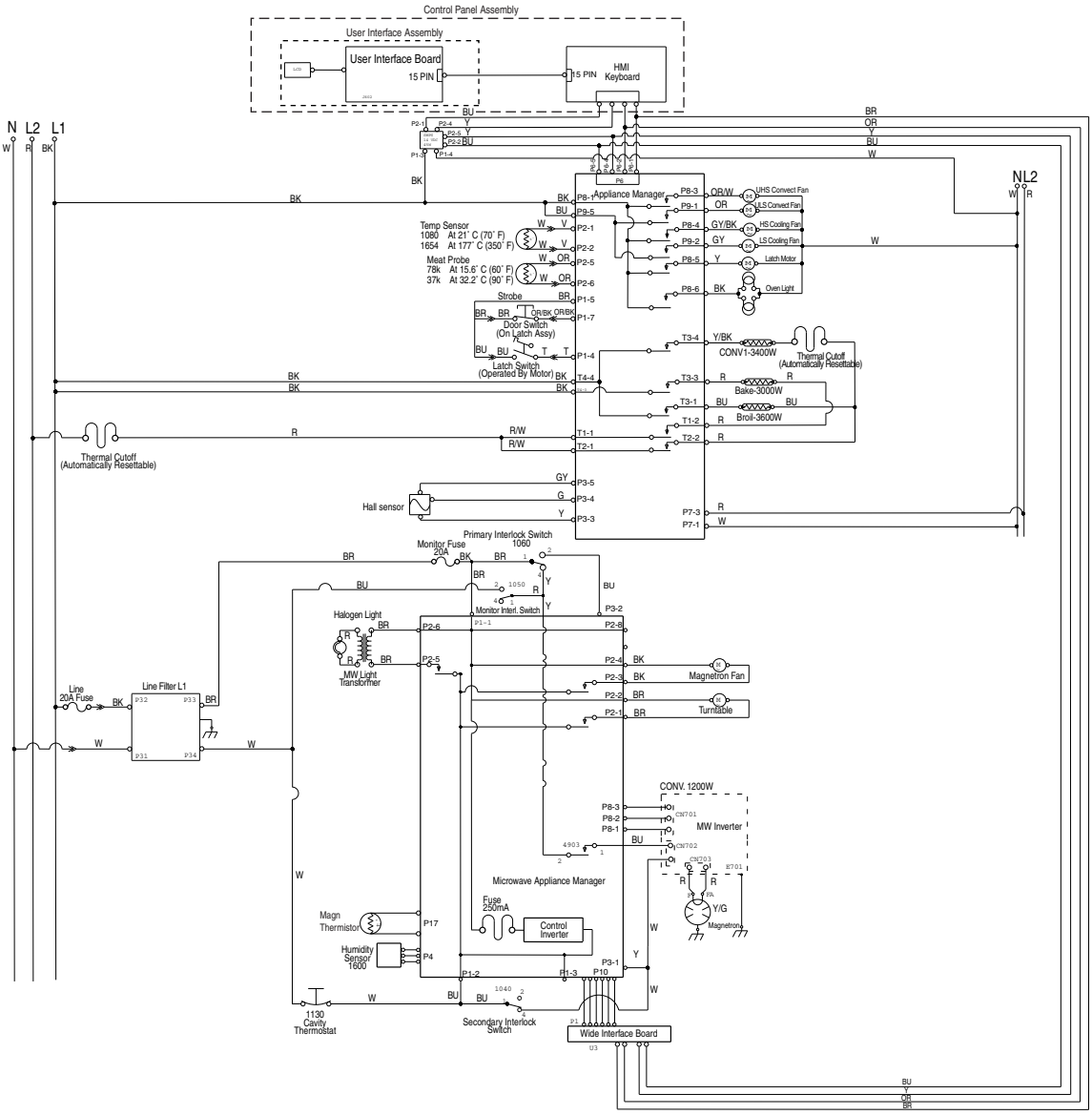
- End of line tester is for manufacturing purposes only.
- Dots indicate connections or splices.
- Circuit shown in STANDBY/OFF mode with oven door closed.
- All voltages in the wiring diagrams are designated as 120/240 VAC. If oven is connected to 120/208 VAC, replace 240V with 208V.

Combination Ovens - Non-Convect Oven Cavity Models



FOR SERVICE TECHNICIAN'S USE ONLY

Combination Ovens - Convect Oven Cavity Models



LEGEND

Ground (Chassis)	Plug With Female Connector	Receptacle With Male Connector	Light	AC Drive Motor	Thermostat	Thermo-actuator	Heating Element	Enclosed Thermistor	Operated By Door	Thermal Cutoff (Non-Resettable)	Thermal Cutoff (manually Resettable)

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Software copyrighted. This product is covered by one or more of the following patents U.S. Patent Nos.

4,852,544	5,321,229	5,491,314	5,808,278	5,924,857	6,035,848	6,201,222	6,394,081	6,663,009	6,734,403
4,974,804	5,349,162	5,571,433	5,810,576	5,928,543	6,043,461	6,232,584	6,403,929	6,666,676	6,784,404
5,008,516	5,378,874	5,571,434	5,813,320	5,961,311	6,079,756	6,263,782	6,437,294	6,693,262	6,841,761
5,064,998	5,382,552	5,620,623	5,841,112	5,967,634	6,087,944	6,349,717	6,509,551	6,698,417	6,870,138
5,138,137	5,422,460	5,694,916	5,856,654	5,983,888	6,097,000	6,363,971	6,545,251	6,698,923	6,904,969
5,142,125	5,424,512	5,749,388	5,881,710	6,008,478	6,111,231	6,375,150	6,570,136	6,700,101	6,930,287
5,175,413	5,438,180	5,756,970	5,910,265	6,017,211	6,163,017	6,392,204	6,614,006	6,722,356	6,935,330
5,185,047	5,441,036	5,767,488	5,918,589						

Other Patents Pending.

W10213735B

NOTE: This sheet contains important Technical Service Data.

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