



Fast Track Troubleshooting

Model:
FCQ321HTUX/XAA

IMPORTANT SAFETY NOTICE – “For Technicians Only” This service data sheet is intended for use by persons having electrical, electronic, and mechanical experience and knowledge at a level generally considered acceptable in the appliance repair trade. Any attempt to repair a major appliance may result in personal injury and property damage. The manufacturer or seller cannot be responsible, nor assume any liability for injury or damage of any kind arising from the use of this data sheet.

WARNING: It is critical to route wires and wire harness identical to the way they were, to prevent electromagnetic interference causing possible fault codes.

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Samsung 'Electric Range' Diagnostic Code Quick Guide

Display Failure Codes	POWER LOSS CLEARS CODES 1)Press Clock AM/PM pad. 2) Press pad again, select AM. 3)Press # 1-2-3-4 pads. 4)Press Set/Start pad. 5)Press Custom Cook & # 0 pads simultaneously for 2 seconds. 6) error codes will display. 7) Press number 0 pad to review last 5 codes. 8) Press Clear/Off to exit.	
<u>Failure Code</u>	<u>Cause</u>	<u>Solution</u>
E27 E28	Oven sensor opened(over 2950Ω) Oven sensor shorted (Under 930Ω)	1. Disconnect power. Open the back cover. Disconnect sensor harness from control Measure sensor resistance :1080Ω at room temperature → If different value, replace oven sensor. 2. If there is not any problem with oven sensor, Please check whether there is a damaged terminal or wire on harness. 3. Check resistance of oven sensor connector on main PCB (Normal:2850Ω)
E-08 E-0A	Oven not heating error Oven over heating error	1. Disconnect power. Open the back cover. Disconnect sensor harness from control. Measure sensor resistance :1080Ω at the room temperature → If different value, replace oven sensor. 2. Check the broil, bake and convection heater. Check the resistance of each. 3. Check whether DLB of sub PCB, Broil, Bake and Convection heater relay are being activated 4. Check wiring harnesses between main PCB on sub PCB. 5. Check the resistance of oven sensor connector on main PCB. (Normal : 2850Ω)
SE	Shorted key	1. Check if cable of keypad has been inserted into connector of main PCB. 2. Check for short between main PCB and connector or keypad and cable. 3. If there is not a problem with connector on main PCB and cable of keypad, replace the main PCB.
E-OE	Door locking error	1. Disconnect power. Open the back cover. Check wiring harness connections between door lock switch and motor. 2. Check resistance of door lock motor ,1750~1850Ω at the room temperature. 3. With operating door lockout, measure voltage at door lock motor. (Normal Voltage : AC 120V) 4. Check whether door locking switch is operating properly.
LE	Low Voltage Error	It occurs when the DC 12V is dropped under 9V. It may occurs due to defects of PCB or wiring.



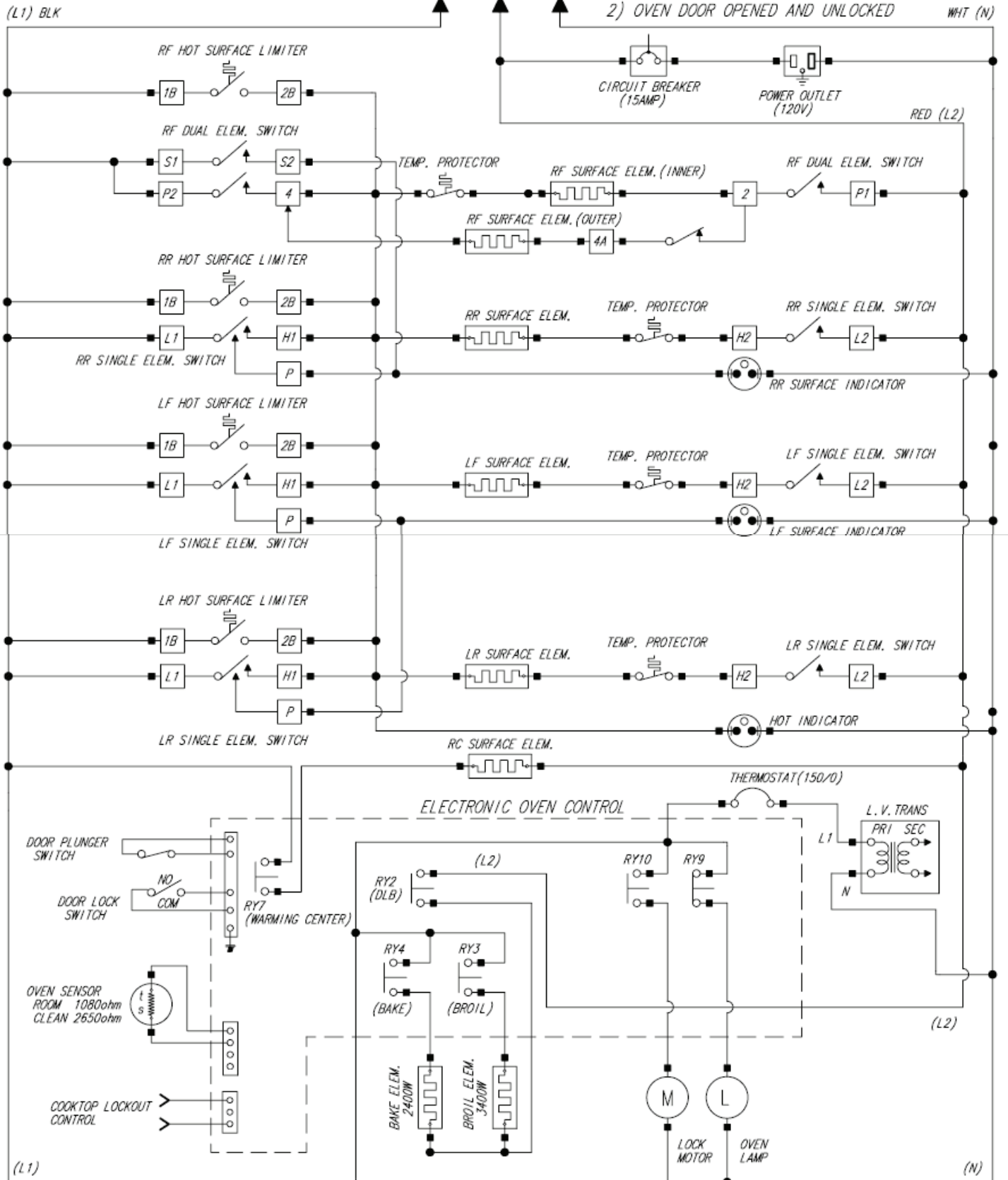
Door Lock Error: Press and hold Cook Time & Delay Start for 3 seconds to test motor operation.

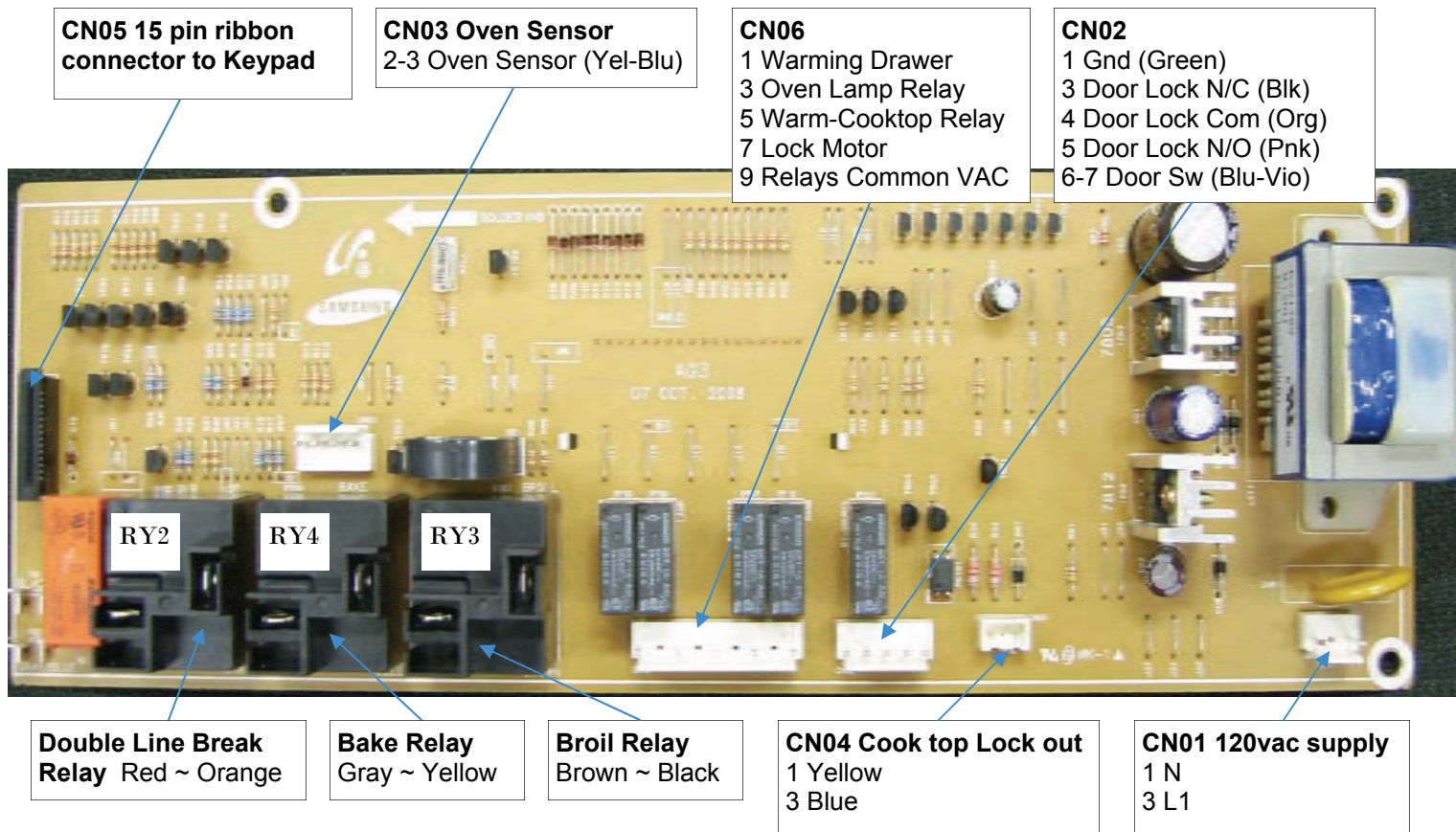
SCHEMATIC DIAGRAM [INVENSYS]

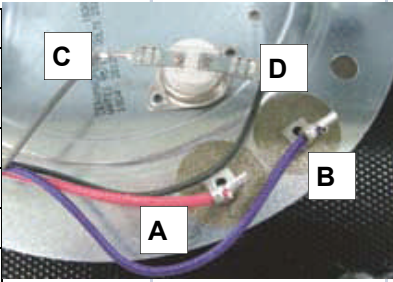
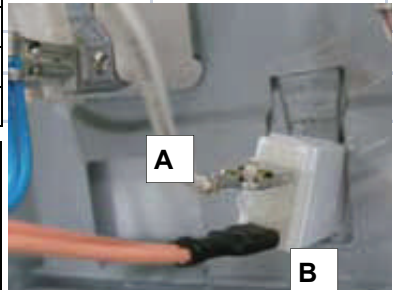
MODEL: FCQ321

NOTE

- 1) INPUT POWER : AC240V 60Hz, 13300W, 55A
- 1-1) OVEN HEATER. : MAX 5800W, 24.2A
- 1-2) COOKTOP ELEMENTS : MAX. 7500W, 30.8A
- 2) OVEN DOOR OPENED AND UNLOCKED



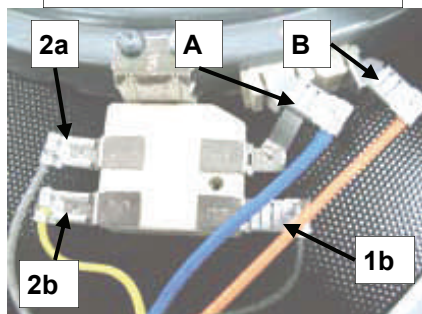


Electric Range Components							
Burner Elements				Oven Elements			
Component	Voltage	Wattage	Ω @ Room Temp	Component	Voltage	Wattage	Ω @ Room Temp
LR	240vac	1200	45Ω~50Ω	Broil	240vac	3400 W	16 ~ 18Ω
RR	240vac	1200	45Ω~50Ω	Bake	240vac	2400 W	23 ~ 25Ω
LF	240vac	2500	21Ω~25Ω	Oven Temp Sensor Resistance Chart			
RF Dual	240vac	1200/2500	45Ω~55Ω/23Ω				
RC Warm	240vac	100	570Ω~580Ω	Degree °F	Ω	Degree °F	Ω
Components				0	932.12	104	1151.38
				14	961.86	113	1170.17
Door Lock Mtr	120vac		1750 ~ 1850Ω	23	980.95	122	1188.93
RC warming element				32	1000	212	1374.93
Position	Color			41	1019.02	302	1558.01
A	orange+violet			50	1038.02	392	1738.06
B	black+brown			59	1056.99	482	1915.39
C	yellow+violet			68	1075.92	572	2089.69
D	yellow			77	1094.83	662	2261.07
RC warming element				86	1113.71	752	2429.52
Position	Ohms			95	1132.56	842	2595.05
A-B	560~600Ω					932	2757.65
C-D	∞Ω						
Hot indicator Lamp							
Position	Color						
A	White						
B	Orange-Orange						

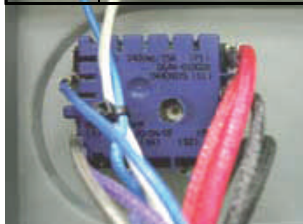
Electric Range Surface Burners and Infinite Switches

Wiring, Resistance and Test Points

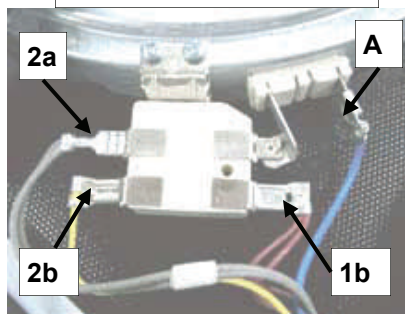
RF Burner



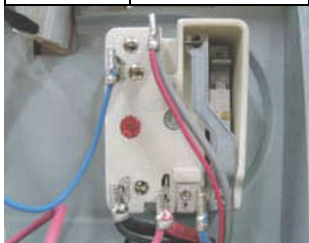
RF radiant element	
Position	Color
A	Blue
B	Orange
1b	Black
2b	Yellow
2a	Gray
Position	Ohms
1b-2b	∞
2a-"A"	45~55 Ω
2a-"B"	42~48 Ω



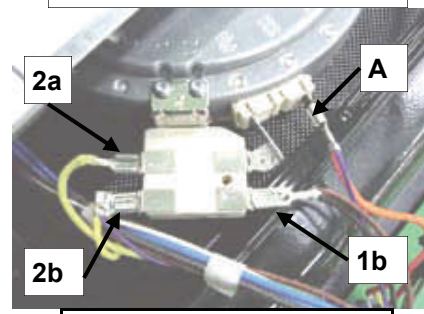
LF Burner



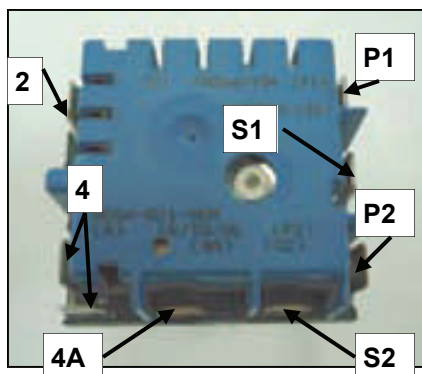
LF radiant element	
Position	Color
A	blue
1b	brown+brown
2b	yellow
2a	gray+gray
Position	Ohms
1b-2b	∞
2a-"A"	20~25 Ω



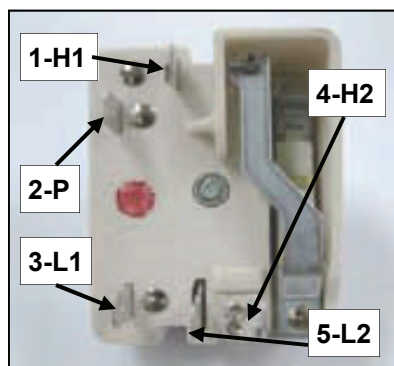
RR & LR Burner



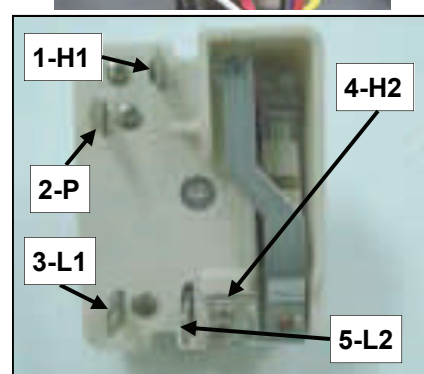
LR & RR radiant elements	
Position	Color
A (RR)	violet+violet
A (LR)	orange+violet
1b	black+brown
2b	yellow+violet
2a	yellow
Position	Ohms
1b-2b	∞
2a-"A"	45~50 Ω



RF INF Switch	
Position	Color
P1	red+red
S1	sky+brown
P2	black+black
S2	blue (Indicator lamp)
4A	yellow
4	violet+gray
2	blue



LF INF Switch	
Position	Color
3-L1	black+black
5-L2	red+red
4-H2	blue
2-P	blue
1-H1	violet+gray



LR & RR INF Switch	
Position	Color
3-L1 (RR)	black+black
3-L1 (LR)	black+brown
5-L2	red+red
4-H2	yellow
2-P	blue
1-H1	orange+orange+violet