

ELECTRIC CONVECTION OVEN

HALF SIZE

UCO-E-05

UCO-E-25



PLEASE READ ALL SECTIONS OF THIS MANUAL.

THIS PRODUCT HAS BEEN CERTIFIED AS COMMERCIAL COOKING EQUIPMENT AND MUST BE INSTALLED BY PROFESSIONAL PERSONNEL AS SPECIFIED.

WE SUGGEST INSTALLATION, MAINTENANCE AND REPAIRS SHOULD BE PERFORMED BY YOUR LOCAL AUTHORIZED GARLAND SERVICE AGENCY LISTED IN YOUR INFORMATION MANUAL PAMPHLET.

In the event you have any questions concerning the installation, use, care or service of the product, write or call our Customer Service Department.

NOTE: Unit must be installed with no less than 3" clearance from Combustible construction at rear and sides.

Continuous product improvement is a Garland policy, therefore specifications and design are subject to change without notice.

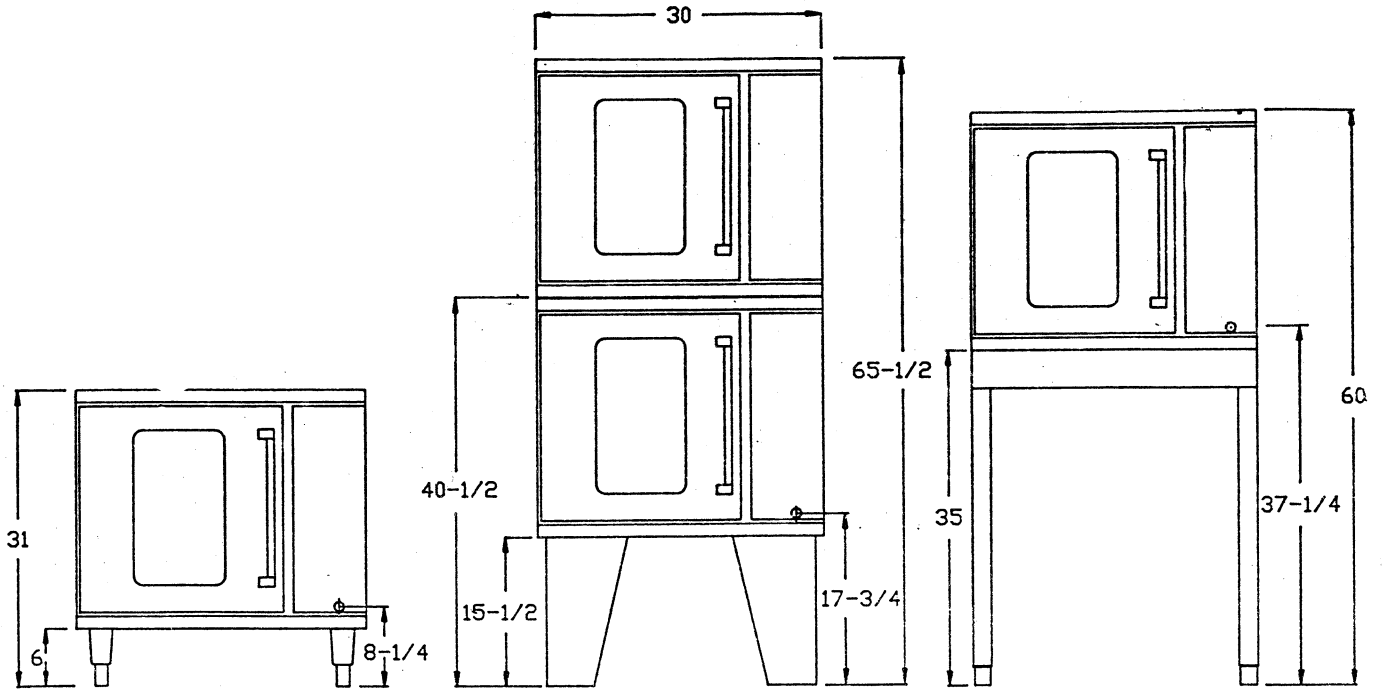
CONGRATULATIONS! You have purchased the finest commercial cooking equipment available anywhere.

Like any other fine, precision built piece of equipment, it should be given regular care and maintenance. Periodical inspections by your dealer or a qualified service agency are recommended. When corresponding with the factory or your equipment dealer regarding service problems or replacement parts, be sure to refer to the particular unit by the correct model number (including prefix and suffix letters and numbers) and the serial or code number. The rating plate affixed to the unit contains the information.

REGULAR MAINTENANCE ENSURES PEAK PERFORMANCE

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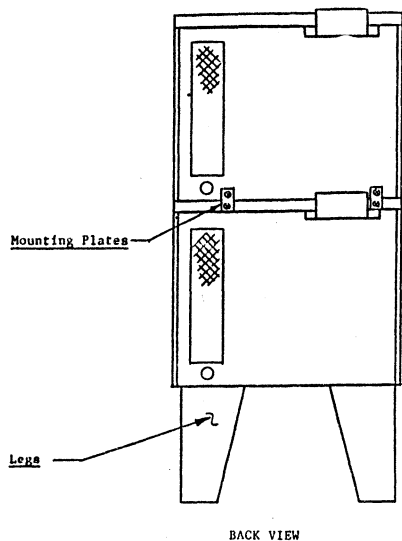


MODEL NUMBER	TOTAL KW	THREE PHASE KW PER PHASE				NOMINAL AMPS PER LINE							
						SINGLE PHASE		THREE PHASE					
		208	240			208	240	X	Y	Z	X	Y	Z
UCO-E-5	5.5	0.5	2.5	2.5	X	26	23	13	13	21	11	11	18
UCO-E-25	11.0	3.0	5.0	3.0	X	53	46	25	34	34	22	29	29

WARNING:

This product contains chemicals known to the State of California to cause cancer. *Installation and servicing of this product could expose you to airborne particles of glasswool/ceramic fibers. Inhalation of airborne particles of glasswool/ceramic fibers is known to the State of California to cause cancer.

DECKING INSTRUCTIONS



1. LEG INSTALLATION:

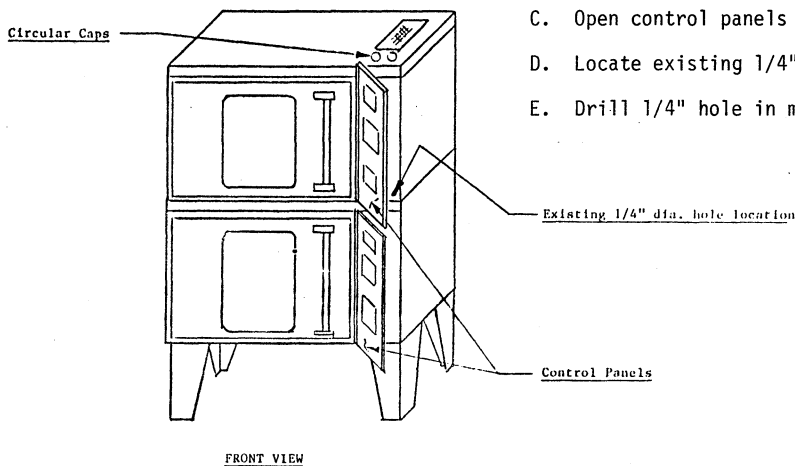
- A. Raise the front of oven. Position the legs at the front corners of the main bottom. Start each bolt with lock washer threading then into the weld nuts which are located in the main bottom. Four bolts must be used to secure each leg in place. Tighten the bolts evenly and securely. (5/16 DIA bolts and lockwashers in decking kit).
- B. Raise and block the rear of the oven and fasten the rear legs as above.

2. KNOCKOUT REMOVAL:

Before raising the upper section into its proper position. Knockout openings in main bottom of upper section, and remove circular caps from main top of lower unit.

3. STACKING OF UNITS:

- A. Place top unit into place and line up body sides and backs of the units.
- B. Fasten the rear of the two units together by removing 2 screws from bottom of upper deck, and remove 2 screws from top of lower deck. Secure units together with mounting plates provided in decking kit.
- C. Open control panels on top and bottom units.
- D. Locate existing 1/4" hole in main bottom of top unit.
- E. Drill 1/4" hole in main top of bottom unit using 1/4" hole (Item D) as template.
- F. Bolt top and bottom units together by using 1/4" nut and bolt supplied in stacking kit.
- G. Insert wires (3 for 5KW) through knockout and circular cap opening, refer to section II A. (Wires provided in stacking kit).
- H. Connect wires to terminal blocks using wiring diagram supplied with units.



Before attempting the electrical connection, the rating plate should be checked to insure that the unit electrical characteristics and the supply electrical characteristics agree.

Installation of the wiring must be made in accordance with UL 197 Commercial Electric Cooking Appliance Standards, local and/or National Electrical Code.

- A. Switch Panel Size
- B. Overload Protection
- C. Wire Type
- D. Wire Size.
- E. Temperature Limitations.
- F. Method of Connection (Cable, Conduit, Etc.)

The service line will enter through the rear of the unit and is to be connected to the terminal block (located behind the combustion chamber door) as indicated in the accompanying wiring diagrams. Input voltage and phasing must match the units voltage and phasing.

Wiring diagram is attached to main back of unit.

Visually check all electrical connections.

Energize electric service to units.

WARNING: Inadequate ventilation may result in high ambient temperature at the side of oven. Excessive ambient temperature can cause tripping of the blower motor thermal overload protection device. This condition must be corrected immediately to avoid damage to the blower motor.

STANDARD ELECTRONIC THERMOSTAT

1. A. Set power switch to 'on' position.
B. Set mode switch to 'cook' position.

NOTE: Digital displays 4 & 5 should be illuminated and the oven fan on.

2. A. Rotate temperature knob 7 to obtain desired cooking temperature. Red temperature digits 5 will now flash until internal oven temperature reached desired cooking temperature.
B. The actual internal oven temperature may be viewed at any time by depressing the temperature switch 9.
C. The cooking temperature may be increased or decreased at any time by rotating the temperature knob 7. The temperature digits 5 will again flash until oven reaches new temperature.

3. Timer Operation.

- A. To set timer rotate time knob 6 until desired cooking time is indicated on the white display digits 4 - digits will now flash indicating that timer is ready to be started.
- B. To start timer depress timer start switch 8. White digits 4 will stop flashing and timer colon 4a will blink indicating timer is counting down.

When the time digits reach 00:00 a tone will sound to alert operator.

NOTE: 1. The tone is continuous and must be cancelled by depressing timer cancel switch 8.

2. Timer does not control oven; product must be removed by operator at time 00:00 or oven switched off manually.

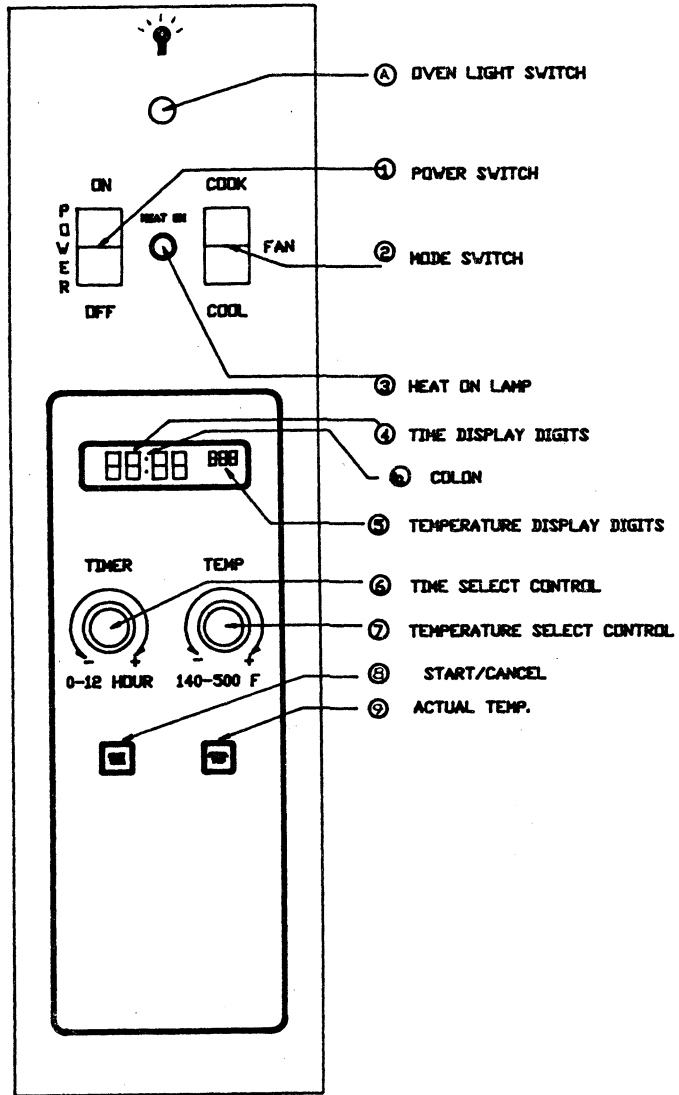
4. Cool Down

- A. To cool down cavity, set mode switch to cool down position and open oven door.

The following checklist should serve for a review:

1. Input, voltage.
2. Proper phasing.
3. Thermostat calibration (if required).
4. Total check of electrical characteristics to comply with specifications.

The result of the installation properly performed can only assure long, effective operation of the owner's equipment.



OPERATING INSTRUCTIONS

COOK OR ROAST/HOLD THERMOSTAT

1. START UP

- A. Set Power Switch to "On" position.
 - B. Set Mode Switch to desired position.
- NOTE: Digital Displays 4 & 5 should be lit.

2. PRESETTING OF COOK OR ROAST/HOLD PROGRAMS

NOTE: It is easier to program keys with the door open and Mode Switch in the cook position. In this set up, neither the fan nor the burners will operate.

- A. Rotate keyswitch to "Program" position.
- B. Depress keypad labeled "Roast" (for slow fan speed) or "Cook" (for high fan speed) and Release.
- C. Depress and Hold keypad labeled "Pgm. 1".
- D. Rotate Time Select Control until desired cook or roast time is indicated by the time display digits (up to 24 hours).
- E. Rotate Temperature Select Control until desired cook or roast temperature is indicated by temperature display digits (from 140° to 500°F).
- F. Release keypad "Pgm. 1".
- G. To Set Hold Temperature (Note: Hold is not required unless desired as part of a cook or roast process): Depress keypad labeled "Hold" and Release.
- H. Depress and Hold keypad labeled "Pgm. 1".
- I. Rotate Temperature Select Control until desired holding temperature is indicated by temperature display digits (from 140° to 250°F).
- J. Release keypad "Pgm. 1".
- K. Program remaining locations Pgm. 2 thru 6 in the same manner as steps "B" thru "J" above.

3. OPERATION - PROGRAM MODE

NOTE: Keyswitch must be in "Run" position.

- A. Depress desired program (keypads "Pgm. 1" thru "Pgm. 6").
NOTE: Time, Temperature, and Mode Display will now indicate pre-set values as programmed in step 2. Oven will pre-heat to indicated temperature and temperature display digits will stop flashing. At this point, oven is ready.
- B. Load product and depress keypad labeled "Start Timer". Time digits will stop flashing and colon will blink indicating that the timer is counting down. When the cook or roast time has elapsed and a hold temperature has been selected, 3 beeps will sound indicating the end of the specified cook or roast time.

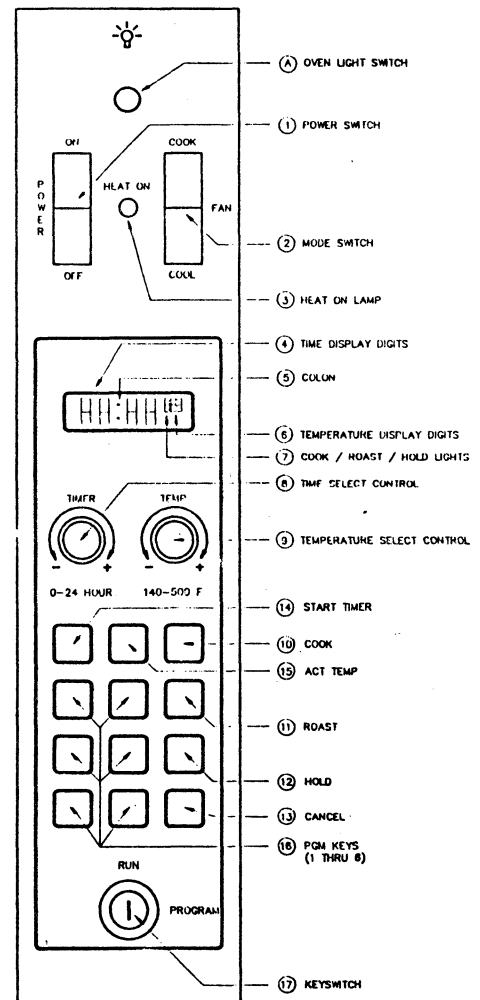
The temperature display digits will flash indicating the oven is ramping down to the selected hold temperature. Also at this time, if the Heat On Lamp is off, the motor will turn off. In the hold mode, the motor is on only when the heat is on. When the oven temperature ramps down to the specified hold temperature (the first time the heat and motor come on after the end of the cook or roast time) the timer will start counting up to show the amount of time the product has been in hold.

If no hold temperature was selected, a tone will sound at the end of the cook or roast cycle to alert the operator. This tone is continuous and may be cancelled only by depressing the keypad labeled "Cancel".

4. MANUAL OPERATION

NOTE: Keyswitch must be in "Run" position.

- A. Depress keypad labeled "Roast" (for slow fan speed) or "Cook" (for high fan speed).
- B. Rotate Time Select Control until desired. Cook or roast time is indicated by the time display digits (up to 24 hours).
- C. Rotate Temperature Select Control until desired cook or roast temperature is indicated by temperature display digits (from 140° to 500°F).
- D. To set "Hold" temperature (NOTE: Hold is not required unless desired as part of a cook or roast process): Depress keypad labeled "Hold".
- E. Rotate Temperature Select Control until desired holding temperature is indicated by temperature display digits (from 140° to 250°F).



4. MANUAL OPERATION (CONT'D)

- F. At this point, temperature display digits will flash until oven reaches temperature.
- G. When temperature digits lock in steady; load product and depress "Start Timer" keypad. Colon will now blink indicating Timer is counting down.

See Step 3B above for tones heard at end of cook or roast cycle depending on if hold temperature has been selected.

NOTE: In manual mode of operation, time and/or temperature may be increased or decreased by rotating time or temperature select knobs as desired.

5. COOL DOWN

- A. To cool cavity down, set mode switch to "Cool" position and open oven door.

MEMORY THERMOSTAT

1. Start Up

- A. Set Power Switch to "ON" position.
- B. Set Mode Switch to desired position.

NOTE: Digital displays 4 & 5 should be illuminated.

2. Pre-setting of Time/Temperature programs.

- A. Rotate keyswitch 8 to "Program" position.
- B. Depress and hold keypad labeled "Pgm. 1".
- C. Rotate time select control 6 until desired cook time is indicated by time display digits 4.
- D. Rotate temperature select control 7 until desired cooking temperature is indicated by temperature display digits 5.
- E. Release keypad "Pgm. 1."
- F. Program remaining locations Pgm. 2 thru 5 in the same manner as above.
- G. Return keyswitch 8 to "Run" position.

3. Operation - Program Mode

- A. Depress desired cooking program (pgm 1 -- pgm. 5).

NOTE: Time and temperature displays 4 & 5 will now indicate pre-set values as programmed in step 2 - Oven will pre-heat to indicated temperature and temperature display digits will stop flashing. At this point oven is ready.

- B. Load product and depress keypad labeled "Start Timer". Time digits will stop flashing and colon 4a will now blink indicating that timer is counting down.
- C. When cook time has elapsed, a tone will sound to alert operator.

NOTE: Tone is continuous and may be cancelled only by depressing keypad labeled "Cancel".

4. Manual Operation.

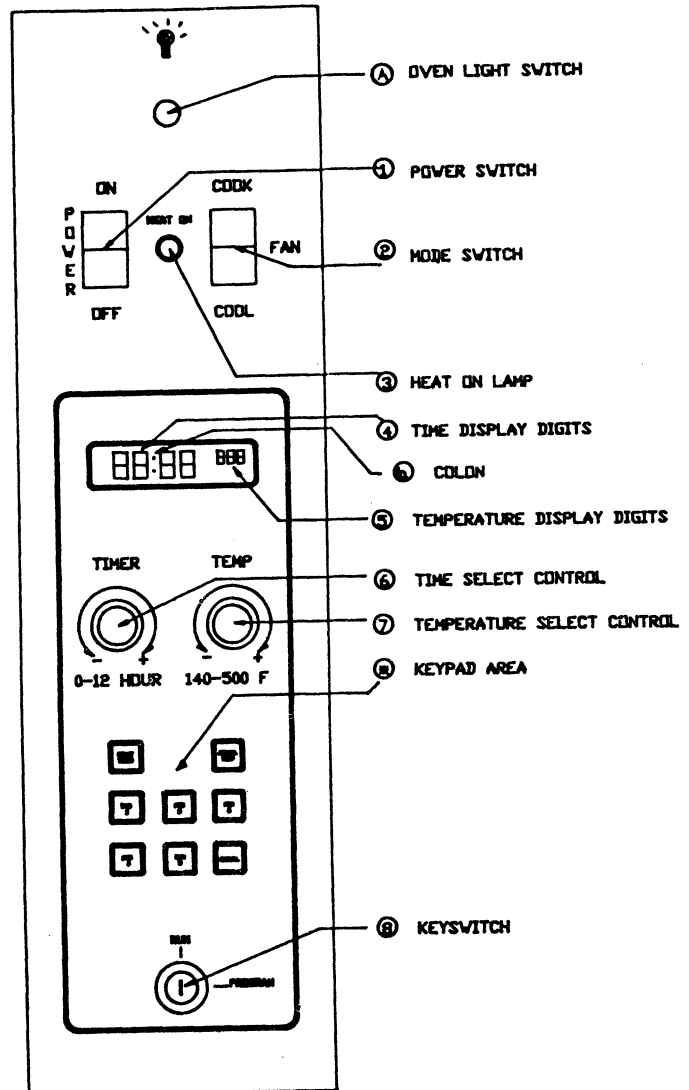
NOTE: Keyswitch must be in "Run" position.

- A. Select desired cooking temperature with temperature select Control 7.
- B. Select desired cooking time with time select control 6. At this point temperature display digits 5 will flash until oven reaches temperature.
- C. When temperature digits lock in steady; load product and depress "Start Timer" keypad. Colon 4a will now blink indicating timer is counting down.
- D. Cancel tone with "Cancel" keypad.

NOTE: In manual mode of operation time and/or temperature may be increased or decreased "on the fly" by rotating time or temperature controls as desired.

5. Cool Down

- A. To cool oven cavity, set mode switch to cool down position and open oven door.



HALF-SIZE ELECTRIC CONVECTION OVEN

USER TIPS

- ° As a guide, set oven temperatures 25 to 50 degrees lower than called for in recipes or directions using standard or conventional ovens.
- ° Cooking time may be less depending upon the product you are preparing. 10% is a general rule. Product should be watched the first time it is prepared.
- ° Cooking time and oven temperature will vary depending upon such factors as size of load, temperature of product, and mixture of recipe, particularly moisture.
- ° When you have established satisfactory time and temperature for your products, record them on a chart and keep as a reference guide.
- ° Preheat oven thoroughly before use. To reach 350° takes approximately 15 minutes. The burner "ON" light will go off when temperature is reached. For optimum results oven should be preheated for 30 minutes to allow for thorough heat saturation.
- ° The load should be centered on the racks to allow for proper heat circulation around the sides.
- ° Load size. The oven will hold five (5), 13" x 18" sheet pans or five (5) 12 x 20 x 2½" steam table pans.
- ° Never place pans directly on the oven bottom. Always place pans on a rack which will allow the air to circulate within the oven cavity.
- ° Load and unload food as quickly as possible to prevent an excessive drop in temperature.
- ° Avoid using warped pans since level pans bake more evenly.
- ° Do not use a deep pan for shallow cakes, cookies, etc. as circulation across the surface is essential for even cooking and browning.
- ° When baking muffins or products with thin batters, turn the fan switch to low to prevent flowing.
- ° To prevent excessive shrinkage, roast meats at a low temperature, 250° to 325°.
- ° When rethermalizing frozen entree or casserole products, preheat the oven 50 degrees higher than cooking temperature to compensate for heat loss during and after loading. Thermostat must be returned to cooking temperature after loading.
- ° To conserve energy, turn the oven off when not in use.

PROBLEMS/SOLUTIONS

HALF-SIZE ELECTRIC CONVECTION OVEN

PROBLEM	SOLUTION
If cakes are dark on the sides and not done in the center	lower oven temperature.
If cakes edges are too brown	reduce number of pans or lower oven temperature.
If cakes have light outer color	raise temperature.
If cake settles slightly in the center.....	bake longer or raise oven temperature slightly. Do not open doors too often for long periods.
If cake ripples	overloading pans, batter is too thin, or turn fan speed to low.
If cakes are too coarse	lower oven temperature.
If pies have uneven color	reduce number of pies per rack or eliminate use of bake pans.
If cupcakes crack on top	lower oven temperature.
If meats are browned and not done in center	lower oven temperature and roast longer.
If meats are well done and not browned	raise temperature. Limit amount of moisture.
If meats develop hard crust	reduce temperature or place pan of water in oven.
If moisture accumulates on inside of oven door	open vent located at top inside front of oven.

SUGGESTED USE GUIDE

<u>PRODUCT INFO</u>	<u>TEMPERATURE</u>	<u>TIME</u>
Sheet Cakes (3 lbs. ea. pan, 5 pans*)	300°F	25 min.
Chocolate Chip Cookies (2", 15 ea. pan, 5 pans*)	300°F	12 min.
Sugar Cookies (2", 15 ea. pan, 5 pans*)	300°F	12 min.
Soda Biscuits (12 ea. pan, 5 pans*)	375°F	6 min.
Bread (1 lb. loaves, 12 loaves, 3 racks)	330°F	20-25 min.
Rolls (15 ea. pan, 5 pans*)	330°F	12 min.
Fruit Pies, 20 oz. frozen (2 ea. pan, 5 pans*)	345°F	35 min.
Basic Muffins (2½ oz. ea., 120 muffins, 5 racks)	325°F	18 min.
Hamburgers (6/1, 12 ea. pan, 5 pans*)	400°F	10 min.
Rolled Roast (4 roasts, 10 lbs. ea., 2 pans)	300°F	2½ hrs.
Baked Potatoes (8 oz. ea., 18 ea. pan, 5 pans*)	425°F	45 min.
Lasagne, Frozen (6 lb. pans, 5 pans)	325°F	1½ hrs.
Cheese Sandwichs, Toasted (12 ea. pan, 5 pans*)	400°F	7 min.
Chicken Parts (20 ea. pan, 5 pans)	350°F	35 min.

*Half-Size Bun Pan - 17 13/16" x 12 7/8"

MAINTENANCE

STAINLESS STEEL

For routine cleaning just wash with a hot detergent solution. Wash just a small area at a time or the water will evaporate leaving the chemicals behind causing streaking.

Rinse the washed area with a clean sponge dipped in a sanitizing solution and wipe dry with a soft clean cloth before it can dry.

Use a paste of water and a mild scouring powder if you have to, but never rub against the grain. All stainless steel has been polished in one direction. Rub with the polish lines to preserve the original finish. Then thoroughly rinse as before.

To prevent fingerprints there are several stainless steel polishes on the market that leave an oily or waxy film. Do not use on surfaces that will be in contact with food.

Stainless may discolor if overheated. These stains can usually be removed by vigorous rubbing with a scouring powder paste.

Scale may form whenever hard water is used. Regular cleaning should eliminate any build-up. Water softening equipment may be required if the condition is severe.

Use only stainless steel, wood, or plastic tools if necessary to scrape off heavy deposits of grease and oil. Do not use ordinary steel scrapers or knives as particles of the iron may become imbedded and rust. Steel wool should never be used.

Either a typical bleach solution or hot water can be used to sanitize stainless steel without harm.

MAINTENANCE

EXTERIOR FINISHES

Painted and stainless surface may be cleaned and kept in good condition by applying a light oil such as Shielia Shine. Saturate a soft cloth and wipe oven exterior when cold. Wipe excess with a clean cloth.

OVEN INTERIOR

Before cleaning oven interior, remove oven racks and rack guides. Oven racks and rack guides can be cleaned with a mild soap and warm water.

The porcelain interior can be easily cleaned with oven cleaners such as Easy-Off or Dow Cleaner. Apply only when oven is cold.

MAINTENANCE - MOTOR CARE

The motor on your GARLAND Convection Oven is maintenance free since it is constructed with self-lubricated sealed ball bearings. It is designed to provide durable service when treated with ordinary care. We have a few suggestions to follow on the care of your motor. When the motor is operating, it cools itself internally by air entering at the rear of the motor case, provided proper clearance has been allowed.

Since the blower wheel is in the oven cavity it is at the same temperature as the oven. If the motor is stopped while the oven is hot, the heat from the blower wheel is conducted down the shaft and into the armature of the motor. This action could shorten motor life.

We recommend, at the end of the bake or roasting period, when the oven will be idle for any period of time or before shutting down completely, that the doors be left open, and by use of the cool-down position on the fan switch, the fan continues to run at least 5 minutes. The "FAN" should never be turned "OFF" when the oven is "HOT".

TROUBLESHOOTING GUIDE - UCO-E-05 UCO-E-25

---CAUTION---

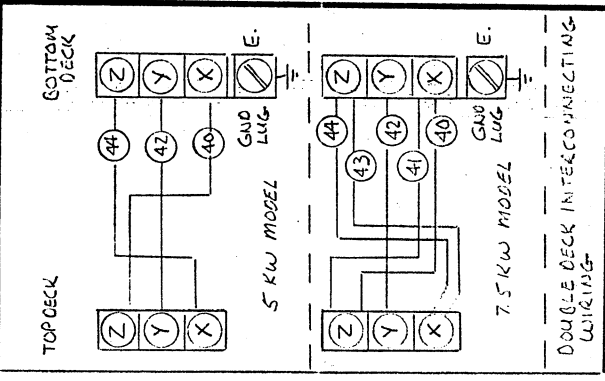
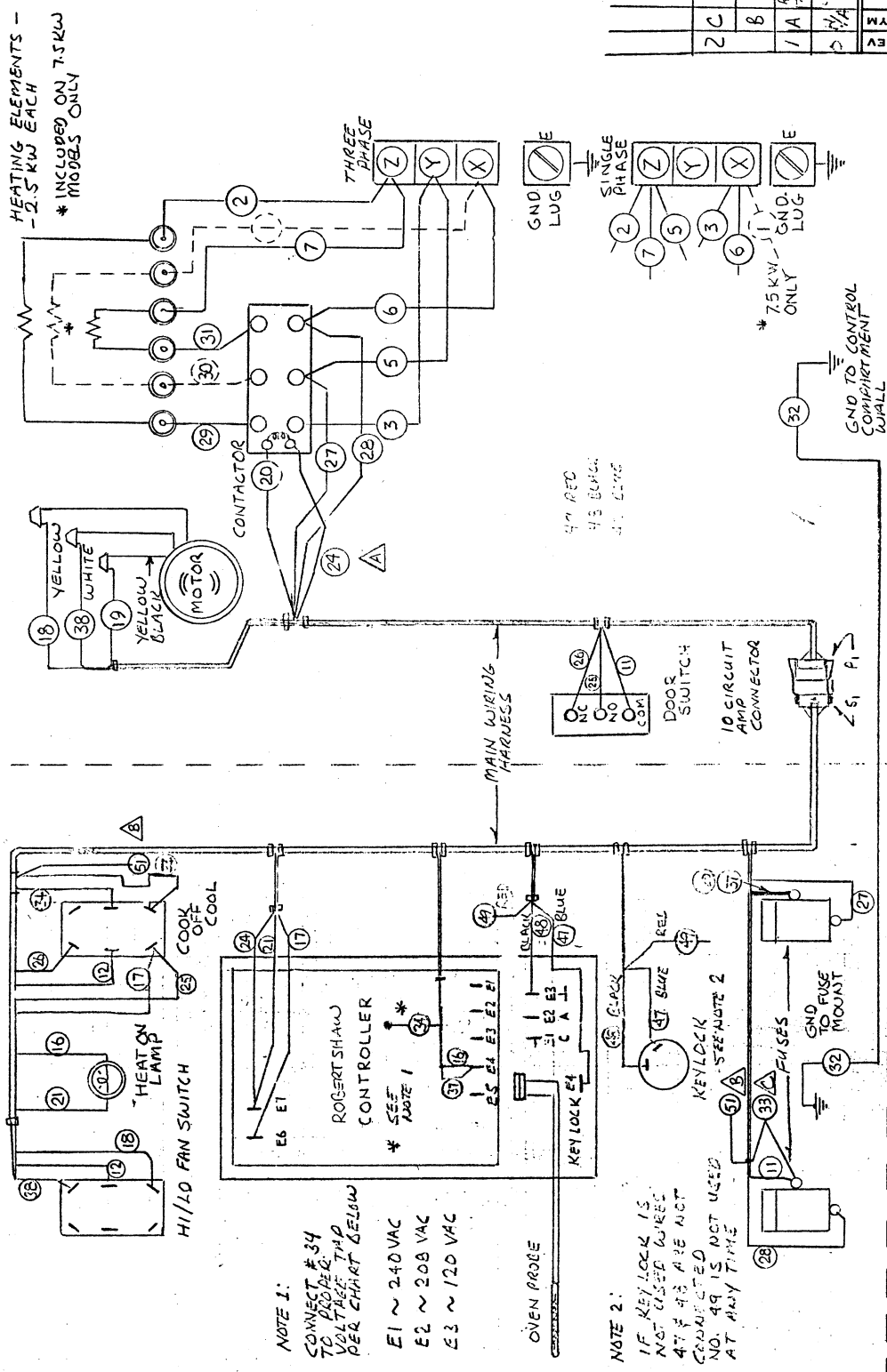
HIGH VOLTAGE - Before opening control panel for servicing disconnect appliance from power source. Failure to do so may result in serious injury.

- NOTES:
1. The time/temp control in the TE2B RTD is an all electronic unit and contains no field serviceable components or adjustments. If malfunction is traced to control it should be replaced.
 2. It is important to note the calibration of the time/temp control is dependent upon the correct voltage/phase and frequency of the electrical supply. This should be checked whenever any control problems are encountered. The appliance rating plate shows the correct values and can be used as reference.
 3. If calibration check is required, measuring thermometer or pyrometer must be placed in the center of the oven cavity. Two calibration bands are provided in the temp control. The low band extends from 100-300°F; the high band from 300 - 500°F. Calibration should be checked at 200°F and 400°F.

Important - Temp control operates in 5°F steps. When checking calibration with actual temp. switch, only temperatures divisible by 5 will be displayed.

4. Refer to chart below for troubleshooting.

SYMPTOM	FRONT PANEL FUSES	CHECK FOR PROPER VOLTAGE AND PHASE	COOK/OFF/COOL SWITCH	DOOR SAFETY INTERLOCK	FAN HI/LOW SWITCH	FAN MOTOR	HEATER ELEMENTS	LOAD CONTACTOR	TIME/TEMP CONTROL	START/CANCEL CONTROL	ACTUAL TEMP SWITCH	OVEN PROBE
UNIT TOTALLY INOPERATIVE	X	X	X	X								
OVEN FAN INOPERATIVE	X	X	X	X	X	X						
FAN OPERATES AT ONE SPEED ONLY		X				X	X					
FAN INOPERATIVE IN COOL DOWN MODE			X	X								
POOR PRE-HEAT TIME		X						X		X		
NO HEAT			X					X	X	X		
TIMER INACCURATE		X								X		
TEMP INACCURATE		X								X		X
CONTRD INOPERATIVE DISPLAY UNLIT	X	X	X	X						X		
CANT START TIMER										X	X	
CANT DISPLAY ACTUAL TEMP										X		X
TIME DISPLAY=F4 CAN NOT CANCEL												X
TIME DISPLAY=F3 CAN NOT CANCEL												X



HEATING ELEMENTS -
2.5 KW EACH
* INCLUDED ON 7.5 KW
MODELS ONLY

DOUBLE DECK INTERCONNECTING
WIRING

NOTE 1:
CONNECT #34
TO POWER TAP
PER CHART BELOW

E1 ~ 240VAC
E2 ~ 208 VAC
E3 ~ 120 VAC

NOTE 2:
IF KEY LOCK IS
NOT USED WIRE
47 & 48 ARE NOT
CONNECTED
NO. 49 IS NOT USED
AT ANY TIME

MODEL NO.	TOTAL KW	THREE PHASE KW PER PHASE		NOMINAL FUSES PER PHASE											
		208/240	208/240	SINGLE PHASE	208	210	215	220	225	230	235	240	245	250	255
7526-R10	5.5	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
TTE2E-R10	11.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
TTE2E-R10-7	16.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0

ITEM	PART NUMBER	PART NAME	MATERIAL	BLANK SIZE	FINISH
1	36501E	WIRING DIAGRAM			
2					
3					
4					
5					
6					
7					
8					

REV	SYM	DESCRIPTION	DATE	APP
2		C SPLIT # 11 f 33	7/25/86	
B		ADDED WIRE # 51	8/88	
1	A	REMOVED WIRE # 51	12/19/87	
0		TO RELEASE FROM	8/18/87	

TOLERANCES (EXCEPT AS NOTED)
FRACTIONAL ± 1/64 DECIMAL ± .005

GARLAND
AVENUE COMPANY
FREELAND, PENNSYLVANIA 18824

DO NOT SCALE
DATE DRAWN APP
4-1-87 AJG GS

DRAWING NO. REV
13660 2

SHEET 1 OF 2

UCO-E

