OPERATING INSTRUCTIONS

PRINCE CASTLE INC.

Universal Toaster
Model No. 411-SL Series

Excalibur

Prince Castle's Universal Batch Bun Toaster caramelizes up to 12 regular 4" (10.16 cm)buns at one time. Perfectly toasts two and three-part buns by allowing operators to adjust time and temperature selections. Constructed of durable stainless steel and aluminum, the 411-SL toaster features a self-diagnostic trouble shooting system and solid state controls and both audio and visual alarms. Two nickel-plated platens offer precise temperature control with superior and consistent toasting results. A stainless steel bun board makes bun removal easy.

PRODUCT SPECIFICATION

Dimensions

Height Open:	15” (38.1 cm)
Height Closed:	7” (17.7 cm)
Width:	16-1/4” (41.2 cm)
Length Open:	35-1/4” (89.5 cm)
Length Closed:	31-1/2” (80.0 cm)

TABLE OF CONTENTS **PAGE**

LIMITED WARRANTY

This product is warranted to be free from defects in material and/or workmanship for a period of two (2) year from date of original installation, not to exceed 30 months from date of shipment from our factory.

Any component which proves to be faulty in material and/or workmanship will be replaced or repaired (at the option of Prince Castle, Inc.) without cost to the customer for parts or labor.

This warranty is subject to the following exceptions/ conditions:

- Use of non-genuine Prince Castle Parts voids this warranty.
- This equipment is portable; charges for on-location service (e.g., trip charges, mileage) are not included in the provisions of this warranty.
- All labor shall be performed during regular work hours. Overtime premium will be charged to the buyer.
- All problems due to operation at voltages other than specified on toaster nameplates.
- This product must be serviced by a Prince Castle Authorized Service Center or a Prince Castle Factory Service Technician. Failure to do so may void this warranty.
- Damage caused by carelessness, neglect, and/ or abuse (e.g., dropping, tampering or altering parts), equipment damaged in shipment, by fire, flood or an act of God is not covered under this warranty.

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Toll Free: 1-800-PCASTLE

INSTALLATION

1. After you have removed the toaster from the carton, inspect the unit for signs of damage. If there is damage to the unit:
   - Notify carrier within 24 hours after delivery.
   - Save carton and packing materials for inspection purposes.
   - Contact the Prince Castle Customer Sales Department at 1-800-722-7853 to arrange for a replacement to be sent.

2. Verify that all parts have been received.

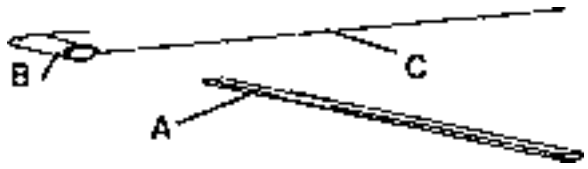
3. If you find a part missing call 1-800-722-7853 and ask for the Customer Sales Department. If you have a question with operation ask for the Service Department.

4. Toaster must be cold before Teflon release sheets can be installed.

IMPORTANT: Toaster must be locked in the open position by engaging the safety latch so toaster cannot be closed before installing the Teflon release sheet.

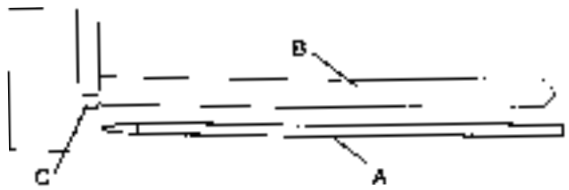
5. Install the stretcher bar (A) into the loop (B) of each release sheet (C). See figure 1.

figure 1



6. Slide release sheet (A) to rear of bottom platen (B) and attach to hooks (C). See figure 2.

figure 2



IMPORTANT: Slots in the stretcher bar are to face the front of the toaster.

7. Pull the release sheet tight against the bottom of the platen and spring retainer on the front of the platen.

8. Push round bar and release sheet into the spring retainer. See figure 3.

figure 3

IMPORTANT: The release sheet should be tight to the bottom of the platen. If not, remove round bar and repeat step 5.

9. Repeat steps 3-6 to install the release sheet on upper platen.

OPERATION

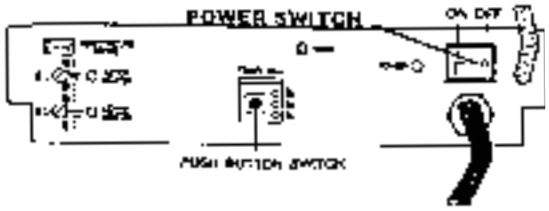
CAUTION: **Before plugging in, make sure toaster power switch is in the OFF position.**

1. Insert the power cord into an ANSI 125/250 volt, 3 pole 4 wire grounding outlet. The receptacle should be a type NEMA #L14-20R. For European units the receptacle should be a MENNEKES #316 P6 1302.

IMPORTANT: This should be a dedicated outlet. No other equipment should be operating on this line (i.e. fryers, refrigerators, cash registers, etc.).

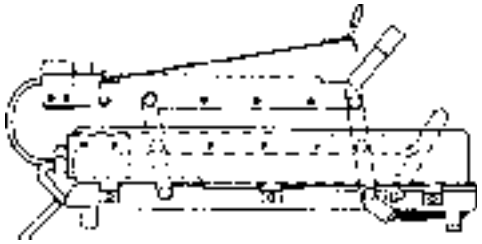
2. Place the power switch in the ON position. See figure 4.

figure 4



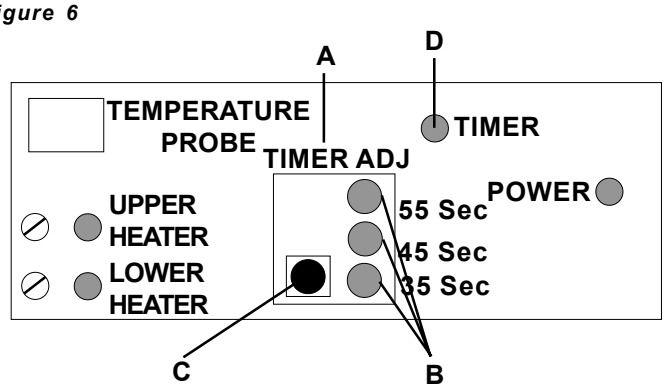
3. Platens must be in the “UP” position while the toaster warms up so that the timer is not activated. Warm-up takes 30 minutes. See figure 5.

figure 5



SETTING TOAST TIMES (See figure 6.)

figure 6



The toaster is preset at the factory for a 35 second toasting time and a 420° F toasting temperature on both platens. Temperature settings using commercial bakery buns are:

35 seconds 420° F
45 seconds 410 ° F
55 seconds 400° F

Settings may have to be adjusted because sugar within the product being toasted may vary from bakery to bakery.

1. On the lower control box panel, locate and lift the sliding door marked TIMER ADJ (A). Behind the door are three red LED's (B) each denoting a bun toasting time setting of either 35 sec, 45 sec or 55 sec.

IMPORTANT: There should be only one time setting light on.

2. Behind the TIMER ADJ (A) door there is a small PUSH BUTTON SWITCH (C). The bun toasting time can be set or changed whenever the toasting cycle is NOT active (i.e. when the red timer light (D) is not lit).

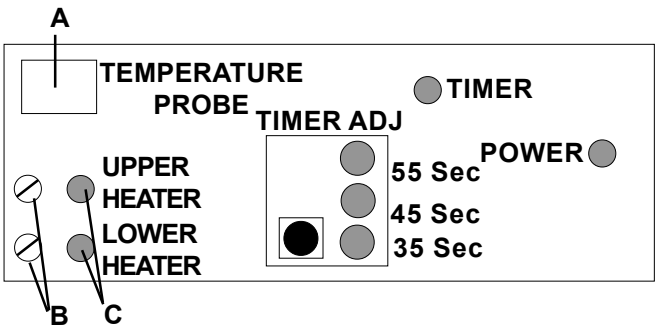
3. Press and hold the TIMER ADJ (A) button in for 5 seconds until an audio alarm sounds. At this point the next bun toasting time light will turn on. Release and press the TIMER ADJ (A) button until the desired bun toasting time for your product is selected.

4. Activate toaster timing cycle by pulling the handle/ lever assembly forward and down. After selected time (35, 45, or 55 seconds) has elapsed the audible alert will sound and the "bun ready light" will come on.

SETTING TOAST TEMPERATURES

(See figure 7.)

figure 7



To properly calibrate and set cooking temperatures the following tools are required:

- "K" Type Pyrometer
- Thermo - Electric Patch Cord #SF001-250
- Flat Blade Screwdriver

1. Locate the two yellow–colored temperature probe jacks (A) on the upper and lower control boxes.

2. Plug one end of the Patch Cord into the temperature probe jack (A) of either the upper or lower control box depending on which platen you are calibrating first. Plug the other end of the patch cord into the "K" type pyrometer.

3. Directly beneath the temperature probe jack (A) on the lower control box are the two platen temperature control potentiometers (B), labeled upper adj and lower adj for upper platen and lower platen. Next to each temperature control potentiometer is a yellow indicating light (C) (upper header and lower heater). These indicating lights will be lit when power is being supplied to the corresponding platen. Thus these lights will cycle on/off as the corresponding platen temperature is being controlled.

4. To set a temperature use the flat blade screwdriver to turn the temperature control potentiometer (B). Turning the pot clockwise will increase the platen temperature counterclockwise to decrease.

5. Observe the potentiometers temperature display and note the temperature at the point when the Yellow heater indicator light (C) of the corresponding platen turns off. This temperature is considered the calibration temperature.

IMPORTANT: Toasting temperatures will vary by bread product so your calibrated temperature may vary for different products.

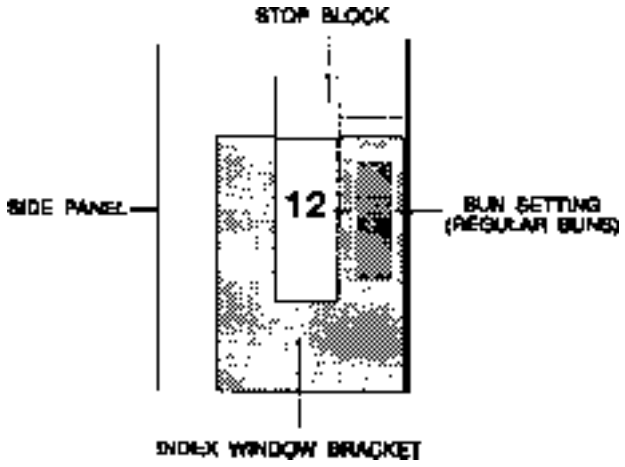
6. Remove the patch cord from the toaster temperature.

SETTING STOP BLOCKS (See figures 8 & 9.)

The stop blocks allow toasting different sizes, cuts and brands of bread product. There are (6) combination stop block settings in 1/16" increments. The overall range is 3/4" to 1-1/4". The stop block settings allow a better crush when toasting different styles of buns.

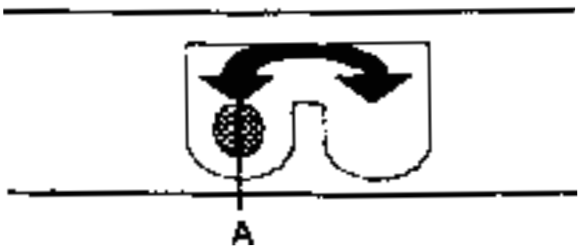
1. Ensure stop blocks are on the correct setting before operating toaster. There are (6) stop block combinations available.
2. To change a stop block setting, depress the right stop block to disengage locking pin and turn in either direction to the desired setting.
3. View the stop block setting selected through the index window bracket which is located over each stop block. See figure 8.

figure 8



4. Locate the selector lever (A) on the front of the toaster frame and move the lever left or right to allow you to switch back and forth between the combination setting selected on the stop block. See figure 9.

figure 9



CENTER OPENING ADJUSTMENT

To adjust the opening between the upper and lower platens, loosen the two screws holding the adjustment plate on each side of the lower platen. There are 11 adjustments. The middle adjustment is 1/2" . Each adjustment moves the opening 1/16". Moving the adjustment plate to the left increases the opening, moving it to the right decreases the opening. The center adjustment should be used when toasting different cuts of bread.

OPERATION

After selecting a cooking time and temperature, and setting the stop blocks and the center adjustment plate you are ready to begin toasting buns.

1. Using the bun spatula place the crowns face up.
2. Using the other bun spatula place the heels cut face down.
3. Lift the bun board on the upper platen up and insert the spatula with the heels on it.
4. Lower bun board down on top of heels and spatula slide spatula out leaving heels on platen with bun board on top.
5. Insert spatula with crowns on it into he center section or lower section of toaster.
6. Pull toaster handle forward to move platen on top of crowns, the timer will automatically activate and the red timer light will come on.
7. When the audio alarm sounds and the bun done light comes on, immediately push handle back to release crowns from platen. Remove spatula with crowns from toaster.
8. Lift bun board on upper platen and slide the spatula in under the heels and remove

REMOVAL & CLEANING OF RELEASE SHEETS

TO REMOVE:

1. Toaster must be cold before release sheets can be removed.

CAUTION: **Before removing release sheets the toaster platen must be locked in its open position by engaging the "safety latch".**

2. Remove release sheets by removing the round bar from the spring clip on the front of platens and then remove the stretcher bar from rear hooks.
3. Remove stretcher bar from release sheets.

TO CLEAN:

1. Lightly scrub the release sheet on both sides using a damp clean towel. Keep sheet flat while cleaning to ensure no wrinkles or creases are put into sheet.

IMPORTANT: Do not use green pads to scrub release sheets.

2. Rinse release sheets using clean running water and wipe the sheets dry in one direction only using a clean damp grill cloth until all residue is removed. Do not fold or crease (air dry).
3. Rinse release sheets using clean running water and wipe the sheets dry in one direction only using a clean damp grill cloth. Keep wiping until all residue is removed.

CLEANING

CAUTION: **Before unplugging power cord make sure the toaster power switch is turned OFF.**

1. Unplug toaster power cord from outlet.
2. Allow toaster to cool.
3. Follow cleaning instructions.

IMPORTANT: Always lock platens in open position using the safety latch before cleaning or relocating toaster to a different location.

IMPORTANT: When cleaning do not pour water on the platen. This may cause an electrical hazard and cause serious damage to the sensitive solid state circuitry in this toaster.

TROUBLESHOOTING CHART

CAUTION: **Service is to be performed by qualified service personnel.**

CAUTION: **Use extreme caustion during electrical ciruit tests. Live circuits will be exposed.**

CAUTION: **Inspection, testing and repair of electrical equipment should be performed only by qualified service personne. The unit should be unplugged when servicing, except when electrical tests are required.**

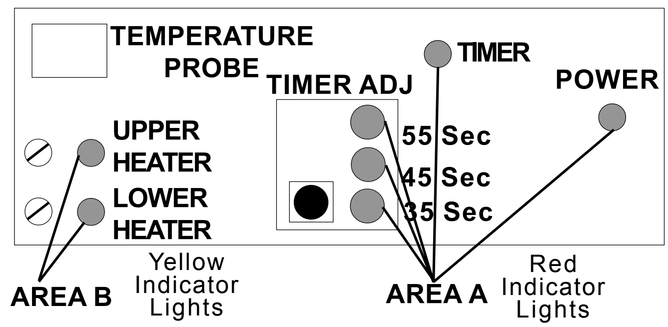
PROBLEM	PROBABLE CAUSE	CORRECTIVE ACTION
Platen Has excessive movement.	Platen attachment bolts loose.	Tighten bolts.
Audio Alarm works, no amber colored bun light.	Light burned out.	Replace amber colored bun done light.
No audio alarm or amber colored bun done light.	Speaker defective. Opto sensor board defective.	Replace speaker. Replace opto sensor board.
Buns being crushed.	Stop blocks not adjusted properly Buns cut improperly.	Adjust stop blocks. Adjust stop block to (=) or (-).
Buns sticking to platen.	Excessive heat. Built up carmelized sugar on platen.	Calibrate toaster. Clean platen (PM Card #17).
One platen not heating but no diagnostic signals.	Corresponding probe inoperable.	Replace probe.

SELF-DIAGNOSTIC TROUBLESHOOTING CHART

Observe the (3) red indicator lights (A), and the (2) yellow lights controlling the upper & lower heater area (B). An audio alarm will sound, match the lights in the malfunction section below to the toaster malfunciton to identify the corrective action.

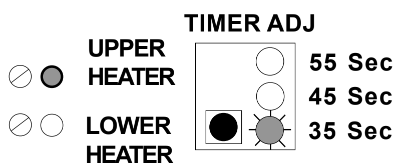
- Indicates red lights is on and flashing.
- Indicates red lights is off.
- Indicates red lights is off.

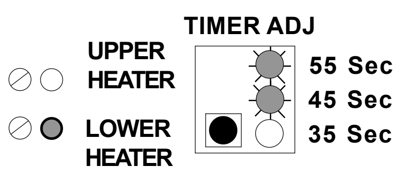
LOWER CONTROL BOX FACEPLATE

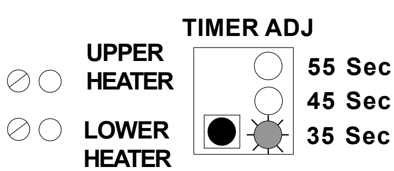


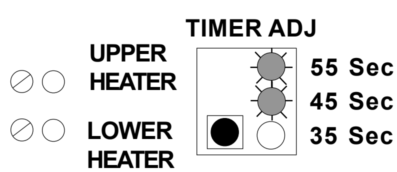
SELF-DIAGNOSTIC TROUBLESHOOTING CHART

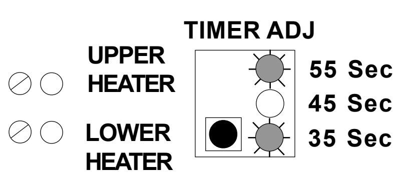
For the five malfunctions in this column, replace the 411-261S Power Board located in the lower control box.



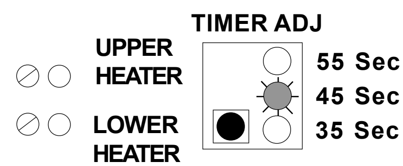




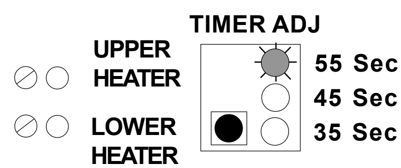




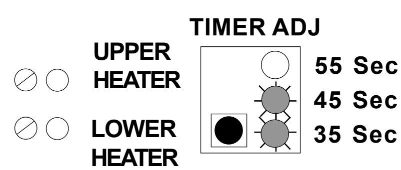
Check the lower probe connector at the main P.C. Board. Replace the 411-85S located in the lower control box.



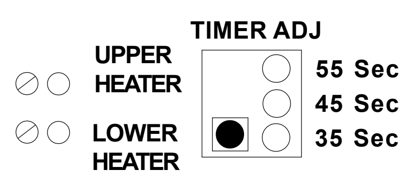
Check the upper probe connection at the opto-sensor board located in the upper control box. Replace the 411-85S located in the upper control box.



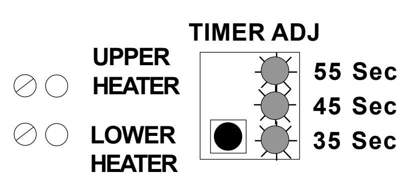
Replace the No. 411-262S Main P.C. board located on the front faceplate on the lower control box.



If there is no timer or heater lights on, but the audio alarm is sounding replace the 411-262S Main P.C. Board.



If (3) timer lights are flashing and an audio alarm is sounding the upper and lower platens are over heating. Turn the toaster OFF and disconnect the power cord from receptacle.



Then call the Prince Castle Service Department at 1-800-323-2930 for assistance.

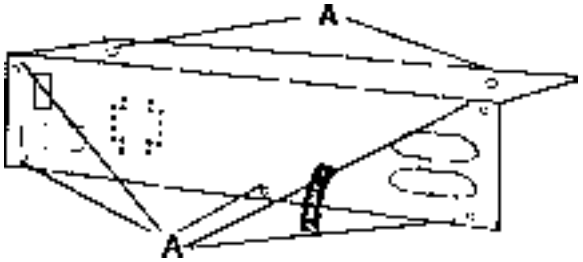
NON-SCHEDULED MAINTENANCE

Model No. 411-14 Opto-Sensor P.C. Board

Tools Needed: 1/4" Flat blade screwdriver

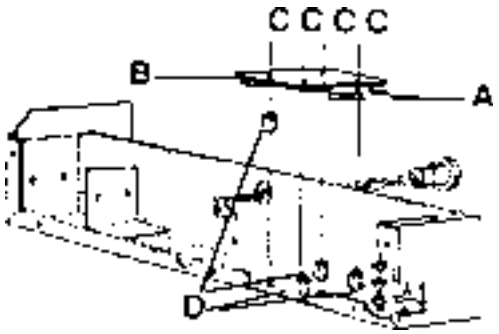
1. With the toaster in the up position and the safety latch in place use the flat blade screwdriver to remove (7) screws (A) from the upper control box and slowly lift up the back. See figure 10.

figure 10



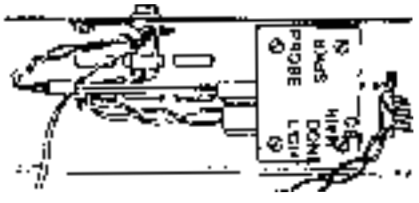
2. Disconnect the (4) wire connectors (A) from the P.C. Board (B). Using the flat blade screwdriver remove (4) screws (C) holding the P.C. Board to the standoffs (D) and carefully remove the P.C. Board. See figure 11.

figure 11



3. To install replacement Opto-Sensor P.C. Board reverse steps 1 and 2. When reconnecting the (4) wire connectors the RED connector goes into PROBE slot on board, the 3 prong white connector goes into the done light slot on the board, the 2 pronged white connector goes into the speaker slot on the board and the six prong maroon connector goes into the main P.C. Board slot on the board. Make sure all connections are tight. See figure 12.

figure 12

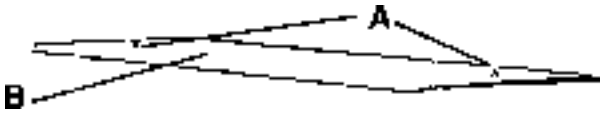


Model No. 411-261S Power P.C. Board

Tools Needed: 1/4" Flat Blade Screwdriver

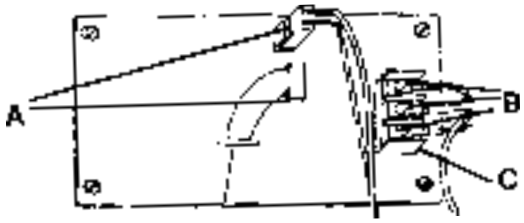
1. Disengage safety latch and lower toaster to toast position. Using 1/4" flat blade screw driver remove (2) screws (A) from cover (B) on the lower control box, and remove cover. See figure 13.

figure 13



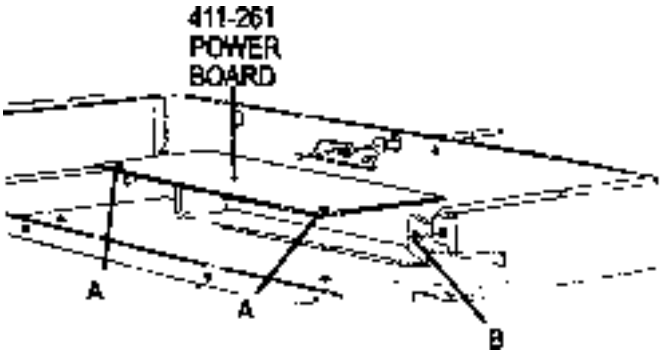
2. Carefully disconnect the wire connectors (A) from the board, using the 1/4" flat blade screwdriver remove the (3) wire connections (B) from the terminal black (C). See figure 14.

figure 14



3. Using the 1/4" flat blade screwdriver remove the (2) screws and washers (A) that hold the power board to the standoffs from the top of the power board. Slide the P.C. Board out of the (2) rear mounting brackets (B) and lift out of the control box. See figure 15.

figure 15



4. Reverse steps 1-3 to install the replacement board. Be sure all wire connections are tight and properly located.

Model No. 411-262S Main P.C. Board

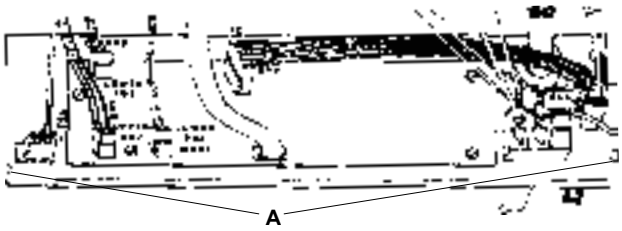
Tools Needed: 1/4" Flat Blade Screwdriver

1. Disengage safety latch and lower toaster to toast position. Using 1/4" flat blade screwdriver remove (2) screws (A) from cover (B) on lower control box, and remove cover. See figure 16.

figure 16

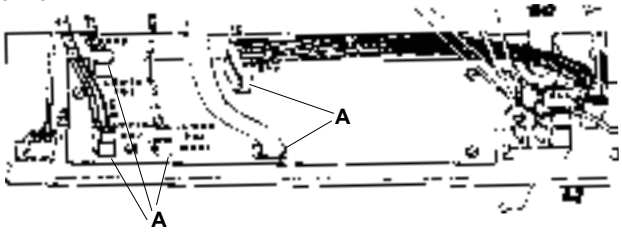
2. Using the 1/4" flat blade screwdriver remove (2) screws (A) from the front of the lower control box and carefully pull back faceplate exposing main P.C. Board. See figure 17.

figure 17



3. Disconnect the (5) wire connectors (A) from the board. See figure 18.

figure 18



4. Using the 1/4" flat blade screwdriver remove the (5) screws (A) from the front of the faceplate which holds the board to the faceplate, and remove the old board. See figure 19.

figure 19

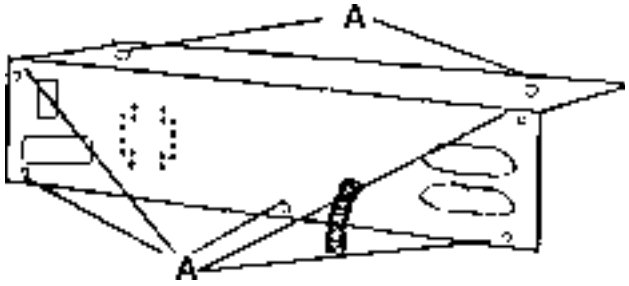
5. To install the new P.C. Board reverse steps 1-4. Make sure all wire connections are tight.

Model No. 411-85S Probe Assembly

Tools Needed: 3/16" Flateblade Screwdriver
1/4" Flatblade Screwdriver
Nut Driver 8-32

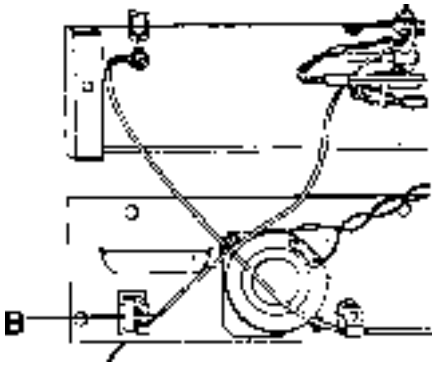
1. Using the 1/4" flat blade screwdriver remove (7) screws (A) that secure the cover tot he control box. See figure 20.

figure 20



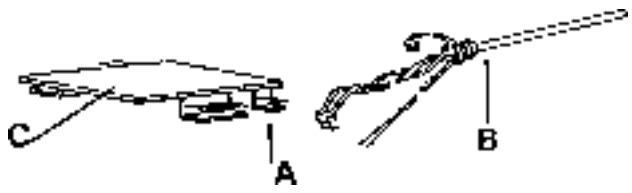
2. Using a 3/16" flateblade screwdriver loosen the (2) screws (A) that attach probe wires to the yellow mini-jack (B) and remove the (2) wires from this connection. See figure 21.

figure 21



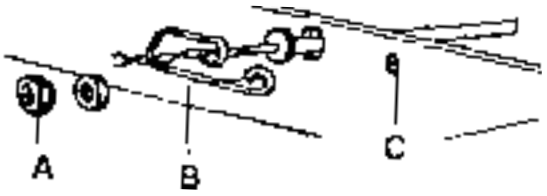
3. Unplug wire connector (A) from the probe (B) to the printed circuit board (C). See figure 22.

figure 22



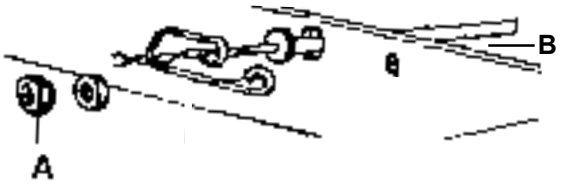
4. Using a nut driver remove nut (A) which secures probe bracket (B) to screw (C) on the control box. See figure 23.

figure 23



5. Remove probe bracket (A) and carefully slide probe (B) out of the platen tube. Discard old probe assembly. See figure 24.

figure 24



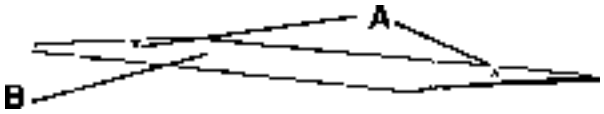
6. Install new probe by reversing steps 2 through 5. For probe replacement in the lower control box follow these same instructions.

Model No. 78-166S Power Switch

Tools needed: 1/4" Flat Blade Screwdriver.

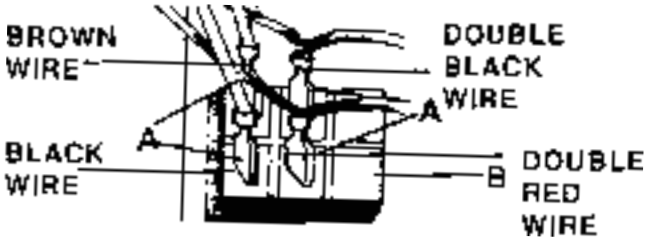
1. Lower toaster to toast position. Using 1/4" Flat Blade Screwdriver remove (2) screws (A) from the lower control box and lift off cover. See figure 25.

figure 25



2. Disconnect (4) wire connections (A) from the power switch (B). See figure 26.

figure 26



3. Remove power switch by squeezing bezel clips on switch (A) and pushing switch (B) out of the control box. See figure 27.

figure 27

4. To install new power switch reverse steps 1-3.

   Make sure all wire connections are tight and on the right posts.

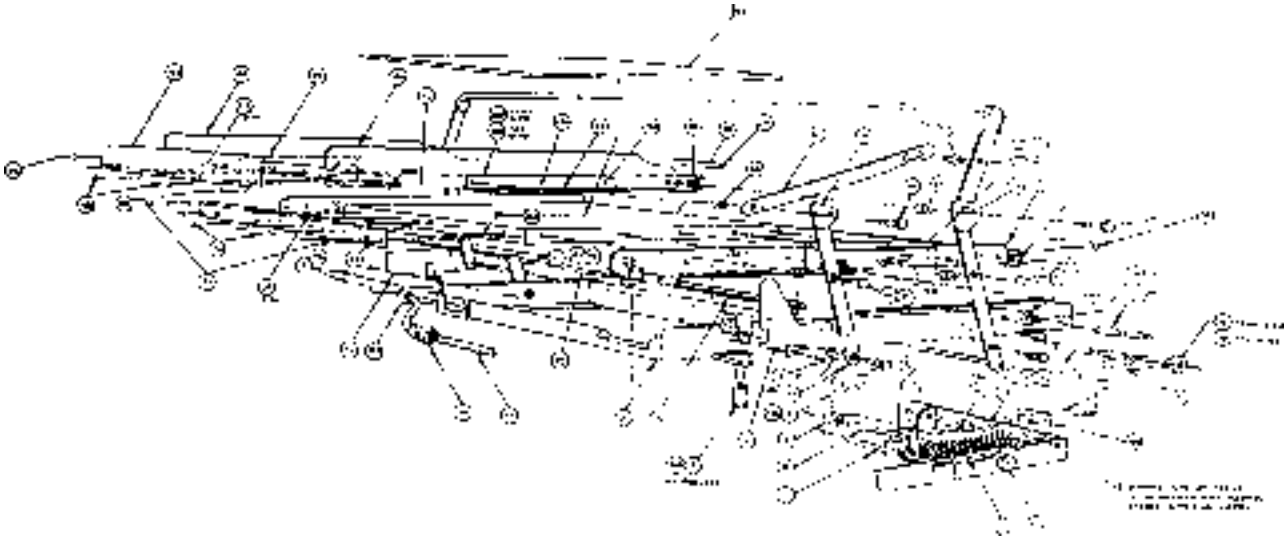
Top Left	=	Brown Wires
Bottom Left	=	Black Wire
Top Right	=	Double Black Wire
Bottom Right	=	Double Red Wire

PARTS LIST

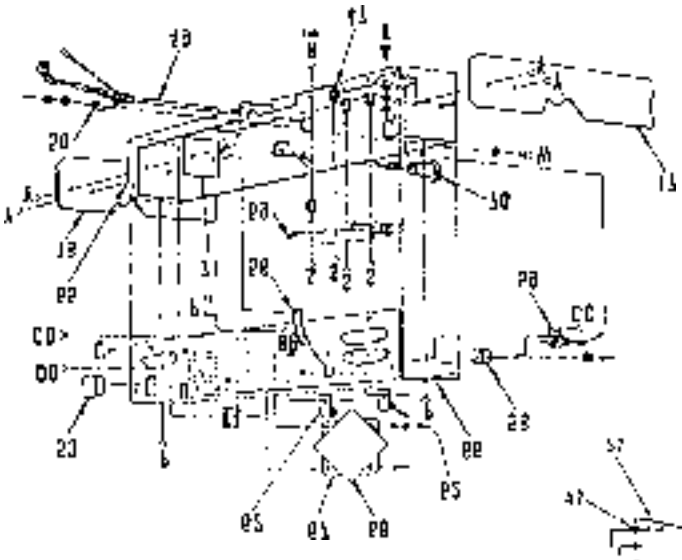
ITEM	PART NO.	DESCRIPTION
1	411-2S	Base
2	89-959S	Rubber Foot
3	411-243	Rear Lever Assy.
7	411-200	Safety Latch
8	411-238	Front Lever Assy.
9	411-118	Safety Latch Pin
10	411-8S	Lower Platen
	411-26S	Lower Platen (220 Volt)
11	411-42	Lower Rear Bun Fence
12	411-44	Lower Left Hand Bun Fence
13	411-43	Lower Right Hand Bun Fence
14	411-70	Platen Tube
15	411-6S	Upper Platen
	411-24S	Upper Platen (220 Volt)
16	411-254	Upper Rear Bun Fence
17	411-234	Upper Left Hand Bun Fence
18	411-223	Upper Right Hand Bun Fence
19	411-86	Spring Rod
20	81-013	Extension Spring
21	411-146	Guide Rod (Shaft)
22	411-108	Lever Block
23	89-925	Plunger Spring
24	411-107	Lever
25	411-117	Cover Plate
26	411-230	Left Hand Stop Block
27	411-231	Right Hand Stop Block
28	411-127	Index Window
29	411-123	Bun Tray Stop
30	411-256	Right Side Panel Assy.
31	411-41	Strain Relief Bracket
32	66-015	Strain Relief Bushing
33	72-126S	Power Cord
34	411-257	Left Side Panel Assy.
40	411-77	Lower Chassis
41	411-80	Lower Face Plate Assy.
42	411-32	Potentiometer Bracket
43	411-133S	Lower Potentiometer Assy.
44	411-132S	Upper Potentiometer Assy.
46	411-261S	Power P.C. Board
47	89-924	Standoff
48	77-058	Barrier Strip
49	411-85S	Probe Assy.
50	213-166	Probe Retainer
51	411-31	Chassis Cover
52	411-262S	Main P.C. Board
53	88-497	Mini-Jack
54	71-117	Clear Lens
55	78-166S	Power Switch
56	411-69S	Interconnect Cable
	411-109S	Interconnect Cable (220 Volt)
57	66-027	Aluminum Stain Relief
	66-062	Strain Relief (220 Volt)
58	411-83	Cable Cord Bracket
59	89-938	Loop Steel Clamp
60	411-33	Door Plate
61	411-34	Door Guard
62	88-573	Cable Clamp
63	89-921	Nylon Spacer
65	411-72	Upper Chassis Assy.
66	411-74	Upper Face Plate
67	213-229	Speaker Assy.
68	482-18	Speaker Grease Seal
69	411-14S	Sensor P.C. Board
70	213-257	Done Light Assy.
71	411-140	Insulator
A	411-59	Base Stud 5/16-18
	411-113	Base Spacer
	73-167	Self Locking Hex Nut 5/16-18
B	411-60	Lower Rear Platen Stud
	411-57	Lower Platen Spacer
C	411-60	Upper Platen Stud
	411-241	Safety latch Spacer
D	411-60	Upper Platen Stud
	411-221	Upper Platen Spacer
E	76-218	Slotted Binder Head Screw 1/4-20
F	411-60	Lower Front Lever Platen Stud
	411-57	Upper Platen Spacer
H	76-179	Slotted Binder Head Screw 10-18
J	76-382	Hex Head Screw 1/4-20 x 3/8
K	76-343	Set Screw 10-32 x 3/4
L	68-039	Roll Pin
M	76-600	Slotted Flat Head Screw 10-24 x 1
	73-008	Self Lock Hex Nut 10-32
N	76-040	Slotted Binder Head Screw 10-32
P	76-043	Slotted Binder Head Screw 8-32
R	76-095	Slotted Binder Head Screw 6-32
S	76-095	Slotted Binder Head Screw 6-32
	79-002	Intl. Tooth Washer #6
T	76-044	Slotted Binder Head Screw 8-32
	73-021	Hex Nut 8-32
U	76-095	Slotted Binder Head Screw 6-32
	79-033	Split Lock Washer #6
	73-031	Self Locking Hex Nut
V	76-043	Slotted Binder Head Screw 8-32
	79-031	Split Lock Washer #8
	73-021	Hex Nut 8-32
W	76-043	Slotted Binder Head Screw 8-32
	79-143	Flat Washer
	73-013	Self Locking Hex Nut
X	920-184	Hex Nut
	79-144	Washer
Y	76-043	Slotted Binder Head Screw 8-32
	73-013	Self Locking Hex Nut
AA	76-043	Slotted Binder Head Screw 8-32
	73-013	Self Locking Hex Nut
BB	76-064	Slotted Binder Head Screw 8-32
	73-021	Hex Nut 8-32
CC	76-043	Slotted Binder Head Screw
	73-021	Hex Nut
DD	76-051	Slotted Binder Head Screw 6-32
	73-015	Self Locking Hex Nut 6-32
EE	76-300	Slotted Pan Head Screw
72	411-233	Upper Bracket

73	411-234	Upper Bracket	77	411-228	Platen Bracket
74	411-240	Front Bracket	78	411-239	Front Bracket
75	212-622	Front Bracket	79	411-242	Teflon Holder
76	411-227	Platen Bracket	80	212-331	Platen Plate

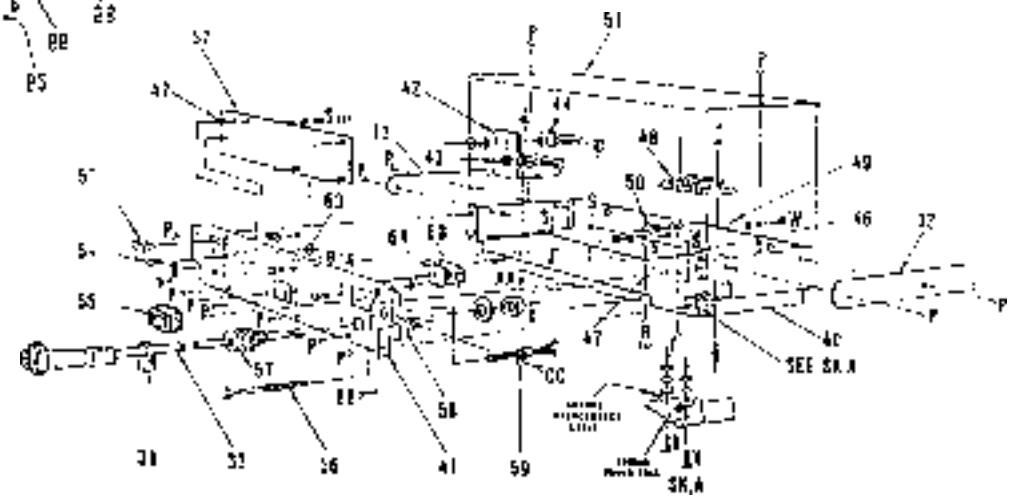
EXPLODED VIEW



UPPER CHASSIS ASSEMBLY



LOWER CHASSIS ASSEMBLY



WIRING DIAGRAM