

## Vertical Contact Toaster Control Board Kit (P/N 7000739)

### ⚠ CAUTION ⚠

To avoid possible personal injury and/or damage to the unit, all inspections, tests, and repair of electrical equipment should be performed by **QUALIFIED SERVICE PERSONNEL**. The unit **MUST** be completely shut down and unplugged before servicing, except when electrical tests are required. Use extreme care during electrical circuit tests. Live circuits will be exposed.

### ⚠ IMPORTANT ⚠

**BE SURE TO KEEP THIS DOCUMENT WITH YOUR OWNER'S MANUAL AS THE ERROR CODE INFORMATION HAS CHANGED.**

#### PARTS INCLUDED:

- 1 - VCT Control Board (4070236)
- 1 - 1/8" Dia. Auxiliary Thermocouple (P/N 4050213)
- 1 - 3/16" Dia. Platen Thermocouple (P/N 4050214)
- 1 - Thermocouple Auxiliary Bracket (P/N 0503321)
- 1 - Instruction Sheet (P/N 1011052)

#### AFFECTED PRODUCTS:

*Various Vertical Contact Toasters*

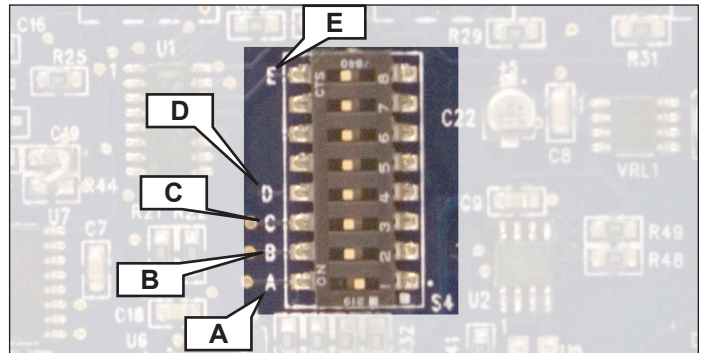


Figure 1. DIP Switch

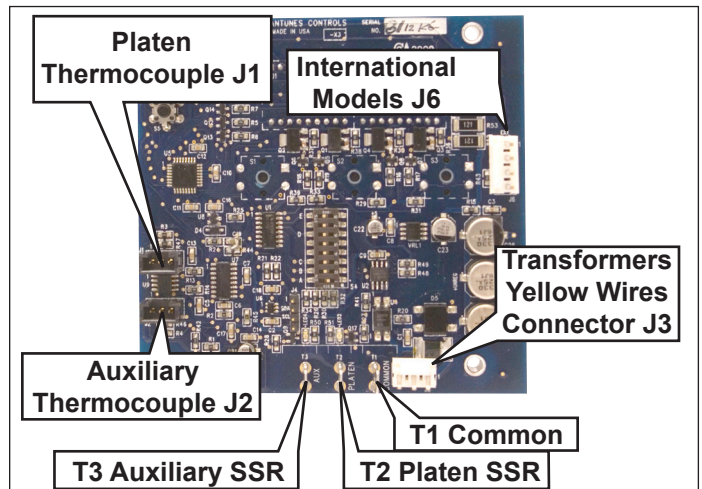


Figure 2. Control Board Connections

12. Plug in the power cord, but do NOT turn the power on.
13. Verify the new Control Board is installed correctly by pressing and holding the Control Board Button (Figure 3) while turning the power switch on

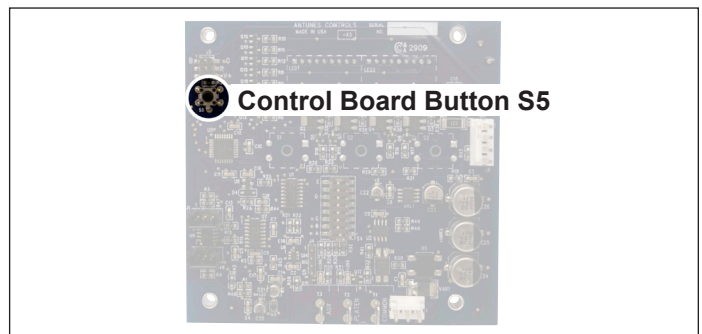


Figure 3. Control Board Button

### Installation

**NOTE: it is recommended to replace the Platen & Auxiliary thermocouples after replacing the control board.**

1. Locate the 8-position DIP Switch on the new Control Board (Figure 1).
2. Configure the A, B, C, D, and E settings (Figure 1) of the DIP Switch for your specific toaster model by using Table 1 on Page 4.
3. Turn the power off, unplug the power cord, and let the toaster cool down.
4. Remove the Side Panel on the right side of the unit (the same side as the Control Panel) by removing all of the screws on the panel.
5. Clean any crumbs and debris from the top cooling fan and Control Panel compartment with a vacuum cleaner or brush
6. Remove the four nuts on the existing Control Board.
7. Note the connections for the existing Control Board.
8. Remove all wires connected to the Control Board.
9. Remove the existing Control Board.
10. Install the new Control Board, secure in place with the four nuts removed in Step 6.
11. Connect all wires to the new Control Board (Figure 2).

**NOTE: The Black wire on T2 MUST go to Platen SSR Terminal #4. Failure to do so will result in the unit displaying random error codes.**

**NOTE: If you have an international model, be sure to connect the A/C Isolator Board (P/N 4070069) to terminal J6.**

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14. Release the Control Board Button. The display will show the 4 digit configuration number based on the DIP Switch selection (See Table 1 and then the 4 digit software version number.
15. Once the Control Board has been installed properly and verified, turn the power off. Then press and hold UP and DOWN arrow buttons simultaneously while turning the power switch on. Continue holding the buttons until the display reads **Fr** (factory reset).
16. Turn the power OFF and proceed with replacing both thermocouples.
8. Run the new Auxiliary Thermocouple through the hole in the side wall of the toaster.
9. Insert the clips onto the Auxiliary Thermocouple.
10. Slide the Auxiliary Thermocouple with clips into place on the Bracket so it locks into place.
11. Plug the Auxiliary Thermocouple connector into the Auxiliary connector on the Control Board terminal J2.
12. Reassemble the Conveyor Chain by placing the chain on the top sprockets with the hook ends down.
13. Wrap the Conveyor Belt Chain around the top and lower sprockets, then connect by hooking both ends together.

**NOTE: If the unit displays any ERR message, all heat will turn off. Use Troubleshooting chart to determine the cause of the error message**

### Auxiliary Thermocouple Replacement (if equipped)

1. Turn off the power and unplug the power cord.
2. Open the Front or Rear Panel and locate the Auxiliary Thermocouple.
3. Pull the Belt Wrap Pin out of the zipper of the Belt Wrap.
4. Remove the Belt Wrap.
5. Disconnect the Conveyor Belt Chain by squeezing any two links together and unhooking both ends (pliers may be used). Set the Compression Knobs to 6/F to facilitate chain removal.
6. Remove the Conveyor Belt Chain.
7. Remove the Auxiliary Thermocouple from the Bracket by unscrewing the two screws holding it in place.
  - a. If the Auxiliary Thermocouple cannot be removed from the Bracket, then remove the two screws holding the Bracket in place and remove the Bracket with the attached Auxiliary Thermocouple.

**NOTE: Use the old Bracket and Auxiliary Thermocouple as a visual gauge for the correct placement within the new Bracket.**

- b. Install the new Bracket with the two screws removed in the previous step.

**NOTE: Make sure the Conveyor Belt Chain is only installed around the conveyor sprockets.**

14. Re-install the Belt Wrap Pin into the zipper of the Belt Wrap.

### Platen Thermocouple Replacement

1. Disconnect the old platen thermocouple from the control board terminal J1.
2. Remove the thermocouple mounting bracket and then slide out the old platen thermocouple from the platen orifice.
3. Insert new platen thermocouple completely into the platen orifice until it stops.
4. Secure the thermocouple mounting bracket but DO NOT overtighten.
5. Plug the thermocouple onto control board terminal J1.
6. Reinstall the covers removed and secure.
7. Test the unit for proper operation.

**NOTE: "LO" flashes during warm up for approximately 30 minutes.**

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Error Code Flashing on display:	Possible Cause	Resolution
<b>Err 1</b>	Internal Control Board error.	Replace Control Board.
<b>Err 2</b>		
<b>Err 3</b>	The DIP switch settings on the new control board were not set to match the toaster's manufacturing number.	Adjust the DIP switches on the control board to match the toaster Manufacturing Number listed on document part number 1011052.
<b>Err 4</b>	Platen Thermocouple is shorted to chassis ground or the control board has failed.	Isolate and test the Platen Thermocouple for shorts to chassis ground. Replace if shorted to ground. If thermocouple is okay, replace the control board.
<b>Err 5</b>	Platen Thermocouple is disconnected, loose, or open.	Isolate and test the Platen thermocouple for continuity. Replace if found to be open. If thermocouple is okay, replace the control board.
<b>Err 6</b>	Internal Control Board error.	Replace Control Board.
<b>Err 7</b>		
<b>Err 8</b>		
<b>Err 9 or PH</b>	The DIP switch settings on the new control board were not set to match the toaster manufacturing number or, on international models, the interlock switches are not engaged or faulty or there is a malfunction with the AC isolator board or its 4 wire harness.	Adjust the DIP switches on the control board to match the toaster Manufacturing Number listed on document part number 1011052. If problem persists, refer to service manual.
<b>Err 10</b>	Internal Control Board error.	Replace Control Board.
<b>CHEC</b>	Electrical compartment ambient temperature is above 140° F (60° C) due to poor air flow.	Inspect the top cooling fan for operation and proper airflow direction. Clean as necessary and ensure the air is exhausting out of the top of the toaster.
Display Flickers Rapidly	Control Board is receiving less than 11.0 AC volts from the step-down transformer.	Verify power cord is plugged into the correct outlet. Control Board must receive 11.0-14.0 AC volts at terminal J3 to function.
<b>HI</b> flashes on display but only after ini- tially reading <b>USE.</b>	Platen solid state relay (SSR) is shorted closed causing the platen to overheat.	Replace the platen SSR if found to be shorted closed.
Display alternates between <b>USE, HI, LO</b> randomly	Platen Thermocouple and Auxiliary Thermocouple are not connected to their corresponding jacks on the control board or the Platen and Auxiliary SSR control voltage black wires are wired incorrectly at the control board.	Verify the platen thermocouple is connected on J1 & auxiliary thermocouple on J2 on Control Board. Verify platen SSR control voltage black wire is on T2 and Auxiliary SSR control voltage black wire is on T3 on the control board.
<b>HI</b> flashes on the dis- play but only when down arrow button is pressed.	Auxiliary thermocouple is disconnected, loose, or open or the auxiliary SSR is shorted closed causing the auxiliary heaters to overheat.	Isolate and test auxiliary thermocouple for continuity. Replace if found to be open. Replace auxiliary SSR if found to be shorted closed.

## Vertical Contact Toaster Control Board Kit (P/N 7000739)

Toaster Mfg. No.	DIP Switch Setting (L=Left, R=Right)					Configuration Number Displayed
	A	B	C	D	E	
9200252	R	L	L	L	L	0167
9200295	R	L	L	L	L	0167
9200296	R	L	L	L	L	0167
9200500	R	L	L	L	L	0167
9200502	R	L	L	L	L	0167
9200504	R	L	L	L	L	0167
9200512	R	L	L	L	L	0167
9200550	L	R	L	L	L	0176
9200552	L	R	L	L	L	0176
9200555	R	L	L	L	L	0167
9200570	L	R	L	L	L	0176
9200580	L	L	R	L	L	0249
9200582	L	L	R	L	L	0249
9200583	L	L	R	L	L	0249
9200584	L	L	R	L	L	0249
9200650	L	R	L	L	L	0176
9210100	L	L	R	L	L	0249
9210102	L	L	R	L	L	0249
9210104	L	L	R	L	L	0249
9210106	L	L	R	L	L	0249
9210108	L	L	R	L	L	0249
9210109	L	L	R	L	L	0249
9210110	L	L	R	L	L	0249
9210112	L	L	R	L	L	0249
9210114	L	L	R	L	L	0249
9210116	L	L	R	L	L	0249
9210117	L	L	R	L	L	0249
9210118	L	L	R	L	L	0249
9210119	L	L	R	L	L	0249
9210120	L	L	R	L	L	0249
9210121	L	L	R	L	L	0249
9210122	L	L	R	L	L	0249
9210123	L	L	R	L	L	0249
9210124	L	L	R	L	L	0249
9210126	L	L	R	L	L	0249
9210200	R	R	R	L	L	0283
9210201	R	R	R	L	L	0283
9210202	R	R	R	L	L	0283
9210203	R	R	R	L	L	0283
9210204	R	R	R	L	L	0283
9210206	R	R	R	L	L	0283
9210207	R	R	R	L	L	0283
9210208	R	R	R	L	L	0283
9210209	L	L	R	L	L	0249
9210210	R	R	R	L	L	0283
9210211	R	R	R	L	L	0283
9210212	R	R	R	L	L	0283
9210213	R	R	R	L	L	0283
9210214	L	L	R	L	L	0249
9210215	R	R	R	L	L	0283
9210216	R	R	R	L	L	0283
9210217	R	R	R	L	L	0283
9210218	R	R	R	L	L	0283
9210223	R	R	R	L	L	0283
9210300	L	L	R	L	L	0249
9210301	L	L	R	L	L	0249
9210304	L	L	R	L	L	0249
9210306	L	L	R	L	L	0249
9210307	R	R	L	R	L	2954
9210308	L	L	R	L	L	0249
9210310	L	L	R	L	L	0249
9210312	R	L	L	R	L	1312
9210400	R	R	R	L	L	0283
9210401	R	R	R	L	L	0283
9210410	R	R	R	L	L	0283
9210500	R	R	L	L	L	0248
9210502	R	R	L	L	L	0248
9210504	R	R	L	L	L	0248
9210506	R	R	L	L	L	0248
9210600	R	L	R	L	L	0254
9210602	R	L	R	L	L	0254
9210604	R	L	R	L	L	0254
9210606	L	R	R	L	L	0282
9210607	L	R	R	L	L	0282
9210608	L	R	R	L	L	0282
9210609	R	L	R	L	L	0254
9210610	L	R	R	L	L	0282
9210611	L	R	R	L	L	0282
9210612	R	L	R	L	L	0254
9210613	L	R	R	L	L	0282
9210615	L	R	R	L	L	0282
9210616	L	L	L	R	L	0288
9210618	R	L	R	L	L	0254
9210619	R	L	R	L	L	0254
9210620	R	L	R	L	L	0254
9210622	R	L	R	L	L	0254
9210624	L	R	R	L	L	0282
9210626	L	R	R	L	L	0282
9210952	R	R	R	L	L	0283

**Table 1. DIP Switch Settings**