



Cuisinart 4-Slice Tandem Toaster Teardown

This guide will illustrate how to teardown the Cuisinart 4-Slice Tandem Toaster.

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INTRODUCTION

This guide is part of a reverse engineering project for EE 460. We were given a Cuisinart 4-Slice Tandem Toaster, and we broke it down into its most basic components.



TOOLS:

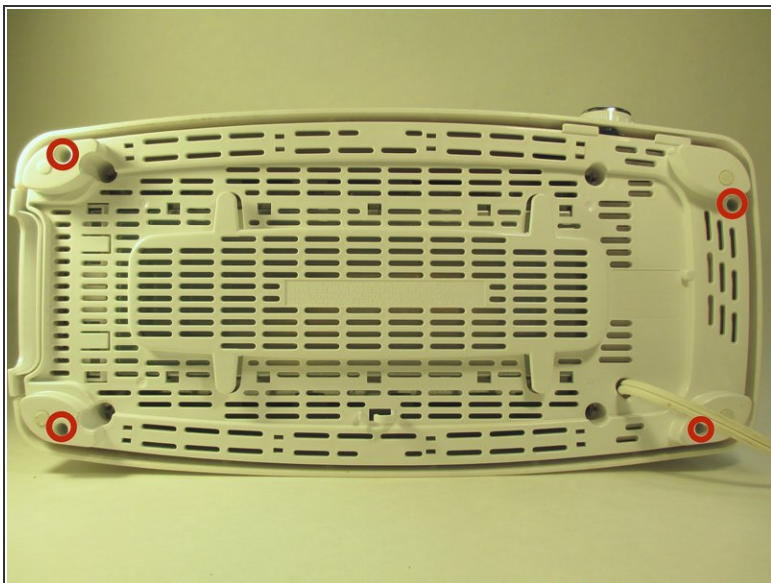
- [T8 Torx Screwdriver](#) (1)
 - [iFixit Opening Tools](#) (1)
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Step 1 — Cuisinart 4-Slice Tandem Toaster Teardown



- This Cuisinart Toaster's technical highlights include:
 - Tandem, 2-slot toaster
 - 1½" wide toasting slots
 - Function control dial
 - Bagel, Defrost and Reheat selections
 - Blue LED shade control with large, easy-to-read numbers
 - 2 or 4 slice button; cancel button

Step 2



⚠ Unplug the toaster prior to teardown.

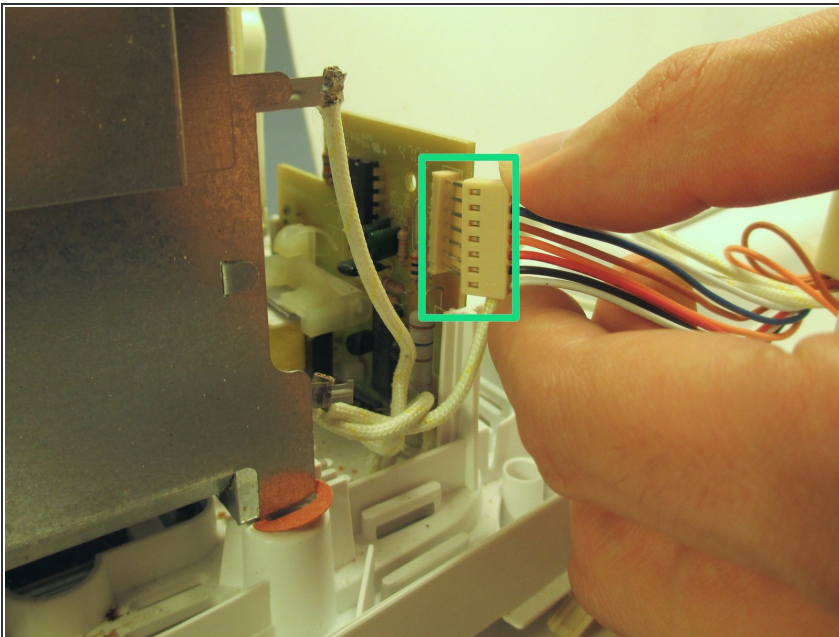
- On the bottom of the toaster, unscrew the 4 Torx screws (using a screw driver)

Step 3



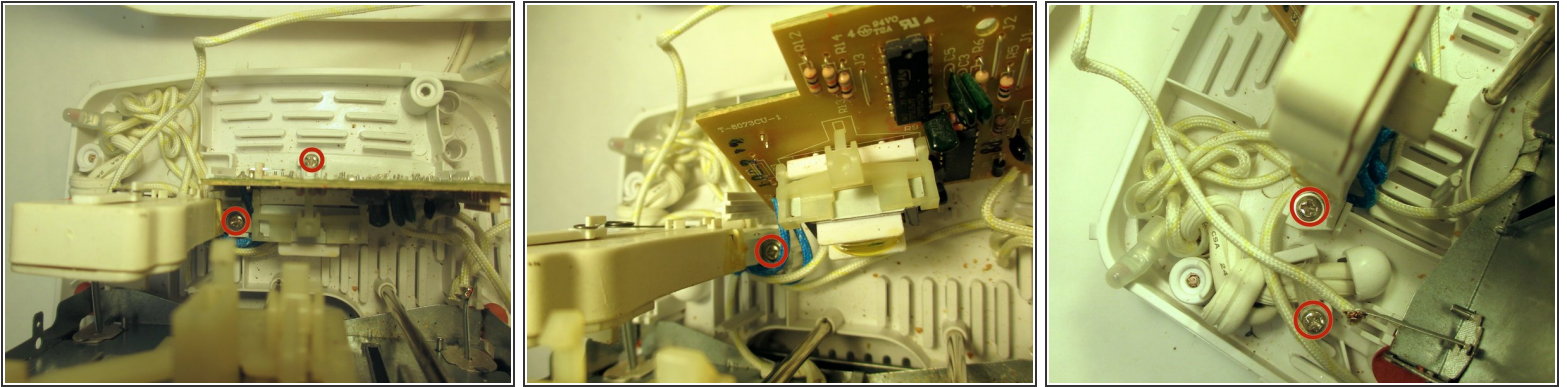
- Pull the press handle down and away from the toaster to disconnect the body.
- Lift up the body of the toaster.

Step 4



- Pull the pin header cable to disconnect the body of the toaster from the main assembly unit.

Step 5



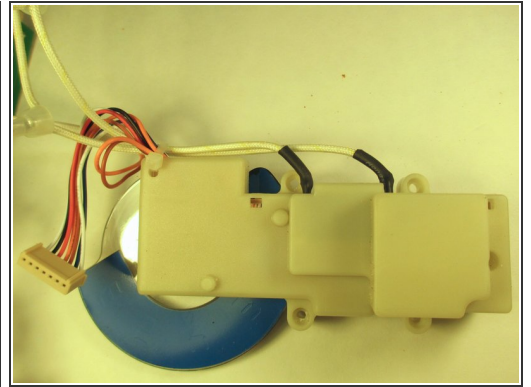
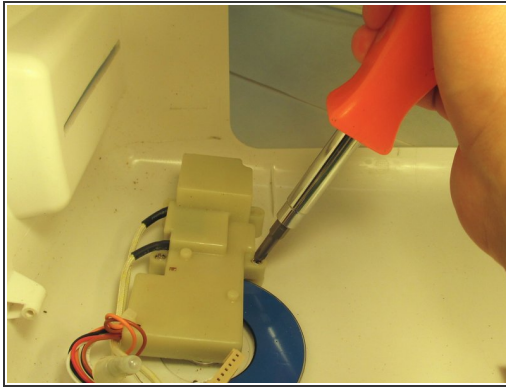
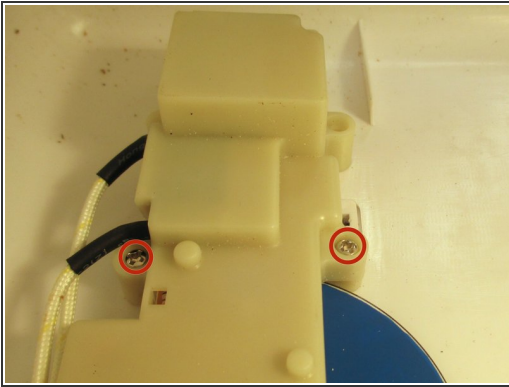
- Remove the 5 Torx screws to detach the heating unit from the bottom of the toaster unit.

Step 6



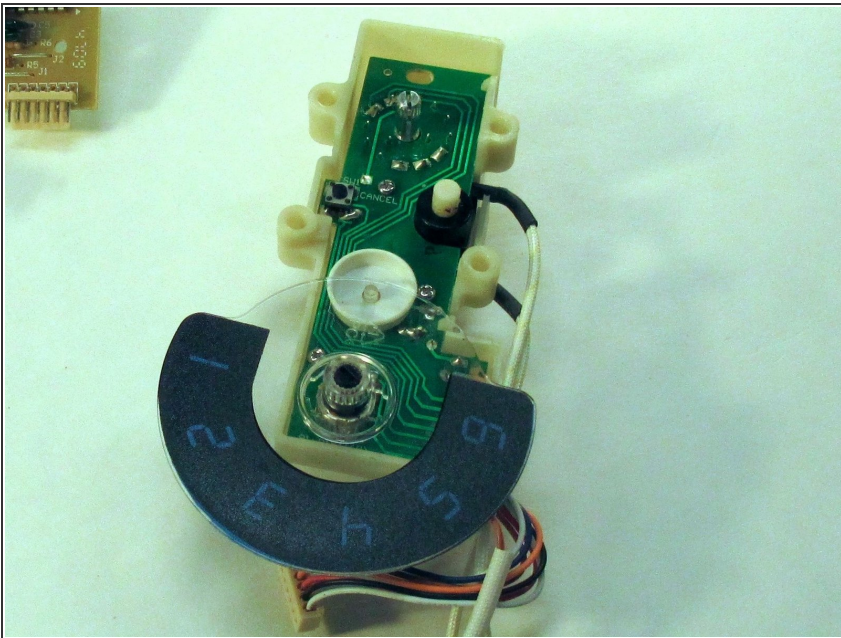
- Using a plastic opening tool, carefully pry open the metal casing underneath the toaster.

Step 7



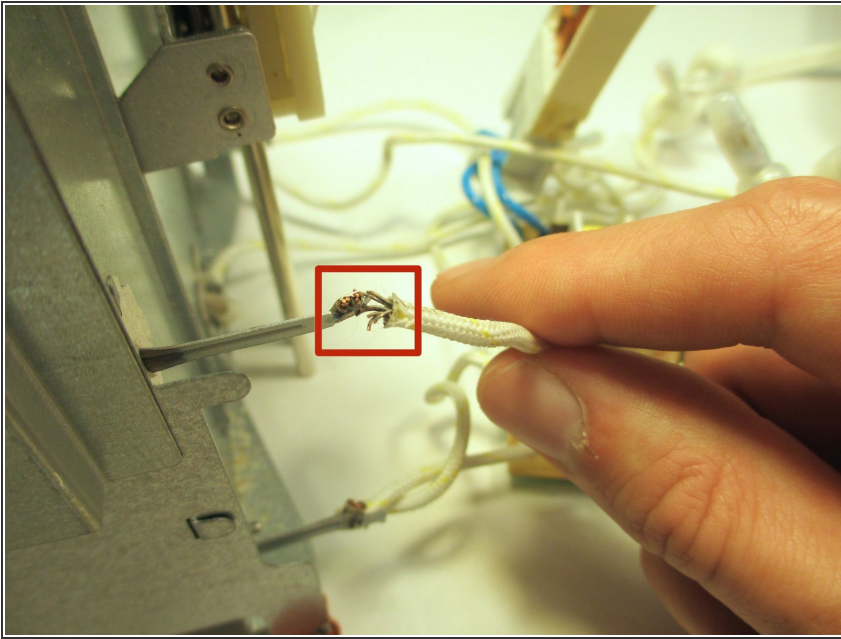
- Remove the screws to detach controls from the plastic shell of the toaster.

Step 8



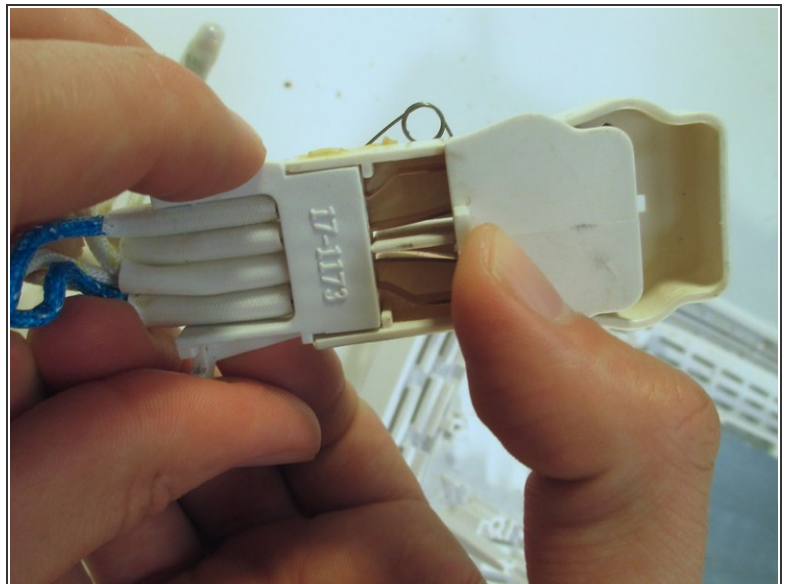
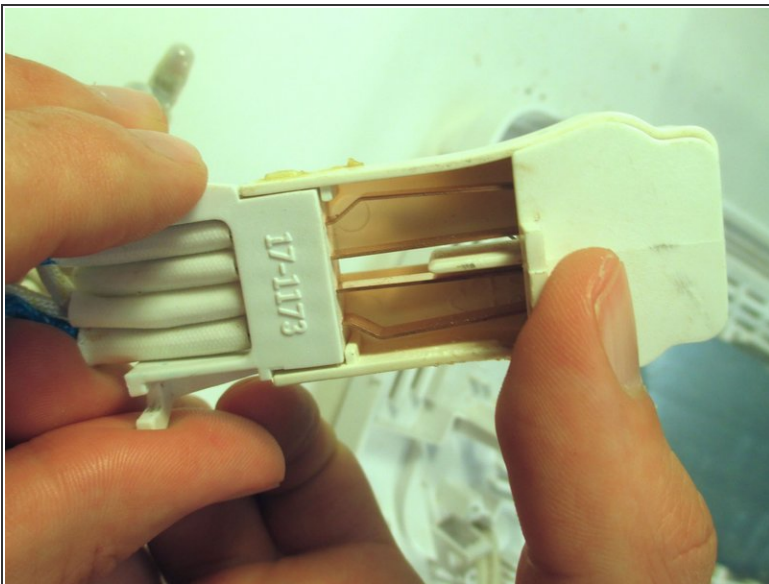
- Interior of the user control interface

Step 9



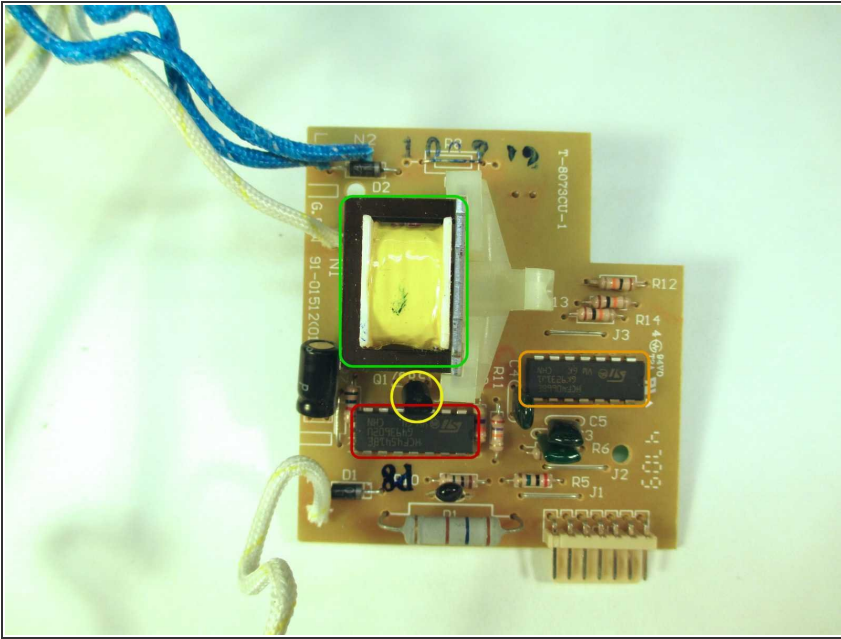
- Remove the soldered wire that is hooked to each part of the end plate assembly.

Step 10



- Heating Unit

Step 11



- This is the Circuit Board used for controlling each subsystem of the toaster.
- The integrated circuit marked 4541 contains an oscillator which oscillates at some hundreds or thousands of oscillations per second, the speed being determined by the browning setting. It also contains a binary counter which can count up to 65,536.
- The integrated circuit marked 4066 contains several logic gates which select the count value required for normal, defrost or reheat.
- During the count, the logic gates supply a small current to the transistor, causing it to energise the electromagnet. At the end of the selected count, the logic gates switch this current off and the transistor de-energises the electromagnet.
- While energised, the electromagnet holds the lever down. When the current is switched off the lever is released and the spring pops the toast up.

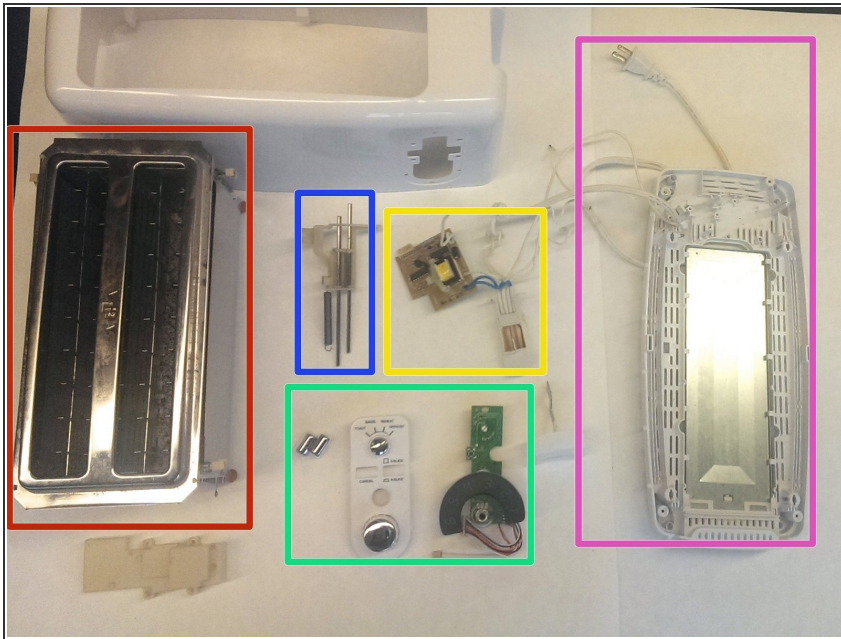
- Toasters of this age frequently use these "4000-series" integrated circuits as they can run off a wide range of supply voltages. Newer toasters use a microcontroller (essentially a simple micro computer) as this is more flexible in its functions and can also easily drive LEDs to show you what the toaster is doing.

Step 12



- Main Assembly Unit

Step 13



- Main Element Assembly
- Crumb Tray with Power Cord
- Circuitry with Heating Component
- User Control Interface with Buttons
- Press Handle Spring

To reassemble your device, follow these instructions in reverse order.