Electronics Online Challenge
Sponsored by Texas Instruments

By Tobías Maciel

Object to deconstruct: Philips remote control

The device that I chose is a Philips TV remote control, I chose it because I'm always interested to know which components have that control.

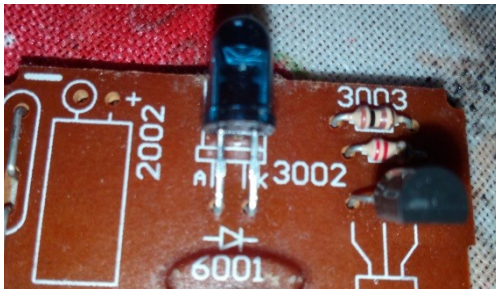
Philips remote control

Components

- LED infrared light
- Buttons
- Resistors
- Transistors
- Crystal Ceramic Resonator
- Battery Holder

Role played by these components

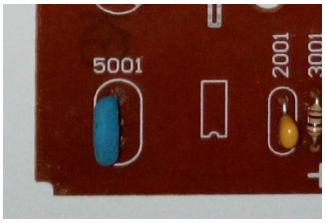
- LED infrared light: It is a diode that radiates an infrared light located at the top of the device, this allows the signals and/or between device (control) and the machine (television) .



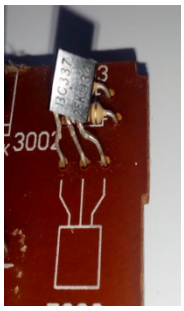
. Buttons: They are located on the top of the board, are made of rubber or rubber tree, which allows to give the command in a simpler way and allows direct contact between the board and the user.

. Resistors: It is located on the side of the LED and aside of the ceramic resonator serves as an opposition to the flow of electrons.

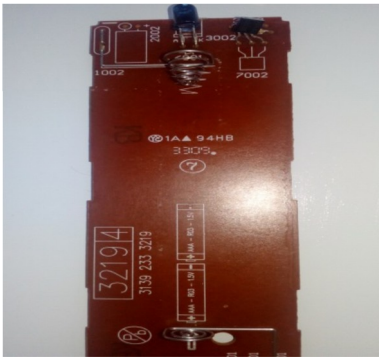
. Crystal Ceramic Resonator: they are fragile and less common than plastic. They have piezoelectric characteristics that make the material generate energy when it is subject to expansions.



. BC337 Transistor: It is located behind the resistances, it is a semiconductor device, it serves to deliver an output signal to an input signal.



. Battery Holder: The negative base (-) is located behind the LED, the positive base (+) is located at the front of the ceramic resonators, allows one or more batteries to be fixed and allow a good conductivity.



Deconstruction Process

. Remove the batteries from the device.

. Disassemble the pressure points located on the side of the button cover.

. I found white color rubber buttons.

. Remove the buttons and I found a board with the integrated circuit in it.

. I turned the board and there I found:

. LED infrared
. Battery holder
. Transistor bc337
. Crystal resonator
. and Resistors

The Results...

Thanks to this challenge proposed by Texas Instruments I understood more about the operation of one or more components within a device, I also learned to be more careful and not to break parts. Also work without batteries in devices.

Credits

“Inside a Remote Control”

Team 11791C

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