

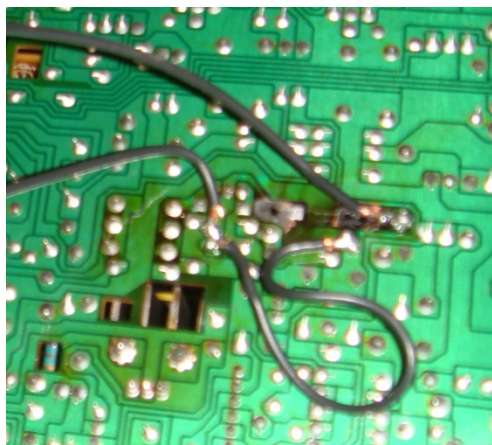
Ashley Giegel – ME 345- Extra Part of “Stimulus Package”

Recently the screen on our stereo receiver went out. Being that all of us in the family are engineers we decided that we were going to fix this instead of buying a new one. So we took the receiver apart to access the circuit board.

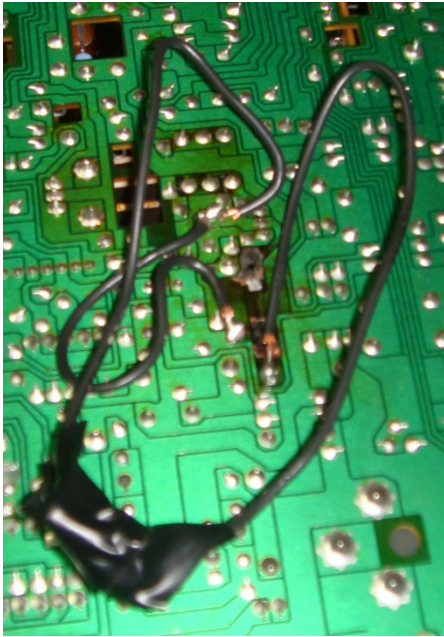


Receiver with lights out

Once we got access to the circuit board we found the piece that was making the lights go out. The obvious trigger was the discoloration around a resistor on the printed circuit board. We found that as the circuit board heated up the resistor would lose contact therefore no current was getting to the lights to light up the screen. This noncontact created damage to the circuit board and to fix it we needed to attach our own resistor. We traced back on the circuit board to a point where we could add the resistor in place of the damaged one. We then used connecting wires and soldered this new resistor into place on the circuit board.



We first attached a wire in place of the damaged resistor. But it soon became apparent that this addition would not complete the circuit as the actual board was damaged so we included a second wire (the bottom of the two wires at left) to bridge the damaged portion of the circuit board.



We then covered all of the connection points and loose wire ends with electrical tape to stop any unwanted connections. To prevent short circuiting we just covered the entire resistor with electrical tape to make sure we had all wire ends covered. The next though was what about all of this heating up to an extent that it would cause overheating and again damage the circuit board. To quell any fears we load tested the receiver at full power over night to make sure there was no overheating. The receiver passed the test and is back to full use.

