

Vex VRC Online Challenge - Electronics Online Challenge Sponsored by Texas Instruments
East Texas Homeschoolers - Team 24365A

For the Texas Instruments Online Challenge, we selected an old Dell CRT monitor to disassemble. We chose this because, being an older piece of technology, we thought it would be unique. While we didn't find any TI parts, we did find two unlabeled chips, lots of capacitors, resistors, and other electronic parts. We also found an AOC 56A1125 -159 semiconductor.

It was very difficult to research the AOC chip in our monitor. We did find out what semiconductors are for, which is interacting with the other parts using silicone as a conductive material. Our monitor contains lots of capacitors (used to store energy), which were made many many years ago, and are still working fine (some modern ones die really fast). It also has resistors, which reduce electric flow; a bleeder resistor discharges electric charge stored in the capacitors when it is turned off so it is safer.

We learned that older electronics are interesting but hard to find information on. It was neat to figure out how to discharge the unit; we attached a wire to a grounded area and then to a screwdriver and put it under the cup (CRT HV connector) to discharge static. We rebuilt the monitor after disassembling it. This was a very fun challenge to complete, as taking apart electronic things is quite neat.

See below for captioned photographs showing our disassembly journey!

Dell CRT Monitor - Photographs of disassembly



Dell CRT Monitor selected for disassembly



Shell removed



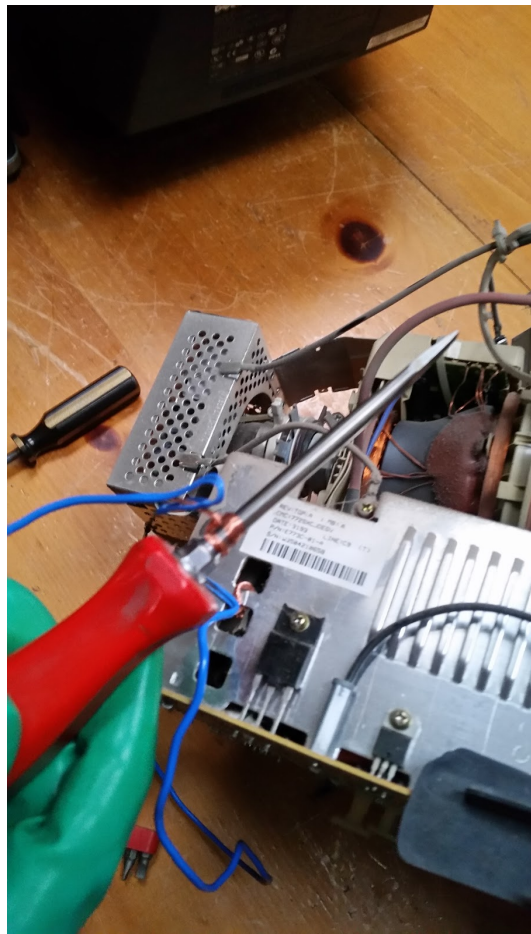
Bottom of monitor is a giant circuit board!



Front of monitor with shell removed



Rubber gloves and screwdriver used for safety and discharging



Discharge 1 - using screwdriver attached to ground to discharge



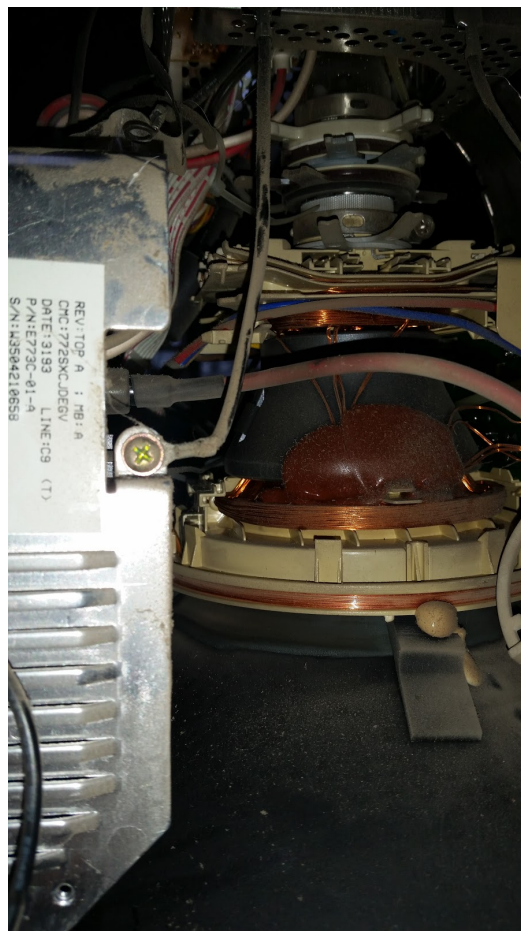
Discharging 2 (for safety) - different screwdriver/ground



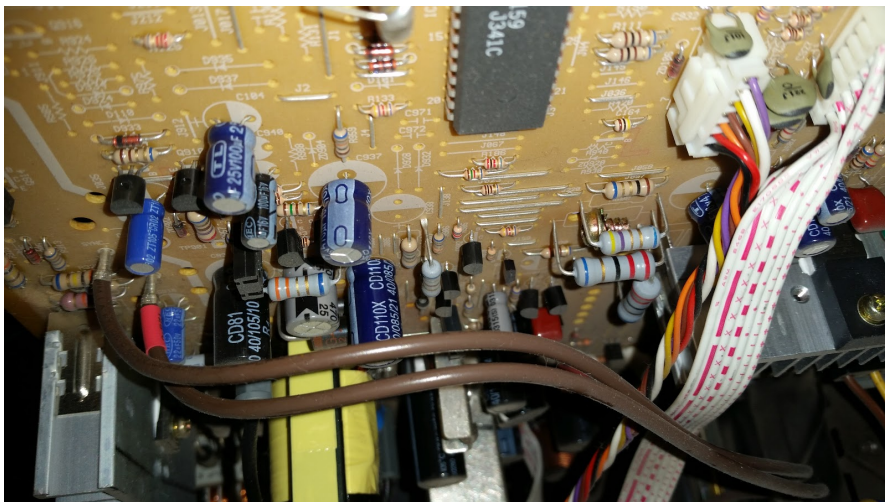
Grounding wires detached to get to circuit board



Inside shot of circuit board capacitor, diode and wires

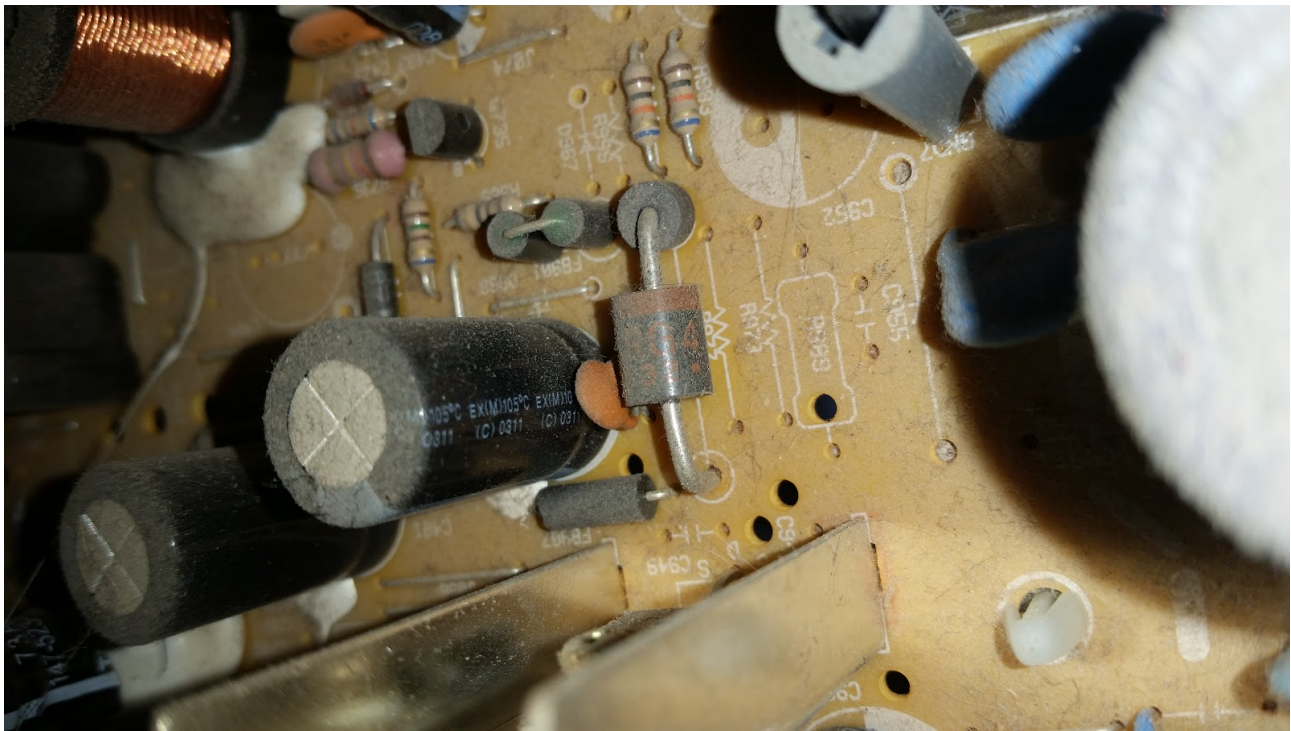


Cathode ray tube exposed

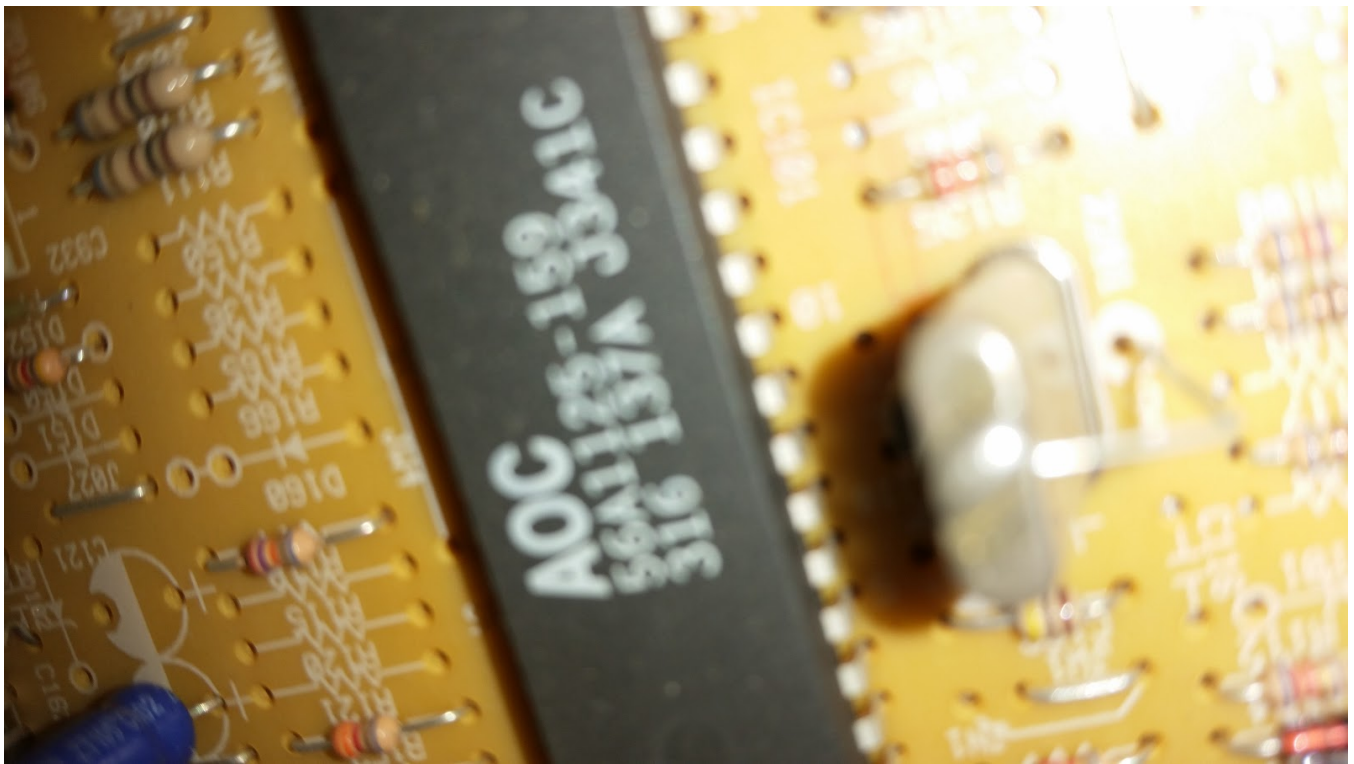


Circuit board detail





Circuit board with wire coil



Semiconductor AOC 56A1125-159 316 137A J341C