

Repairing a faulty CI-V on an Icom IC-756 Pro II

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This is NOT a professional repair guide. These notes are for radio amateurs who are interested in performing a home repair with limited workshop resources.

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- A friend told me about a fault that had developed on the CI-V CAT control of his IC-756 Pro II. After some investigation it was discovered that an SMD ferrite bead on the CI-V ground line could become open circuit. This fault can happen if the computer and the transceiver have different ground potentials (due to not having their grounds electrically bonded together). This turned out to be the fault.

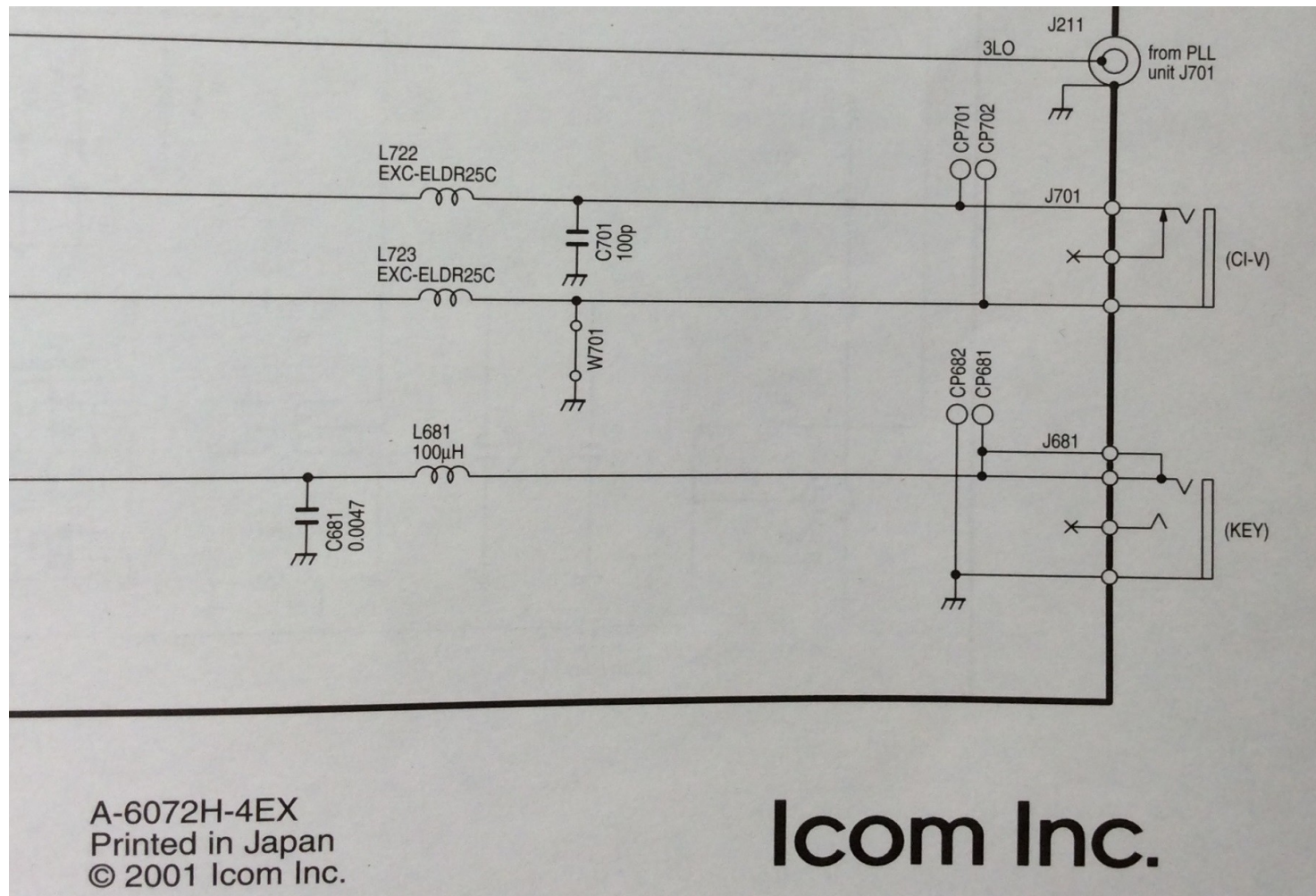
Please note

- This repair involves very small SMD components and working with very complex PCBs. It also requires the disassembly and reassembly of delicate connectors and PCBs. Please consider your level of practical skill and experience before attempting this repair.


Take the main board out



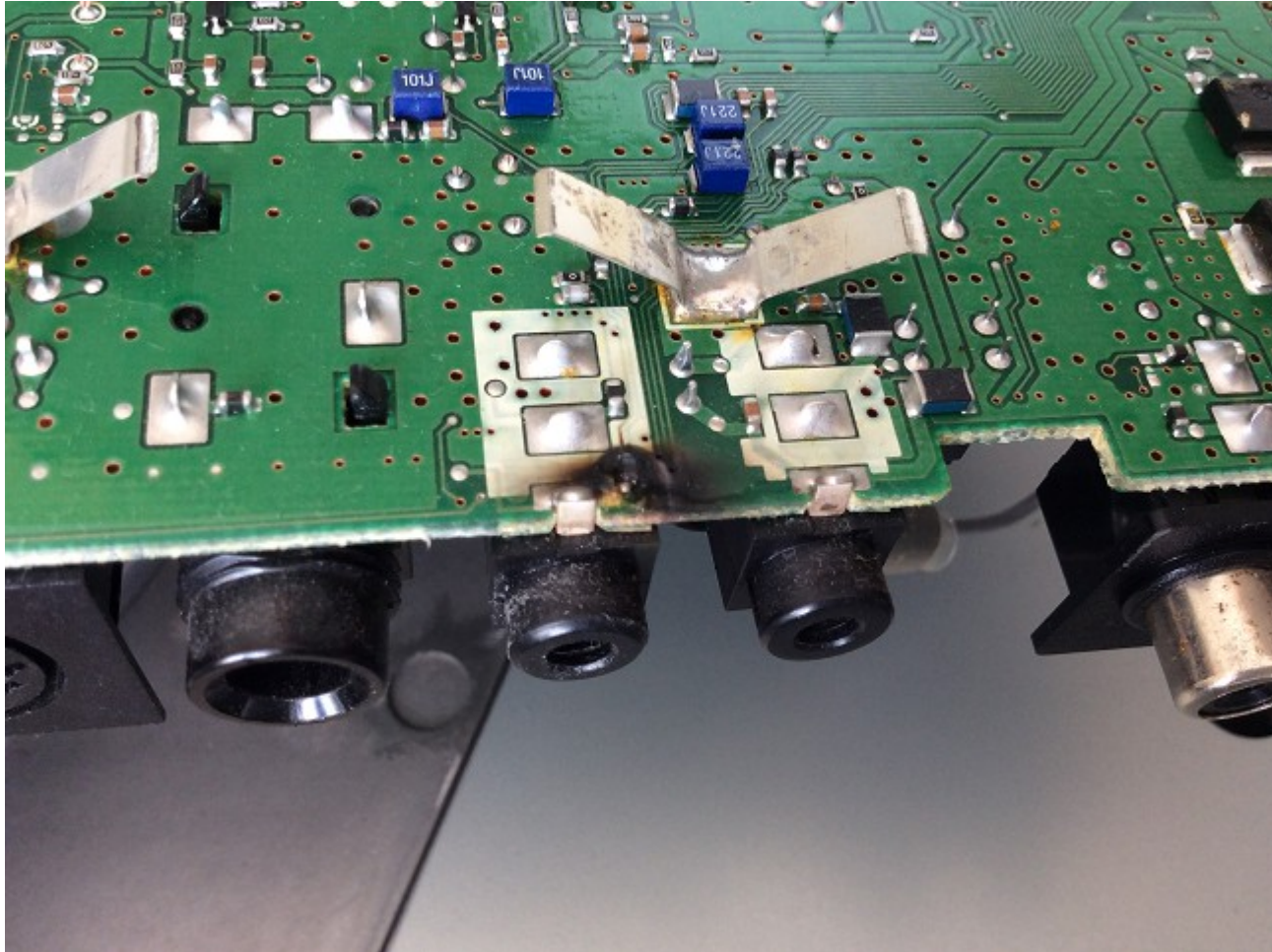
W701 is faulty



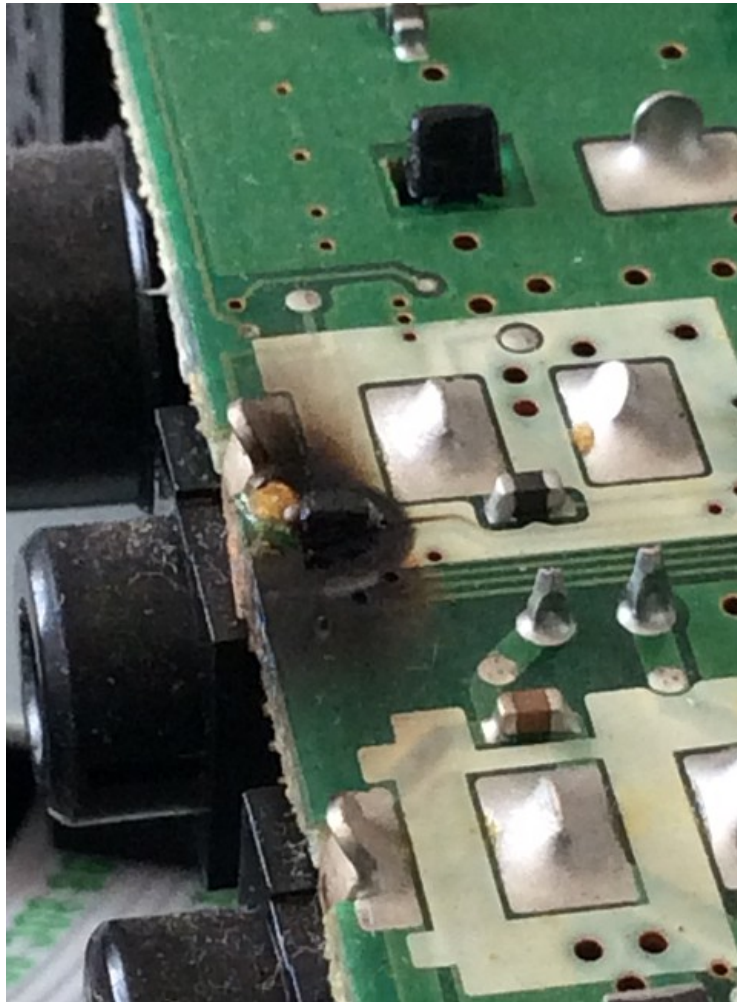
W701 is an SMD ferrite bead

| Image | SKU | Original Item Name |
|------------------------------------------------------------------------------------|---------|-------------------------------------------------------------|
|  | 1669708 | 5 X TDK, MMZ1608Y102B, FERRITE BEAD, 0.5OHM, 400MA, 0603 |

Damage is obvious



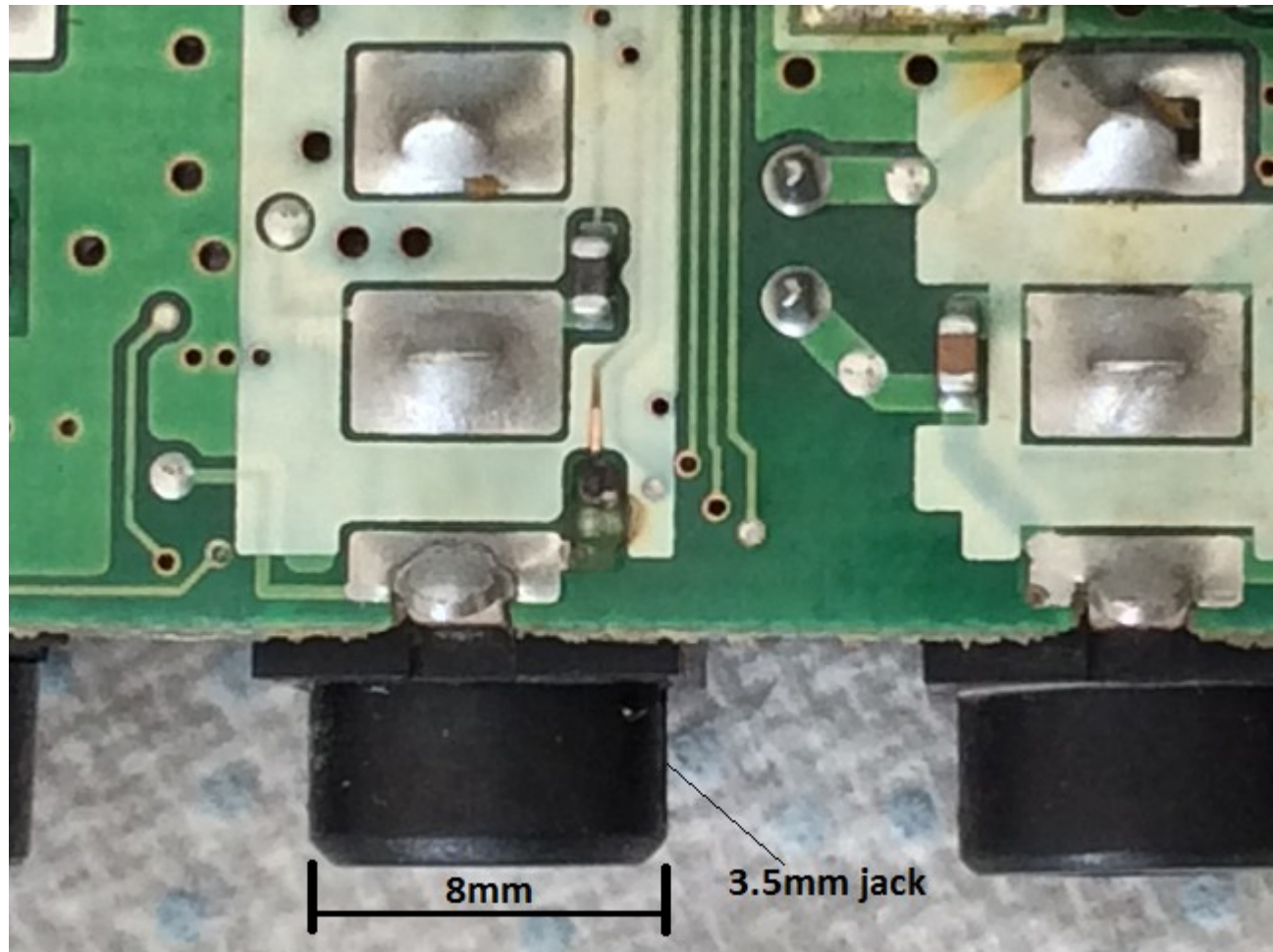
Damaged area needs cleaned



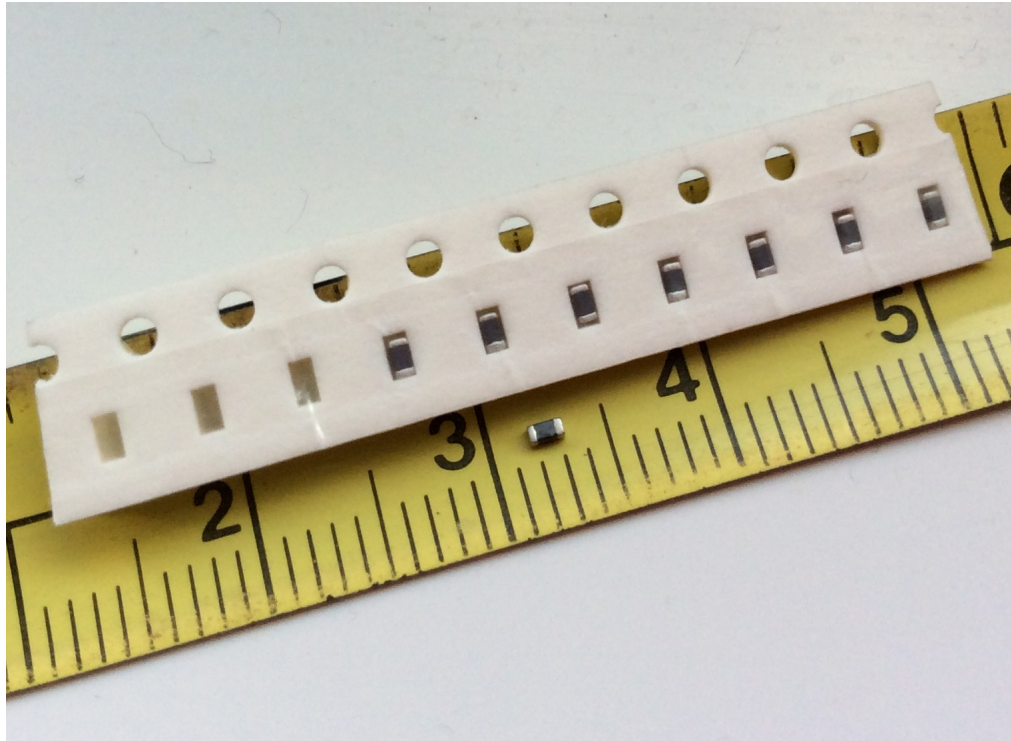
Soft toothbrush and solvent cleaner



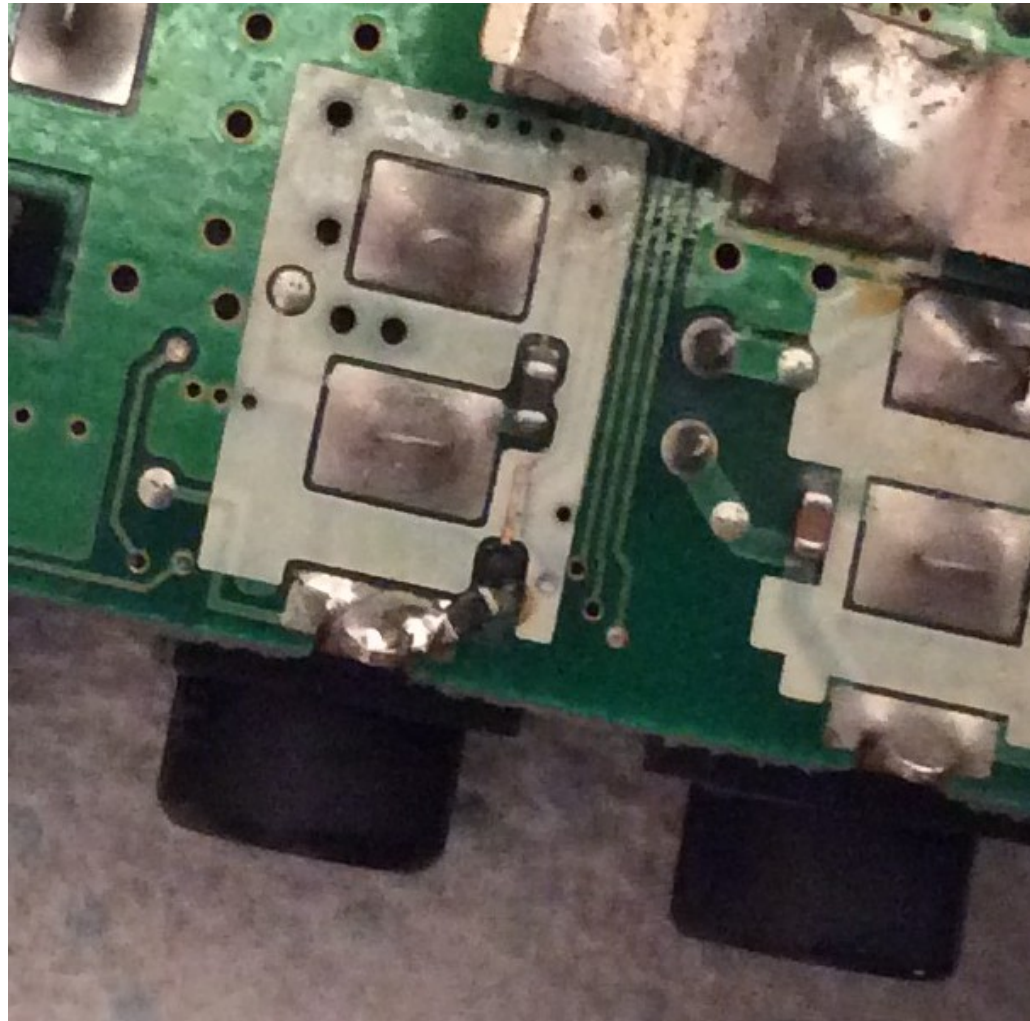
SMD pads are destroyed



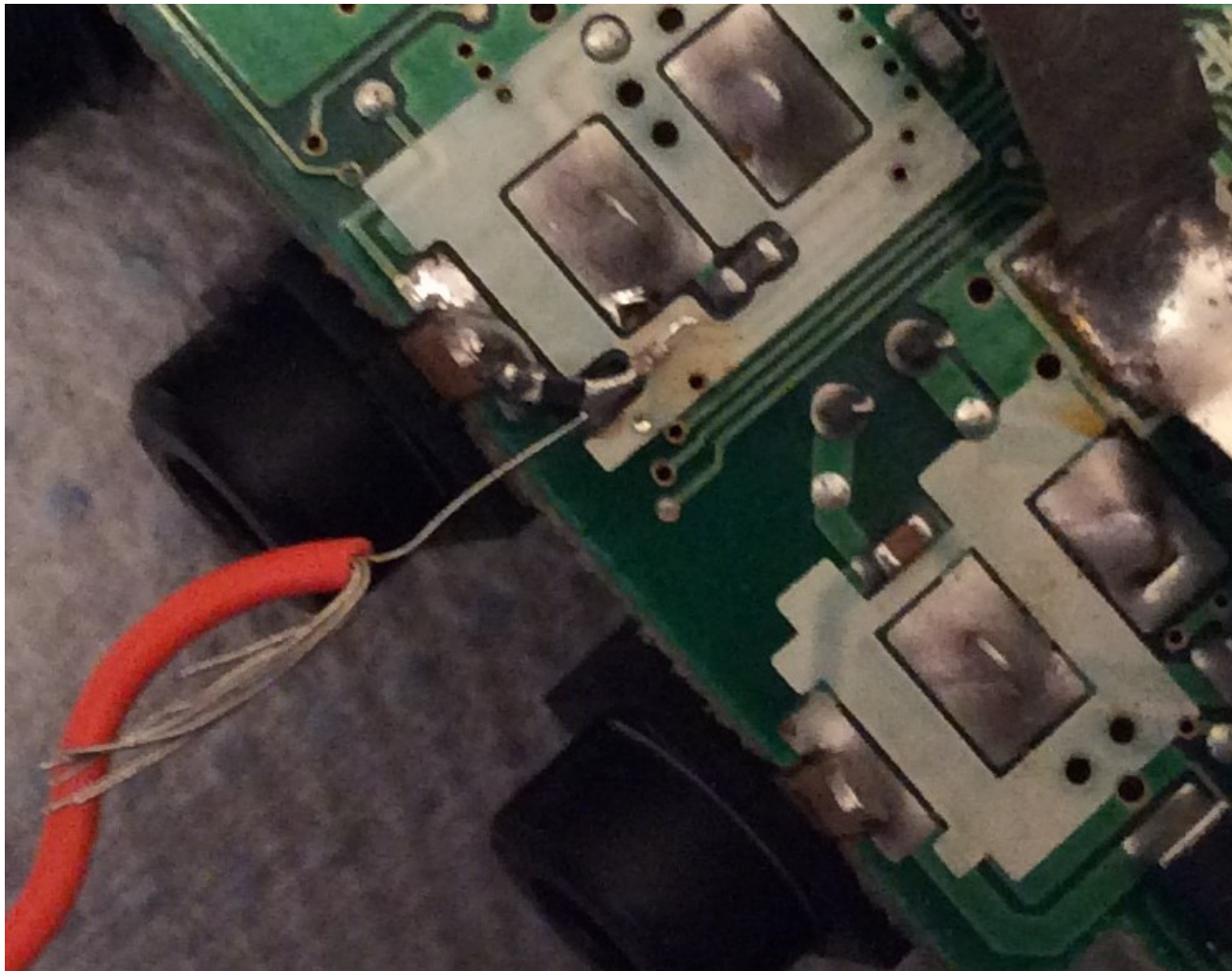
Ferrite bead (1mm x 1mm x 1.5mm), solvent cleaner and liquid flux with syringe applicator



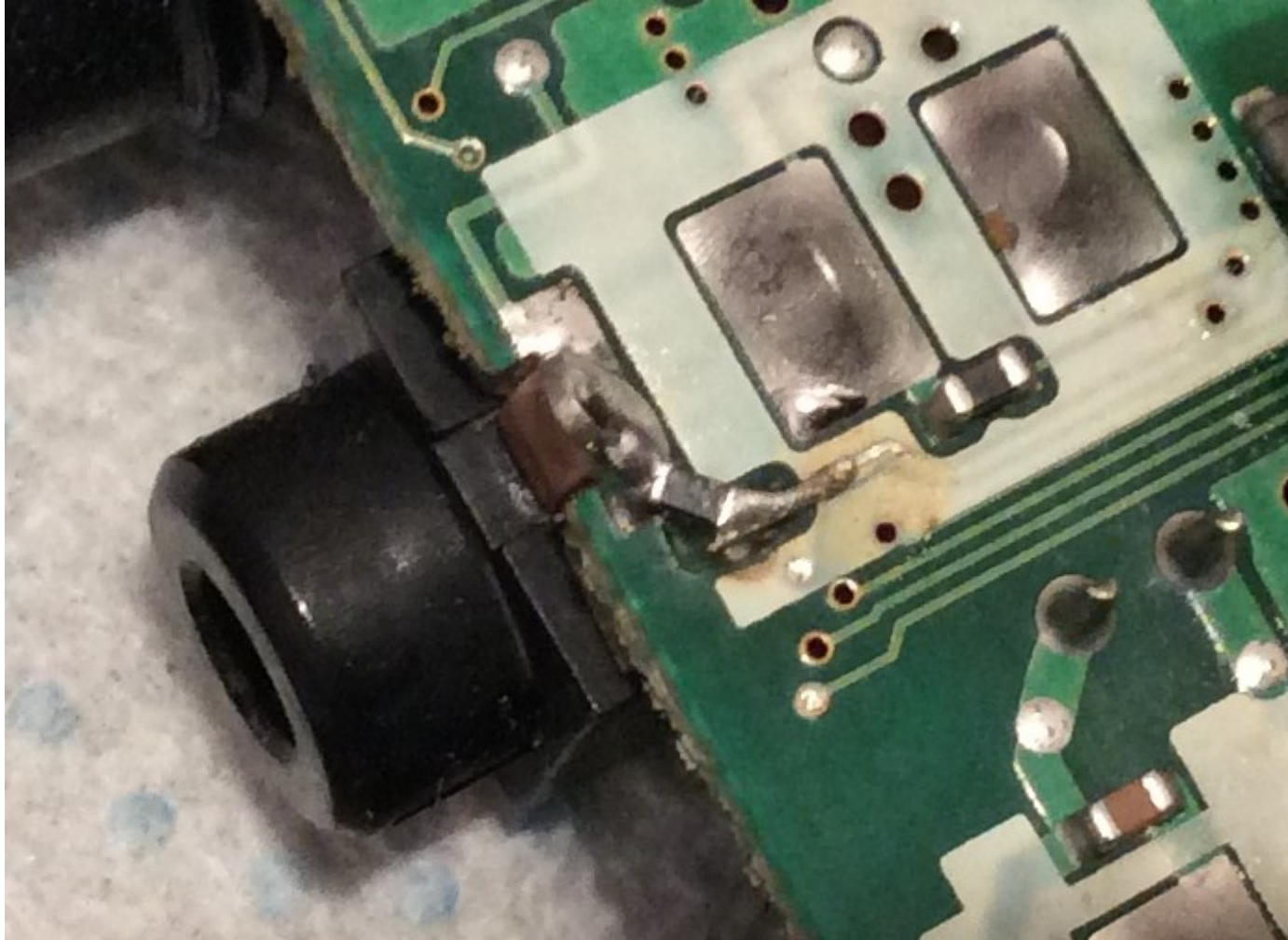
One end of ferrite bead soldered to a good ground pad. Flood area with liquid flux before soldering



Fine wire soldered to other end of ferrite bead and to cleaned, exposed track of PCB.
Flood with liquid flux before soldering



Fine wire trimmed



- Carefully reassemble the board into the chassis.
- Take great care with the flexible ribbon connectors.
- Take your time and make sure everything is back in place.
- In my case the CI-V fault was cleared by this repair.