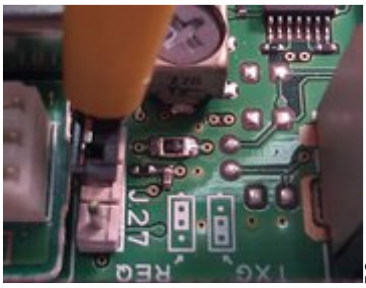
How to Repair/Replace a Yaesu FT897 CAT Interface Power Fuse

Operating while mobile during our adventure to and from the 2011 Dayton Hamvention is really fun! Our setup included a Yaesu FT 897 HF/VHF/UHF transceiver along with a LDG YT-100 autotuner. The autotuner gets power from pin one of the CAT interface on the back of the radio. We discovered that it was a BAD idea to remove and replace the CAT cable while the radio is powered up. This resulted in a blown fuse. But this was not just any fuse, it was a SMD fuse soldered directly to the mainboard inside the FT-897. Here is a photo of the SMD fuse.



SMD fuse is black rectangle with #3

I have never had good success working with SMD components, so I came up with a fix that eliminated the need to deal with magnification, special equipment and much frustration.

I obtained a 35 watt solder pencil and 37/67 0.020 solder from an electric supply house in Golden Valley and an in-line 5x20 mm fuse holder with 3 amp fuses from Radio Shack.


35 watt solder pencil and .020 37/67 solder

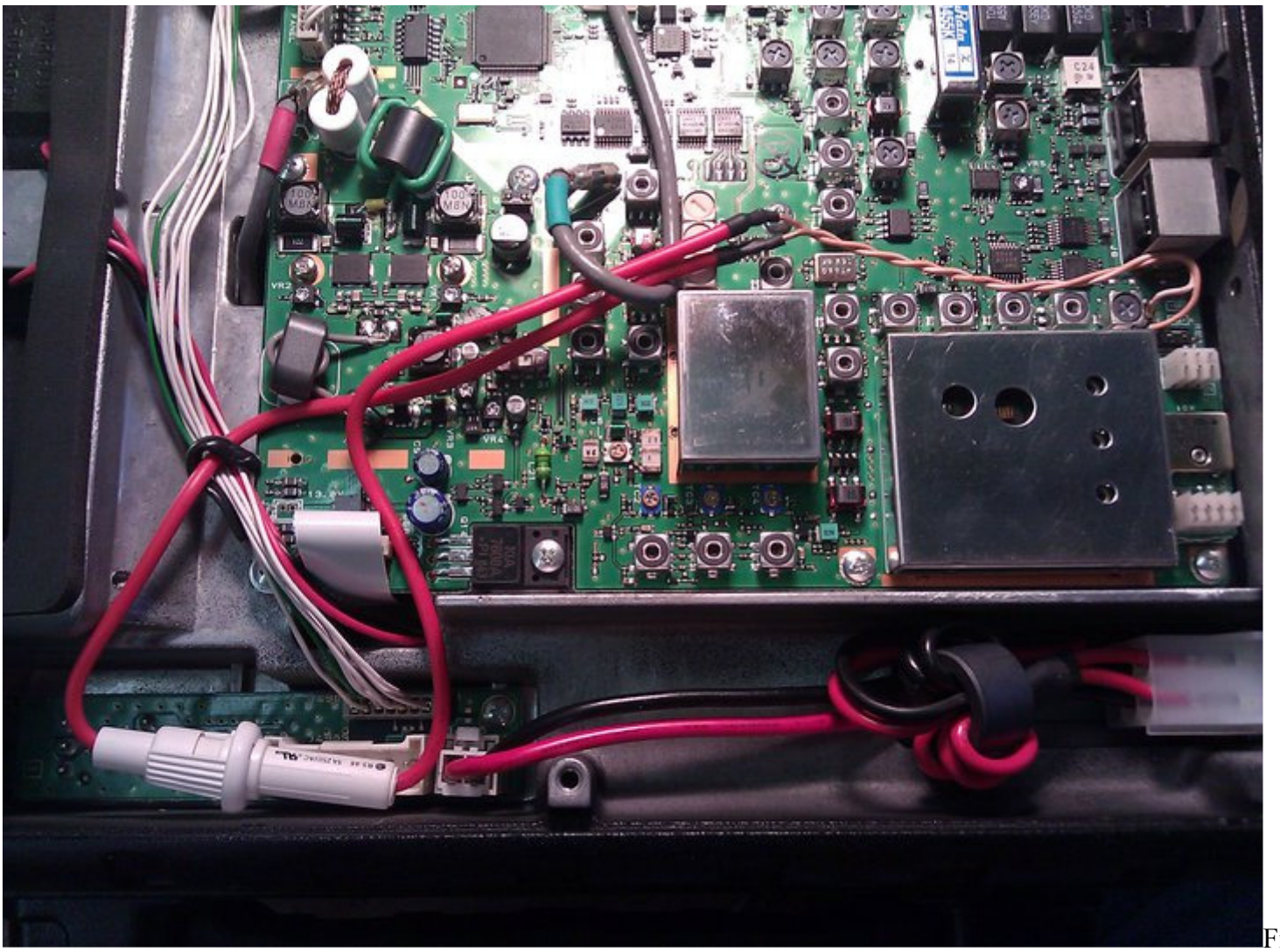
After removing the top cover and two internal batteries, I removed the black plastic jumper just left of the fuse to create a bit more room (and avoid my melting it) then (very carefully) added a small amount of solder to each end of the open SMD fuse. There was no need to remove the fuse since it was open, so I decided to "piggy-back" my solution to it.

I had some very thin twisted pair wire used for telephone terminal block punchdowns so I cut a short length and trimmed about 1 mm of insulation off the ends. A small blob of solder was added to the wire ends. Next one of the punchdown wires was lined up with the left side of the SMD fuse and I touched the solder pencil tip briefly to it to make the connection. Ditto for the right side.


Punchdown wire soldered to open SMD fuse

Now all that was left was to splice the in-line fuse holder to the punchdown wire. I trimmed insulation from both ends off each wire (after running a short piece of heat-shrink down the wire), soldered the ends then slid the heat shrink down

over the splice. A wooden match took care of shrinking the heat-shrink. I put a 3 amp 5x20 mm fuse in the holder, replaced the black jumper, did some wire routing and bingo, that was that.


Finished modification

Before I put the top case back on the radio, I stuffed the remaining spare fuses into a mini-ziplock bag and put it in a space in the corner. Now if we blow the fuse again it will be easy to replace the fuse!

I hope this quick article was informative and maybe even applicable to other rigs.

73 - Dave Ventura, KE0NA