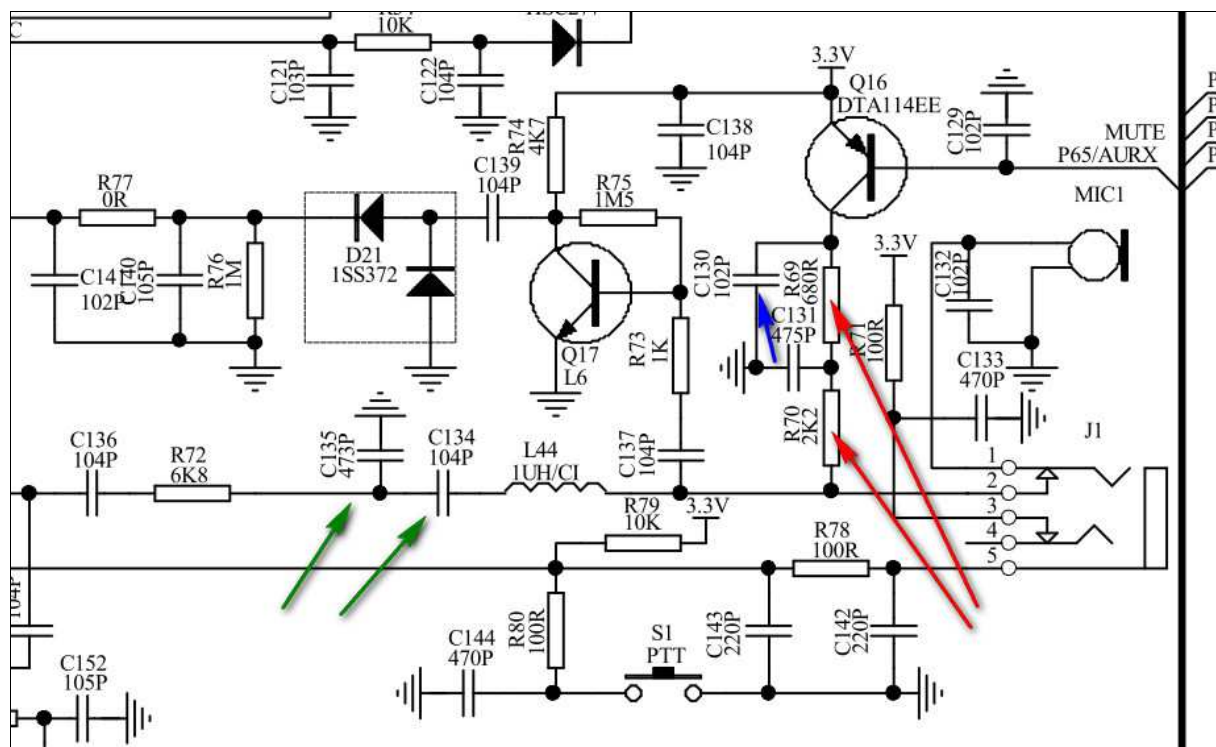


These fine transceivers are known for their weak modulation (low level, tiny sound, wind effects due to the necessary close speaking range).

On the internet you can find some minor modifications which try to "jumper" some SMD parts in the mic-input line to improve audio level. Of course this will give you some improvements but nevertheless I have not been satisfied.



The main problem of the low mic input level is the kind how the manufacturer puts the DC voltage on the electret capsule.



- R69/R70 puts the DC voltage on the electret capsule while pushing PTT
- By looking to the AF view, C131 shortens R70 to ground. It has a low impedance for all AF, but blocks DC. This means on the AF chain, R70 "goes" from mic input to ground. So these 2k2 "burn" a major amount of AF level !
- Just by chance I measured R69/R70 by an ohmmeter. And I found out, **that (apart from the given schematic) the manufacturer exchanged both resistors ! This means R69 is in reality 2k2 and R70 is now 680 !!! So the other way around !**

What does that mean ?

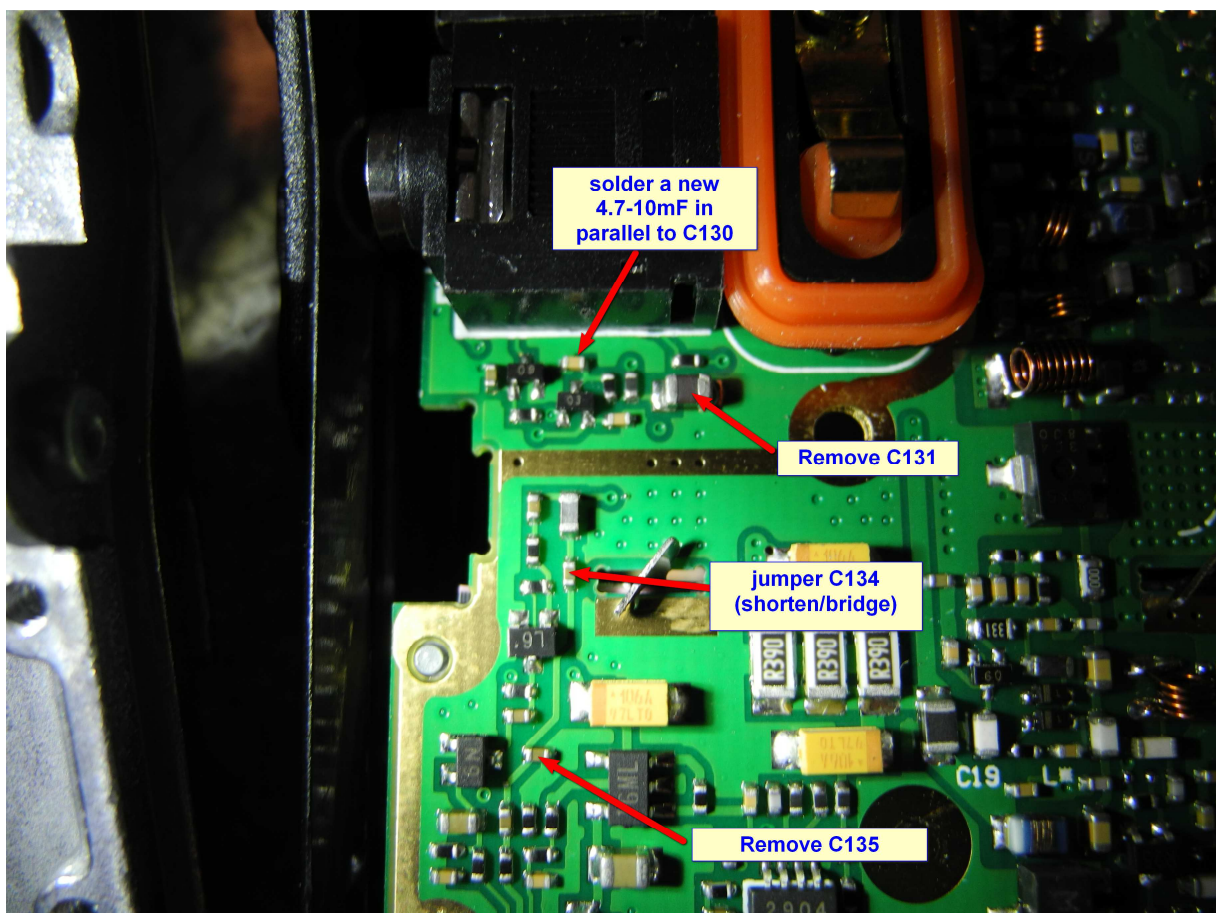
This means that in reality the modulation input of the electret capsule is decreased by a 680 ohms to ground ! An even worse scenario !

Soldering/unsoldering the fu****ing small SMD parts in their 0402 size is quite tricky and not everybody is able to do this on his own. So instead of removing R69/R70 and solder them in again, but with their correct values, I found a much easier way.

TX-Mods UV-82L

(more sensitivity + audio level, more pitch)

- Remove C131 and solder a new 4,7-10 μ F (4.7-10mF) non-polarised SMD capacitor in parallel to C130
- Jumper C134 for more basses
- Remove C135 for even more high tones
- Drill-up the front mic hole up to approx. 2mm



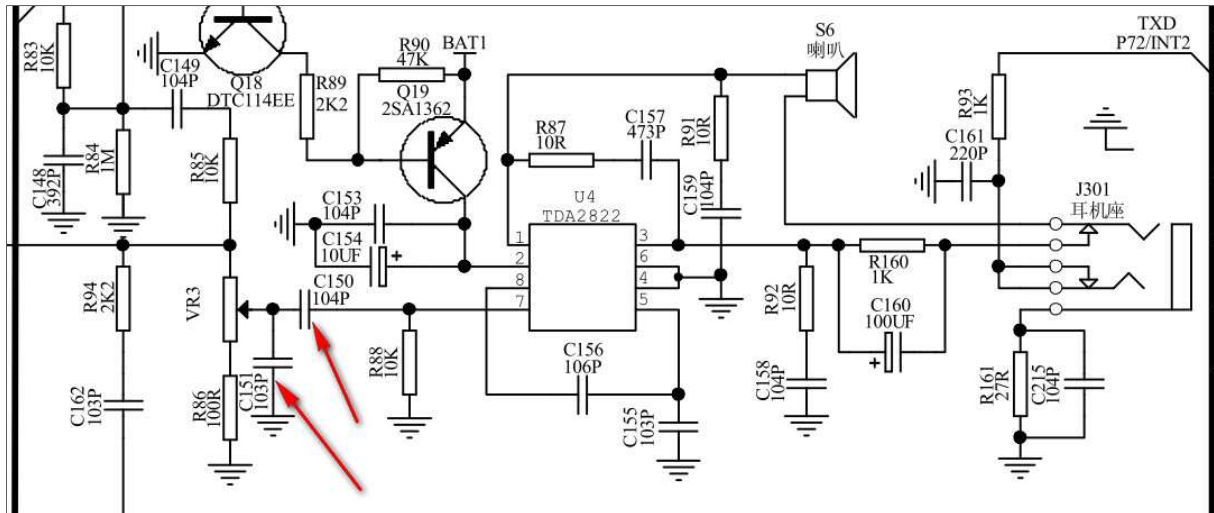
In result DC voltage ripple is still smoothed like before by the new capacitor in parallel to C130, but on the AF side the electret capsule "sees" now 2k9 (2k2 + 680) going to ground. This only affects the input level in a very minor way.

C135 with its "huge" value of 47nF (0.047mF) dropped lots of high tones to ground.

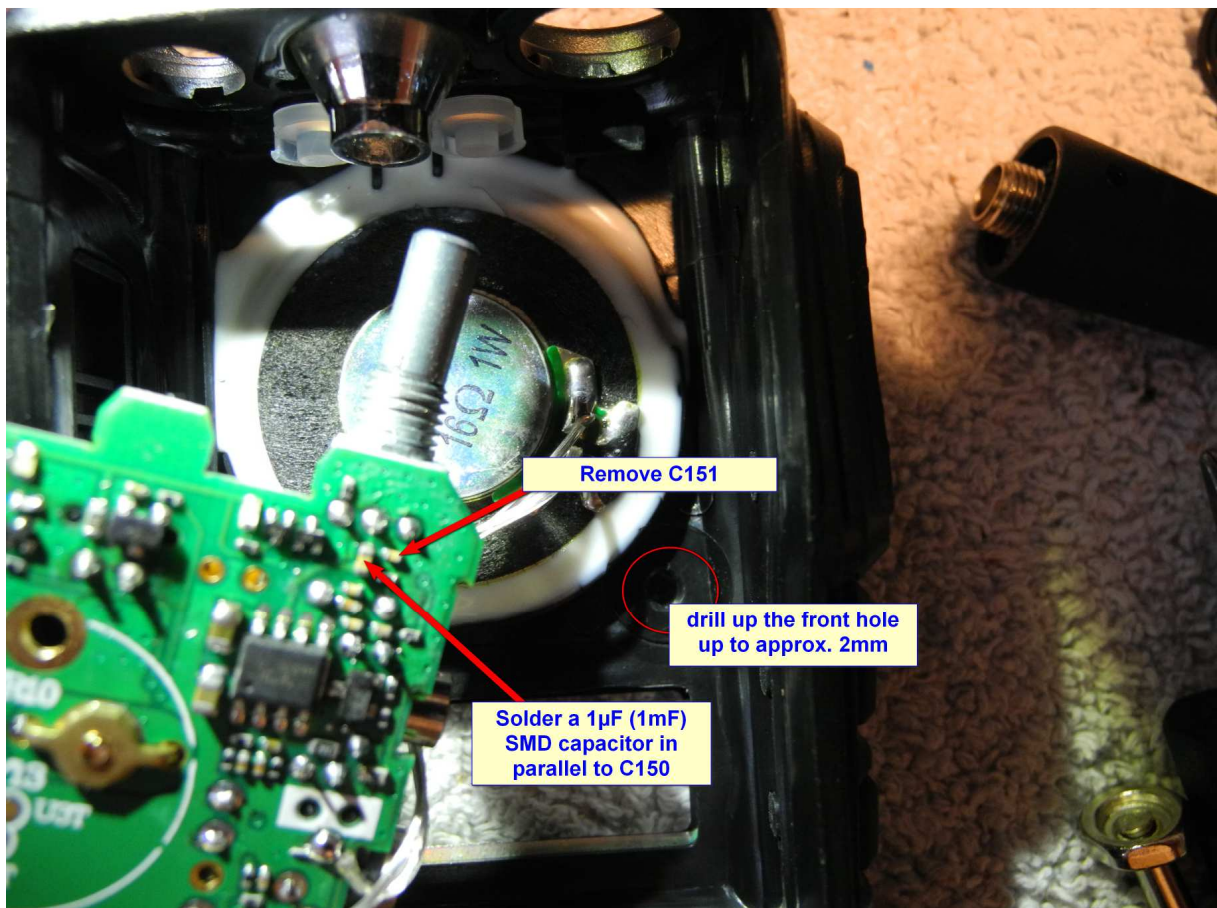
Due to another PCB mismatch, C134 is in series directly to C136 (and not to R72 as mentioned in the schematic). By jumper C134, input capacitance is doubled which lets more basses come through.

RX-Mods UV-82L

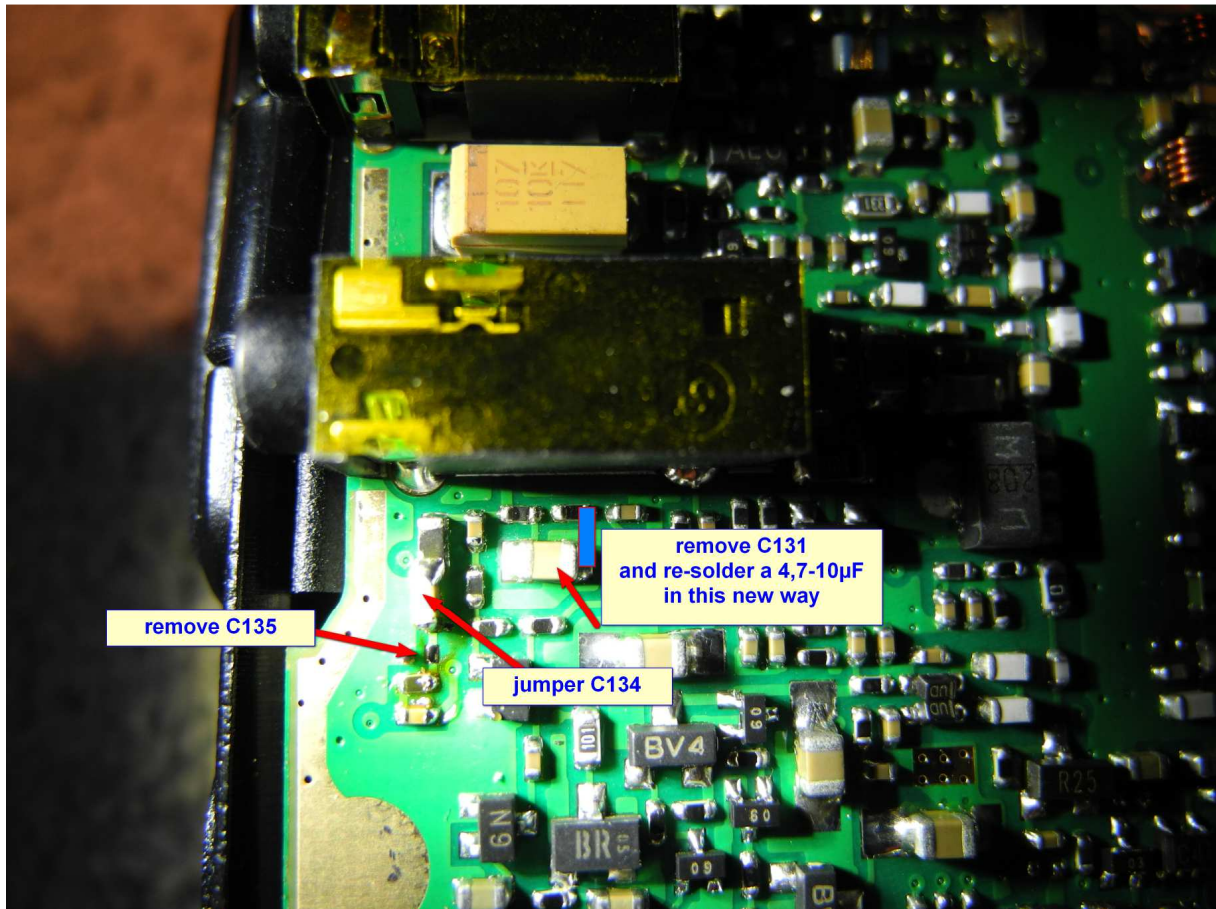
(more basses, more pitch)

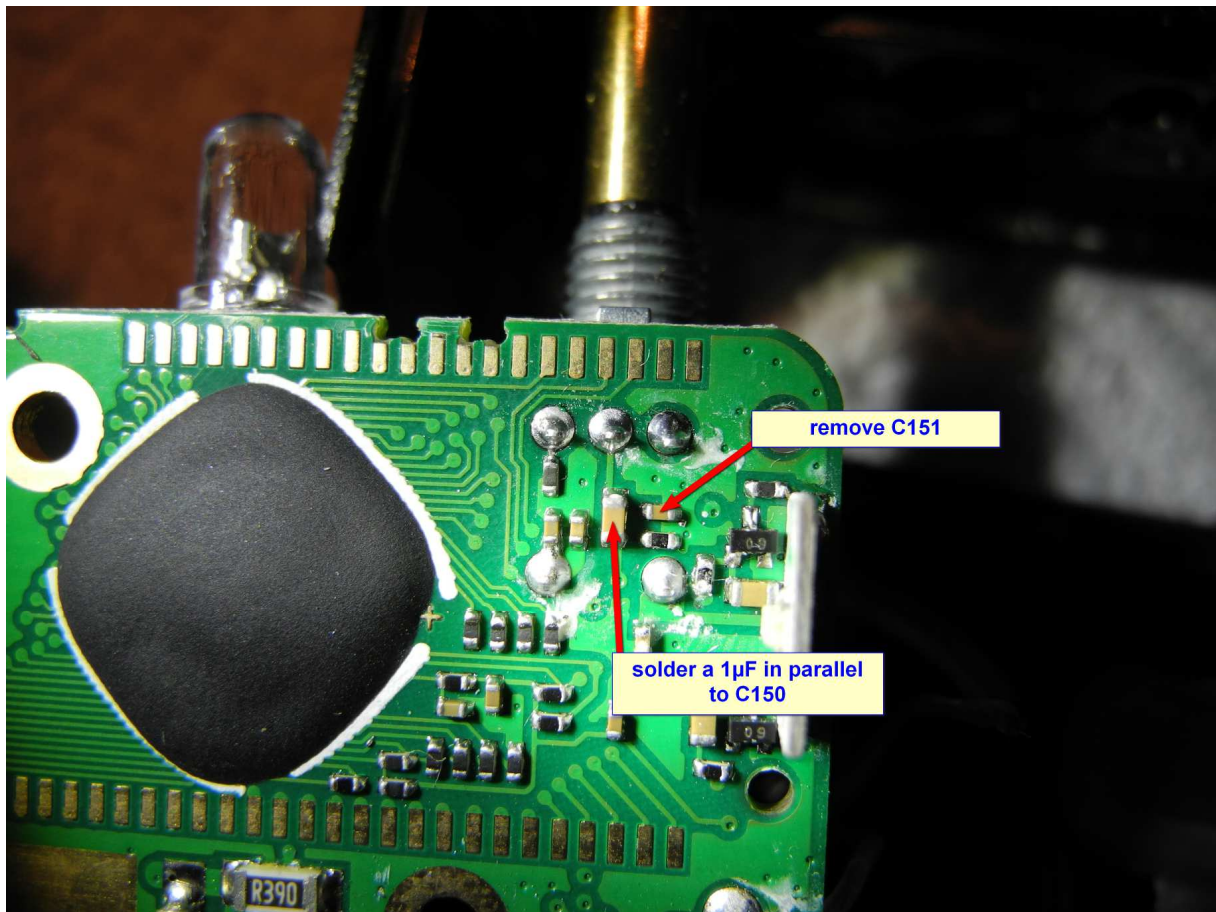


- Remove C151 to raise pitch
- Solder a 1 μ F (1mF) non-polarised SMD capacitor in parallel to C150 to improve basses



And here are the pictures for the UV-5R



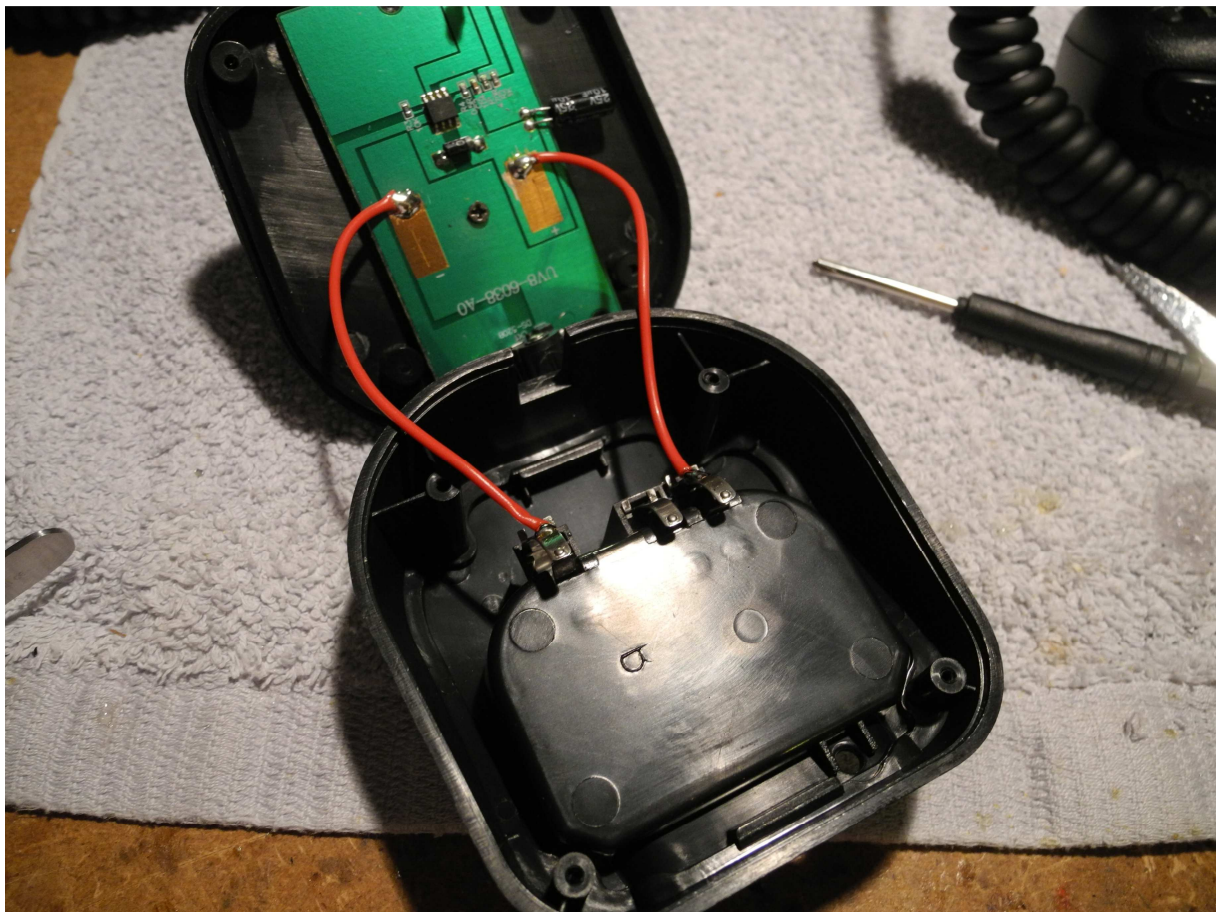


Fast-Charger Contact problems

I had some contact problems with the brand-new charger of my UV-82L. By having a look to some internet forums I found out that I have not been alone. Lots of users had the same problem and often send the complete UV-82L back to their shop to get a new one.

To keep the story short. **The contacts for the accumulator did not have proper contact to their counterpart PCB fields.**

I just **soldered in two wires** – and the charger works fine again !



Disclaimer • Disclaimer of liability

These modifications mostly need to be done by a electronic specialist who had enough practise and who has knowledge in SMD soldering. **You do the modifications on your own risk !**

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