WP-34s

How to install a clock crystal and an IR diode for printing

1 What you need besides the WP-34s

I used a 16W soldering iron, a hot glue pistol, a tiny Philips screwdriver, tweezers and a wooden toothpick.

2 What I bought from www.conrad.de

1. Quarz MH32768C Bestell-Nr. 156007 0,79EUR
2. IR-LED 3mm Typ L-934F3C Bestell-Nr. 154394 0,37EUR
3. KERKO Chip 0603 NP0 18PF 5% 50V Bestell-Nr. 445644 0,10EUR
4. Widerstand Kohle 0,25W 5% 390R BF 0207 Bestell-Nr. 403202 0,10EUR

Figure 1: Unscrew all five screws. Two are under each end of the rubber foot, three more visible when back cover is removed.

Figure 2: Insert tool between silver front and grey frame and open; sides first, then top and bottom. I used the tweezers.

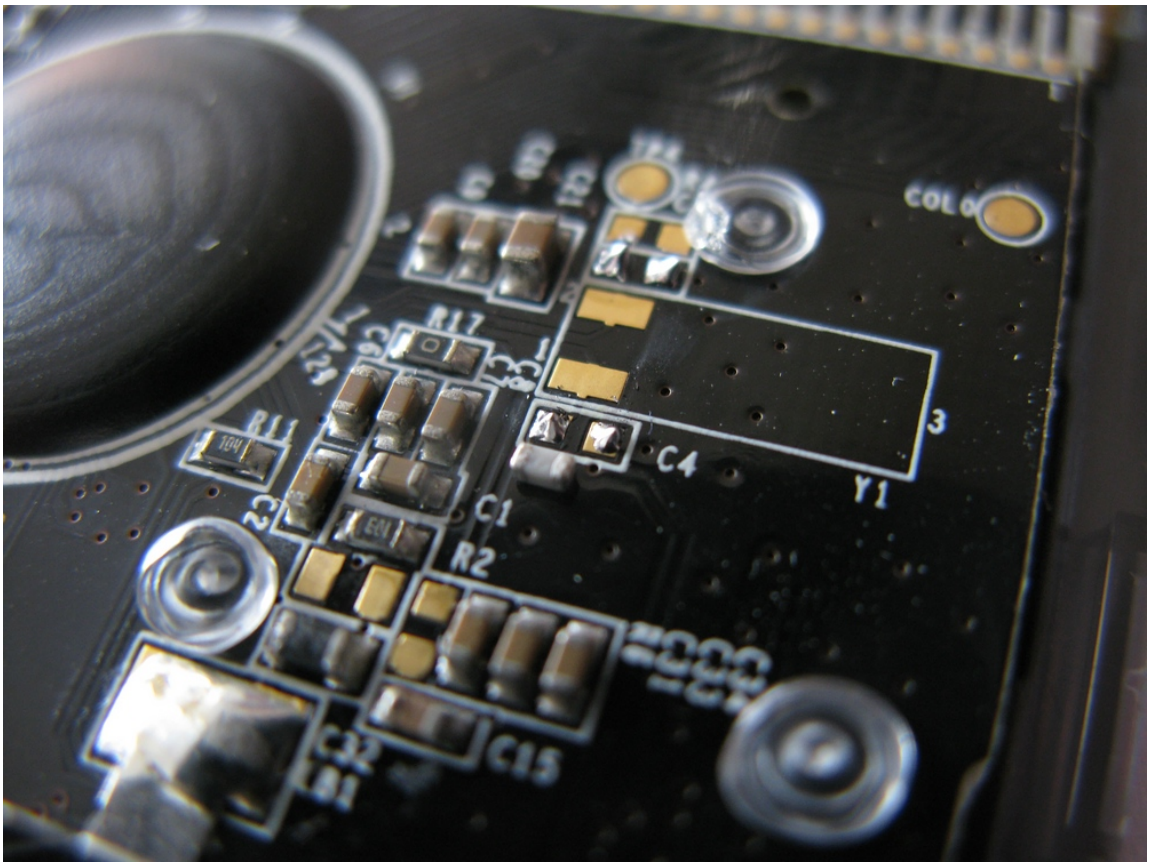

Figure 3: Identify contacts C3 and C4. Put solder on them.

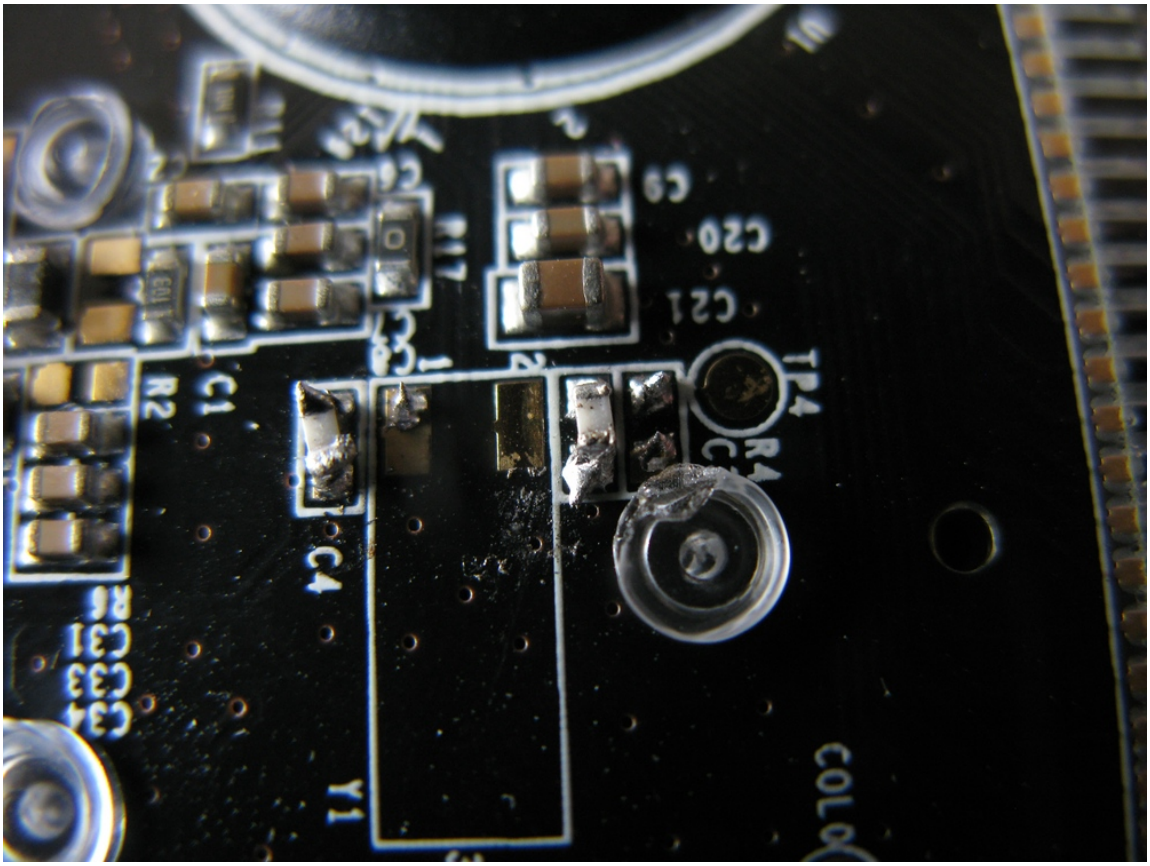

Figure 4: Put tiny capacitors in the vicinity of C3 and C4, hold with wooden toothpick, solder contacts, while solder is liquid, put the caps in position with toothpick. This is a layman's work. If you can do better - good for you!

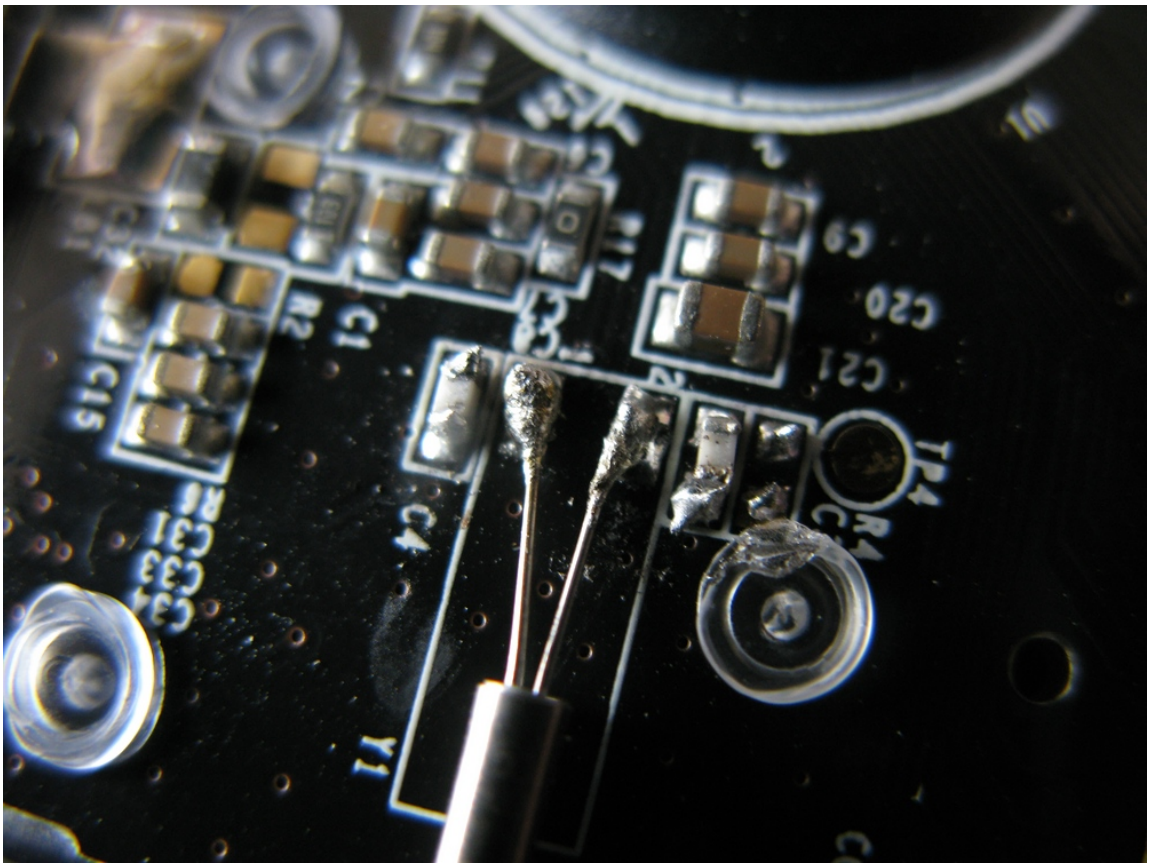

Figure 5: Shorten contacts of clock crystal so that it fits in the Y1 rectangle. Put solder on crystal's legs and on PCB contacts. Solder it in, while holding it with tweezers.

Figure 6: Shorten legs of IR diode as much as possible, more than I did. Solder resistor to longer leg.

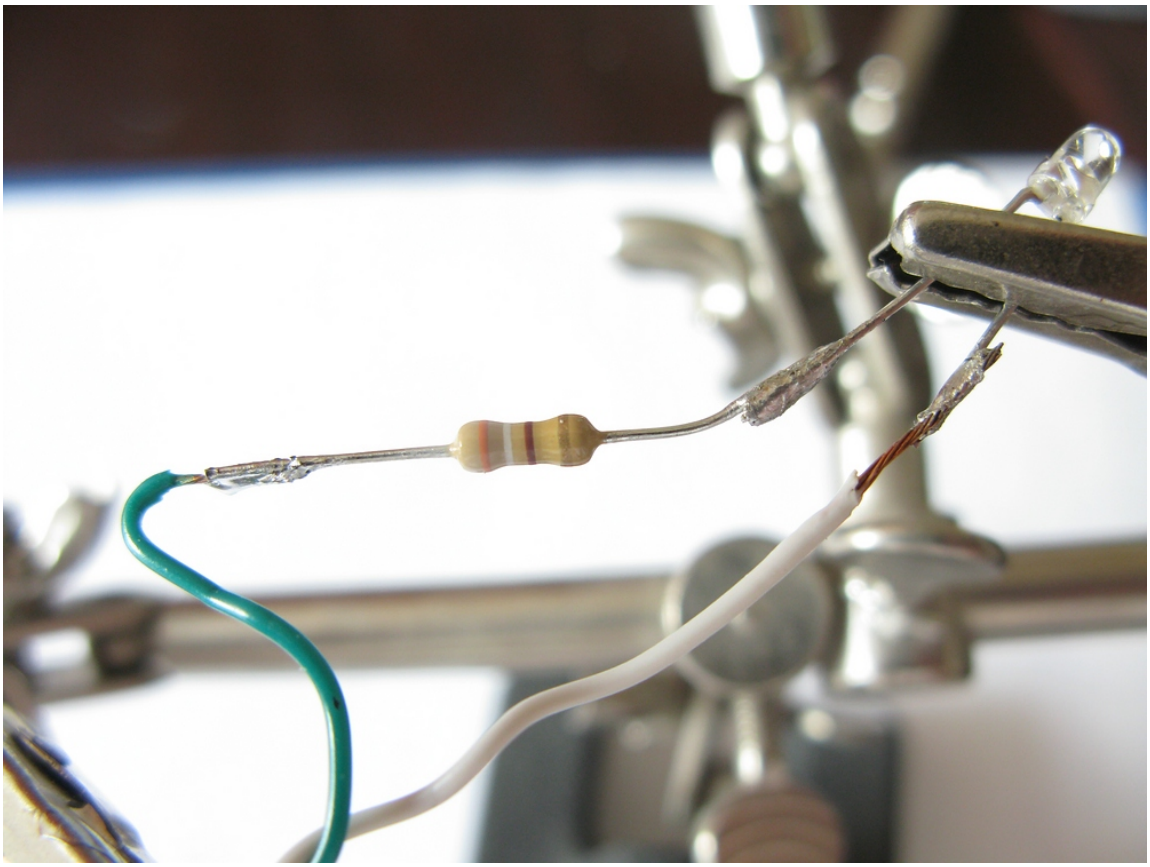

Figure 7: Solder two 10cm wires to resistor and shorter leg. Use considerably thinner wire than I did. The thinner the wire the easier to cram it in the case later.

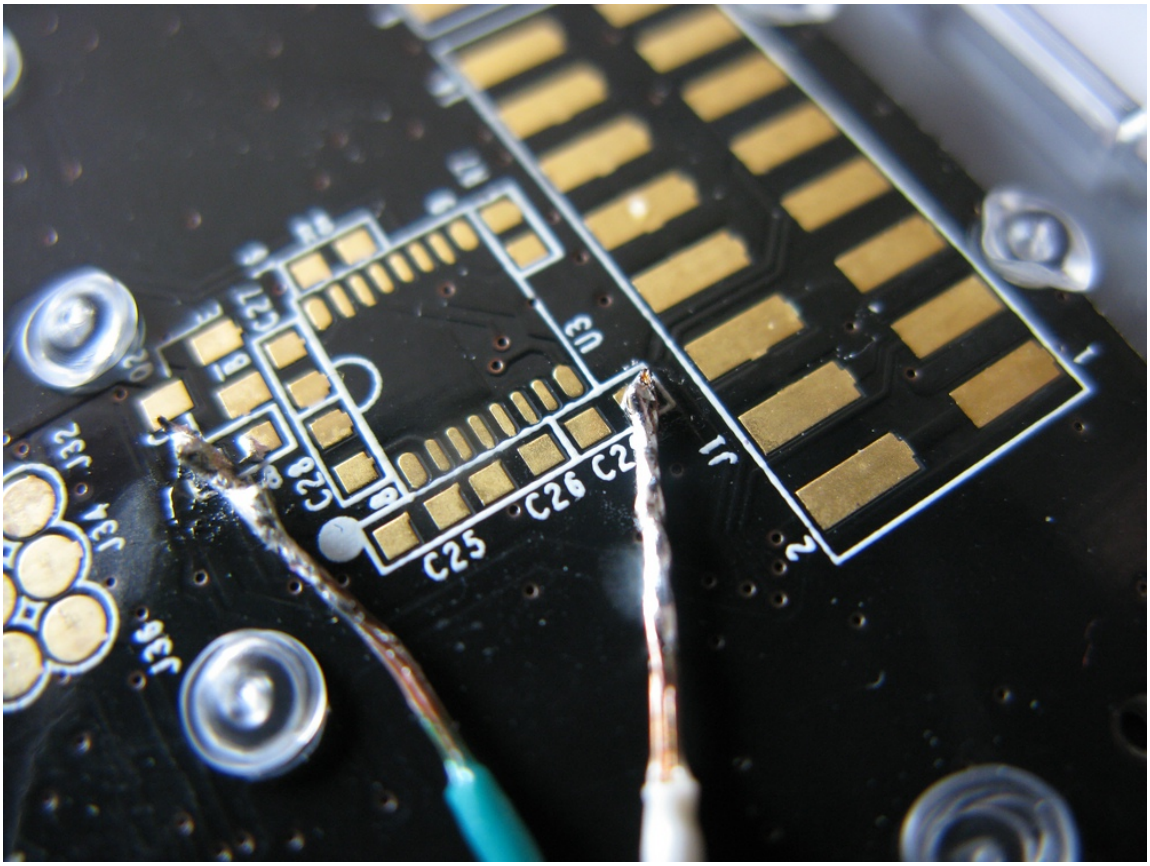

Figure 8: Solder the wire from the longer leg to R18, the other wire to C29, Katie identifies this as the corner pin of U3. I glued the wire with hot glue to the PCB and the lower case before reassembling.

Figure 9: This is the whole I melted with the soldering iron into the top side of the back case - not the back cover.

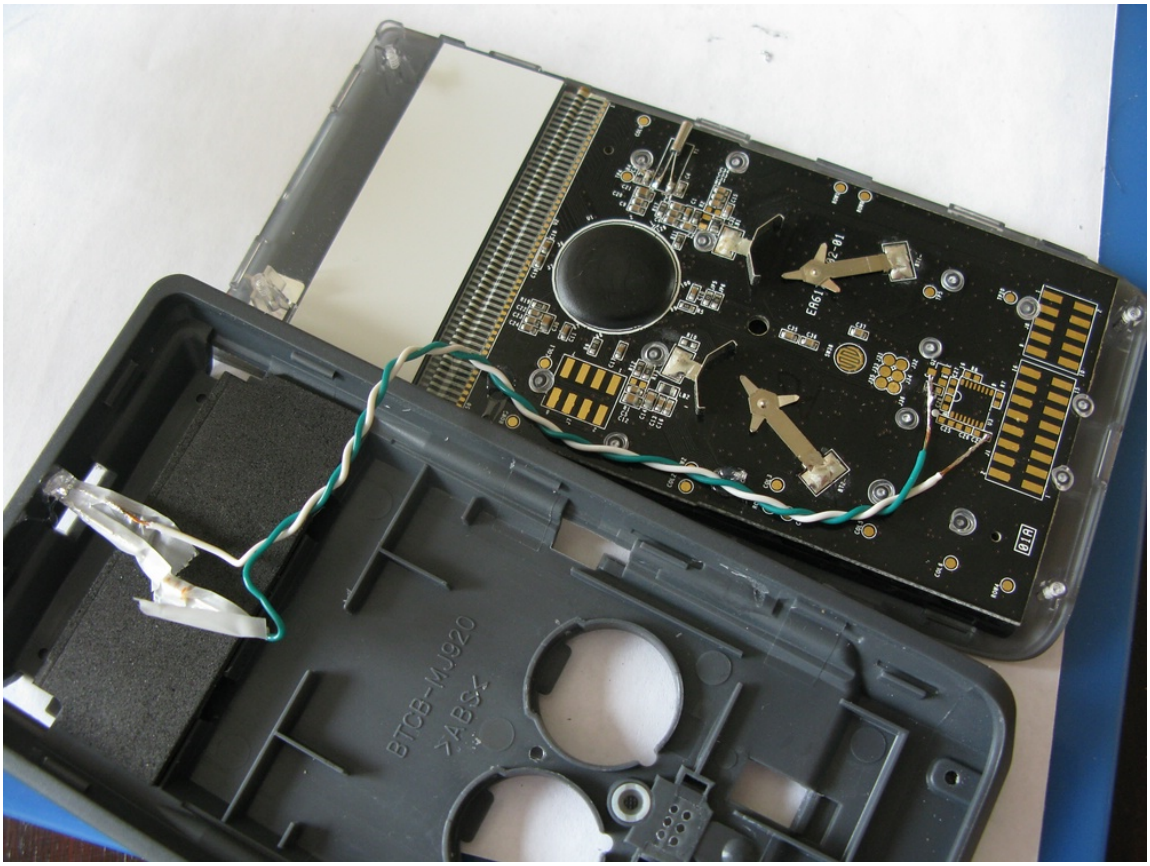

Figure 10: The IR diode in place and the connecting wires. Make them thinner and possibly shorter, in order to be able to easier fit them in the case. If you have fancy shrinking tube, by all means, use it. I had only transparent tape to do the job...

Figure 11: The damaged LCD of my first machine. I had the wires behind the LCD, which probably was fatal.

Figure 12: Everything installed in another WP-34s of mine. Only after the soldering was done did I sucessfully flash to the IR firmware.

Figure 13: The printing commands are located at the end of P.FCN catalog, all beginning with this pretty printer symbol, not with P, so don't be confused when you search for them.

Figure 14: Final location of my IR diode.