

## MICROPHONE

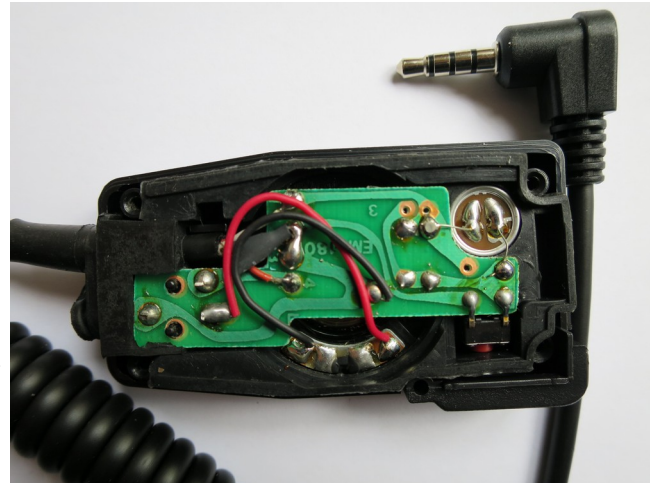
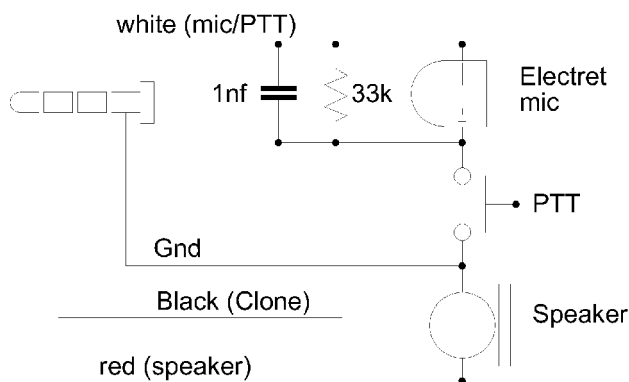
A suitable microphone for mcHF is the Lafayette EM-180Q (pin out for IC\_E7) that you can buy on ebay for less than 10 €.

It is better than the other because it has the electret microphone capsule of normal size, also maintaining compact size.

It requires a small change to the internal wiring to make it usable on mcHF

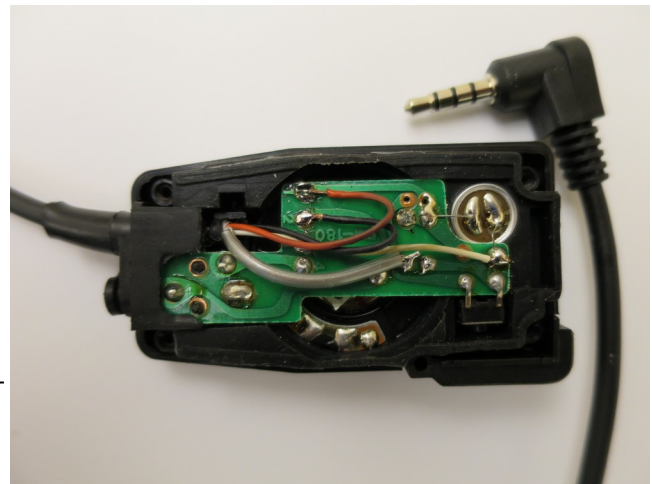
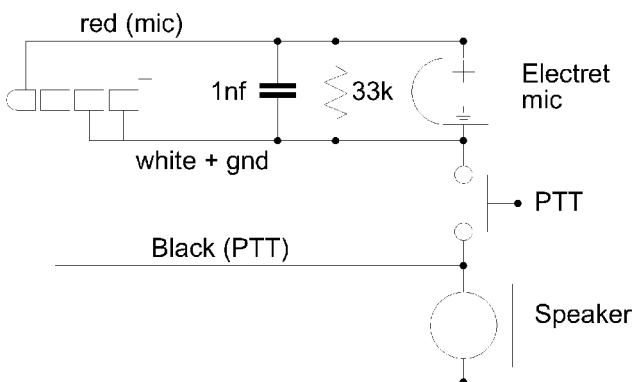
### Schematic and photo of original wiring

Lafayette EM-180Q original wiring for IC-E7



### Schematic and photo of modified wiring

Lafayette modified wiring for mcHF



## MIC BIAS MODIFICATION

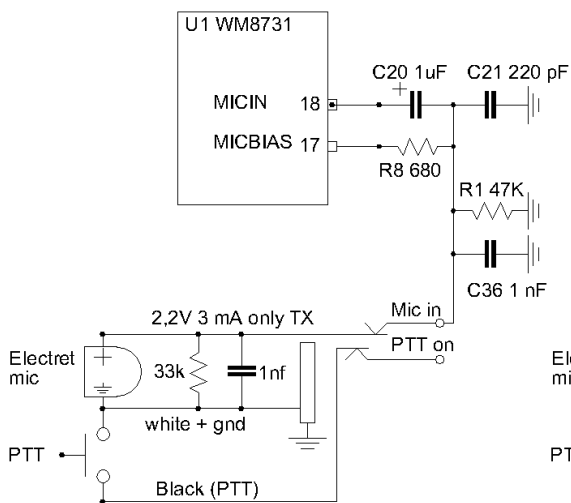
All mcHF have a clunk that is an electronic noise, in particular caused by applying the Mic Bias, which will be supplied to the microphone through Pin 17 of U1 (WM8731), as soon as the PTT is keyed.

The reason that this happens is that there is a loud "click" or "thump" when the PTT is activated and the compressor, doing its job, reduces the gain, taking some time to recover.

I resolved mic ALC problems as suggested in Yahoo Group Conversation applying microphone bias all the time as specified below:

- remove R8 680 ohm (UI board)
- resolder new R8 1 kohm standing on end, on the original pad of R8 (next to R2)
- connect the top of R8 using a piece of wire to C12 positive (+3,3 V)
- substitute R1 47 K with 2,2 K to change the ratio of the voltage divider formed by R1 and R8 to have +2,2 V at the mic bias.
- set the TX mute Delay to 0 on mcHF menu

mcHF mic bias original



mcHF mic bias modified

