



Yaesu VX-5R

Version 1.1

Transmitter



Open the VX-5R and position it like the left picture.



Locate the IC „3403A“ at the upper left corner.

Remove C1040 (10nF)
(the **middle** of the five circuits)

Remove C1036 (3,3nF)
- the black above is a resistor !!!
- the bright-brown is C1036

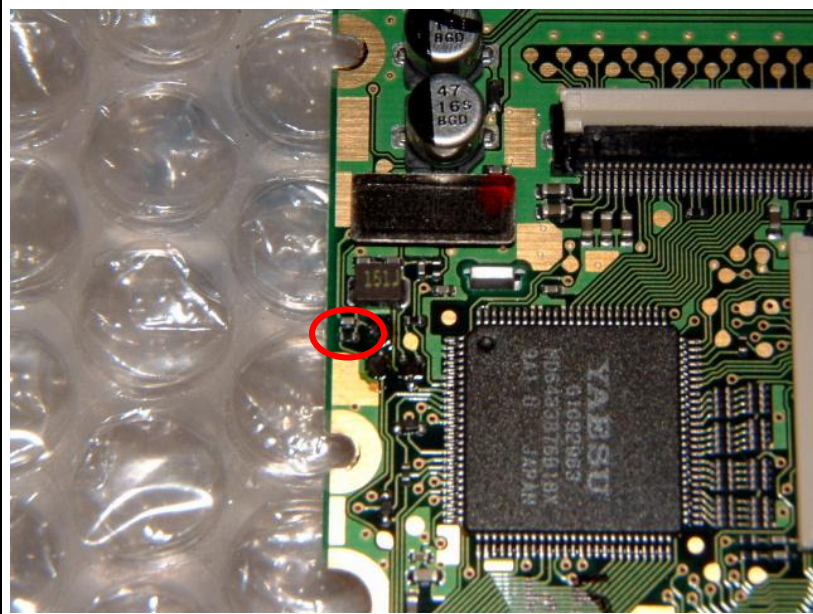
→
Clear, natural sound of Modulation

(opens the tx lowpass-filter)



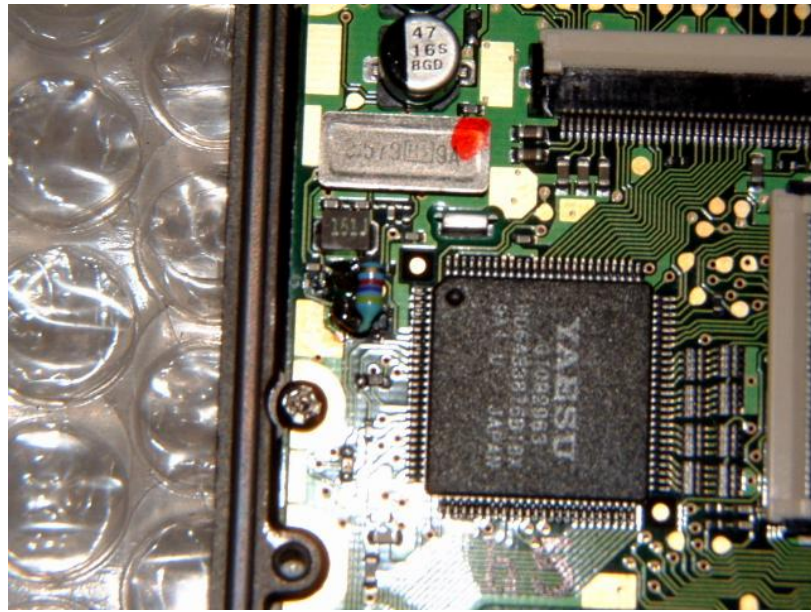
Remove cables and turn the board like this.

Let's go to this area.



Now one of the more interesting modifications for me. I would like to **give the internal mic more punch.**

Locate the PTT pulldown resistor **R1002**. It's the lower black. It will be switched parallel to the internal electret mic on transmissions. But the original value of 2,2k reduces the mic level too much.



Replace R1002 with a value of 4,7k.

But don't use higher values than 4,7k cause otherwise the tx/rx-switching fault !!! A 6,8k or 10k didn't work on mine VX-5R (but on a lot of other HAM handhelds or mobiles).

I used a mini resistor of a walkman but you better use a SMD type....

If you use external microphones you should change there mostly used pulldown resistor of also 2,2kΩ to about 4,7kΩ. This greatly increases the microphone loudness of the external mike. Some external mikes come with a 4,7k one so only check this point.



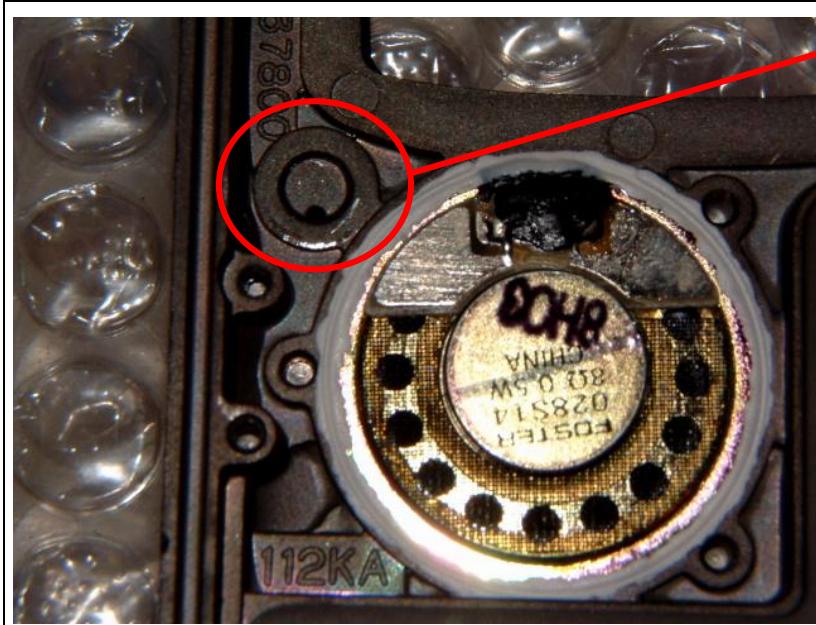
Now we will **give the internal electret microphone a little more brightness and clearance of its sound.**

I removed the thin black material which is fitted on the microphone with glue.

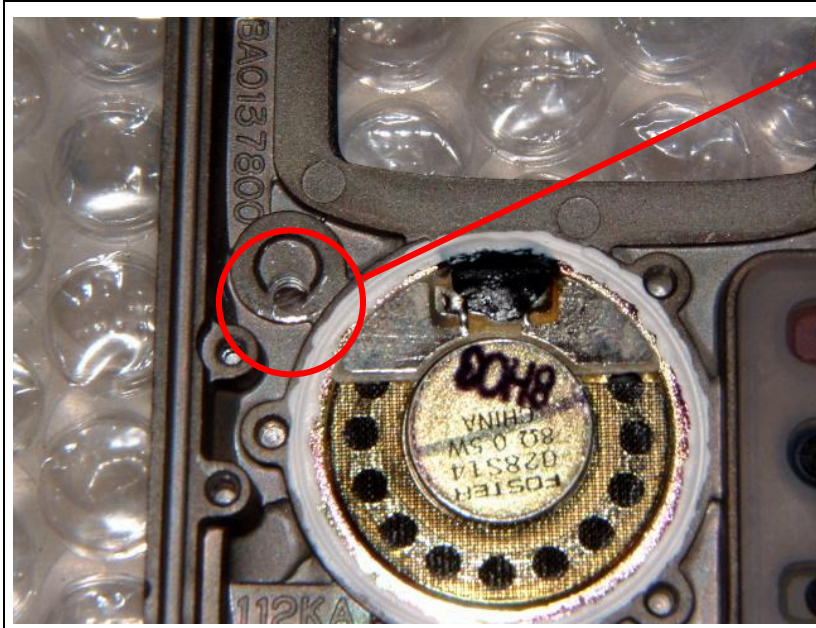
All external mikes I tried sound better and louder than the internal one and have more bass sound. But this is caused of the used electret capsule. All external mikes have a capsule with only on hole in the middle with about 2 mm. These capsules have the better sound.

But I'm not man enough to replace the internal capsule cause of the difficulty operation.

I want to say that the internal mic is good for the daily use, of course ! But you get the perfect sound only with the use of external mikes.



And I also **removed the thin material.**



So I **drew up the hole to about 3 – 4 mm** so that the speak can go directly to the mic.

Maybe you can center the hole.

You can put a litte foam in front of the mic to reduce „popping sound“ on pronunciation of „B., P., T., eg.“

But the foam haven't to be too thick otherwise the sound will even get darker (like before, hi..) and will produce a little hollow sound.

So only use a very small and thin piece of foam which you put into the red rubber ring of the microphone just before you reassemble the front unit.

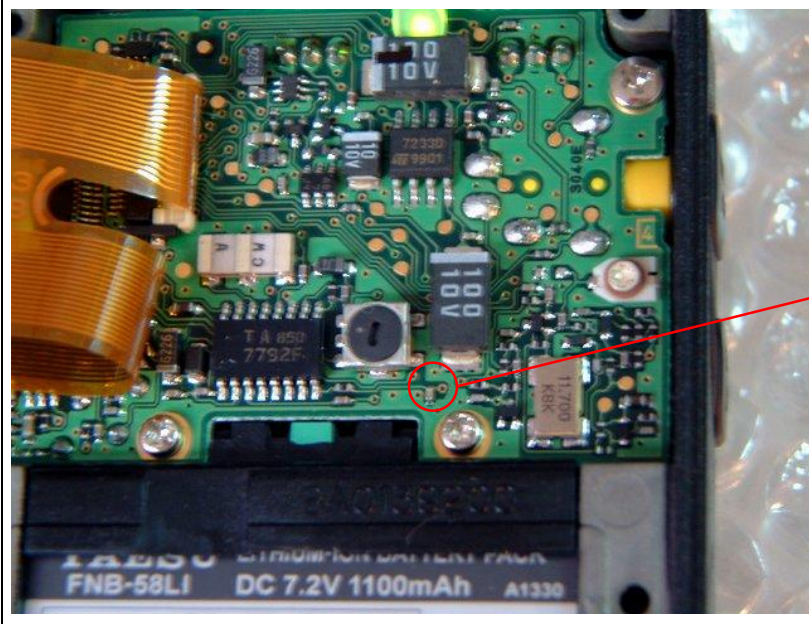
Still not enough !???

So let's go to the....

Receiver

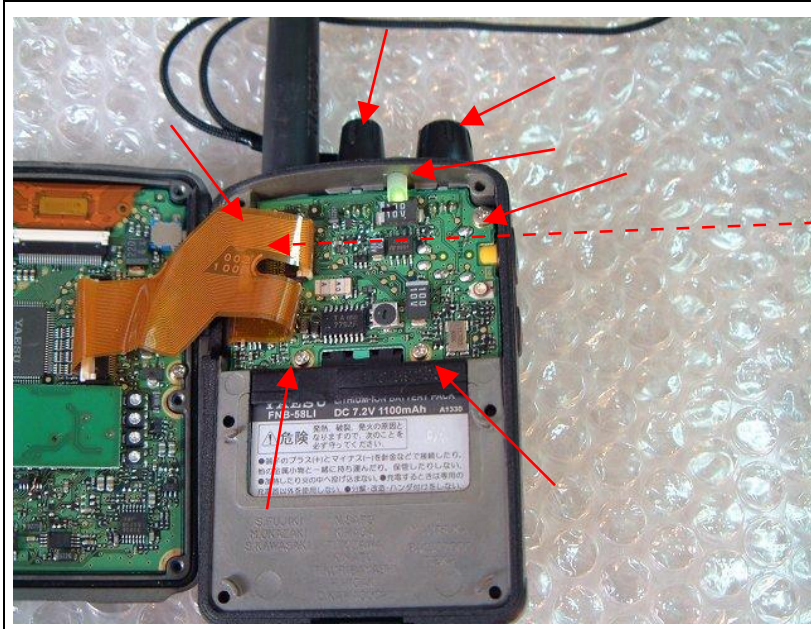


Now position the VX-5R like this.



Remove C2042 (10nF)

→ **Gives more heights to only WFM
receiving** (better sound for e.g.
music of radio stations)



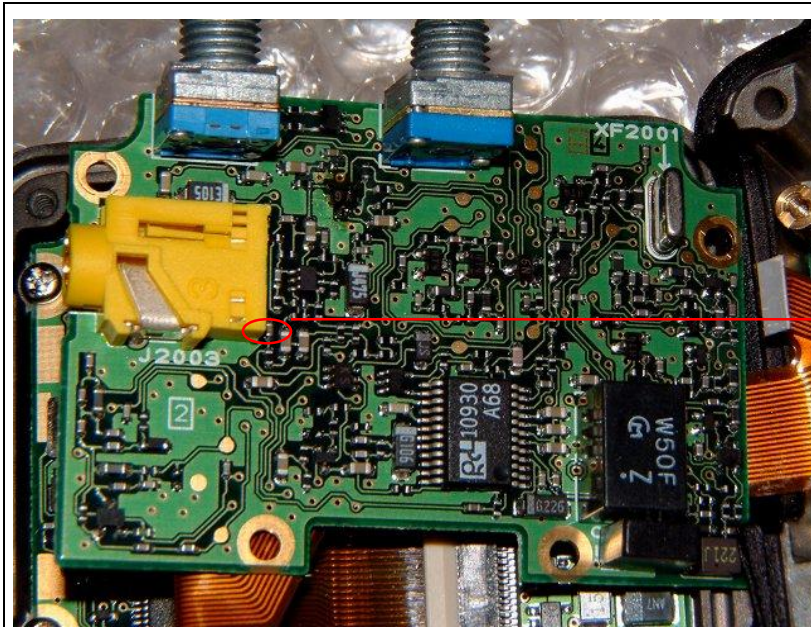
Now

- open the 4 screws
- remove the volume and channel knob and their nuts
- remove the LED rubber
- remove the small flat cable (in the picture it is under the wide flat cable)
- remove the circuit board



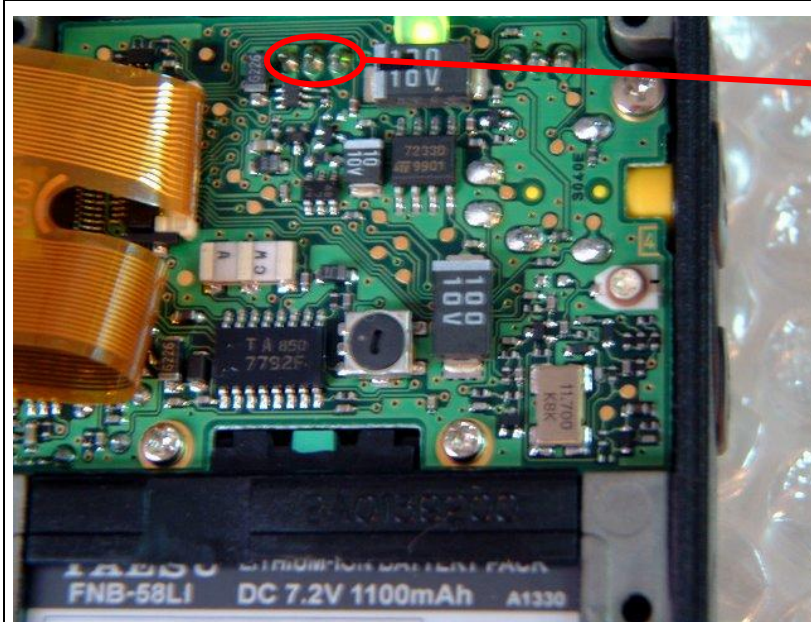
Now it should look like this.

Now we have to go to this area.



Remove C2053 (100nF)
or change it in 4,7nF – 10nF

→
This increases the receiving sound greatly by passing the heights through.



Turn it again.

Solder a 3,3 – 4,7 nF capacitor over the both ends of the vol pot.
So it's parallel the vol pot.

(I use a 4,7 nF).

→
This reduces only the high fm noise but let the speak frequencies through.

With this last mod the receiving sound is much brighter. Without the last capacitor over the vol pot it will maybe sound for someone a little bit shrillness. But with the 4,7 nF I found my optimal sound modification. And the receiver or should I better say the af amplifier is also louder. This sound is much favorite for me cause with this mod you also can receive also in loud background. With the normal extremely dark sound you can't hear anything in loud environments.

Now dry your sweat, reassemble the radio and enjoy the freshen VX-5R !

Antenna

I read a few internet articles of other radio amateurs which get best results with a

Diamond SRH-999 (6m/2m/70cm)

I'm going to buy one on german HAM RADIO 2002.

Disclaimer • Disclaimer of liability

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

Radio modifications shown here are provided for properly licensed operators only! The user is solely responsible for making sure that any modifications made to the radio unit must meet all Federal and State Regulations or the Country of use! Liability of damages to any equipment is the sole responsibility of the user! Downloading , viewing, or using any information provided on these pages automatically accepts the user to the terms of this agreement! Modifications are provided for information purposes only!

Although the greatest care has been taken while compiling these documents, we cannot guarantee that the instructions will work on every radio presented.

Copyright

The author intended not to use any copyrighted material for the publication or, if not possible, to indicate the copyright of the respective object.

The copyright for any material created by the author is reserved. Any duplication or use of objects such as diagrams, sounds or texts in other electronic or printed publications is not permitted without the author's agreement.

Some circuit details are passwort-protected because of legal reasons. Please contact me via e-mail.

If your company would like to provide technical information to be featured on this pages please contact me at: dq2iaq@web.de

Jochen Heilemann
P.O. Box 1106
D - 75218 Niefern-Öschelbronn
Germany

e-Mail : DG2IAQ@WEB.DE
Fax : +49 (1212) 5-346-52-897

Callsign : DG2IAQ
DOK : A51 (Die Rassler)
Locator : JN48JW Latitude 48.917(N) • Longitude 8.783(E)