



Fix RFI feedback

I own two YAESU FT-817 and in my first one I built in one of the first bhi NEDSP-1061 modules which were available here in Germany.

The product is great and I was ever gladly surprised with the audio results.

But as I use my first "Deluxe" FT-817 now at home as my backup TRX I recognized a noticeable audio-feedback on SSB mode. While using a gooseneck electret microphone on my desk I always here some noticeable fragments of the transmission in the speaker. As I normally use an external speaker, and this one of course is straightened toward me (..and the microphone as well !!) my modulation went bad due to the mixture of the audio feedback.

I thought this are RFI problems strayed into the bhi DSP module as the module lies directly on some coils of the FT-817 main PCB. The FT-817 internal room is so limited that I have to live with that cause there's no room to vary with the module. And the effects were there even on transmitting into a dummyload !

First I tried to compensate it with additional resistors and RF chokes in my external speaker. This reduced the audio feedback effects, ...but the audio as well. ☹

Today I opened again the FT-817 top side and I found the solution very easily. During the transmission on 20m USB into a dummyload I "shaked" the bhi module and I recognized and heard breaks and scratches in the feedback audio.

To make the story short:

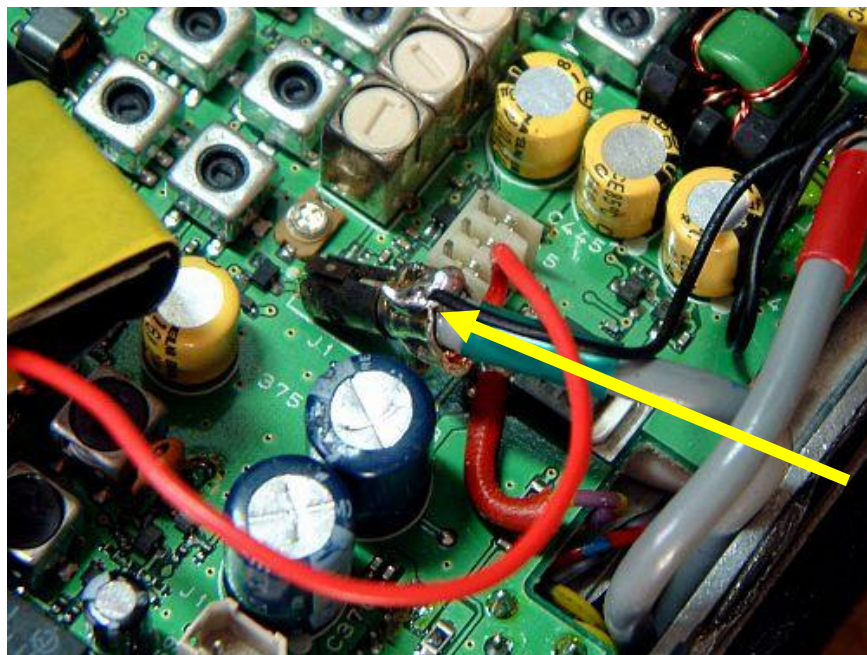
Even if I soldered the red lug just from the beginning on building in the module there must be one or some bad contacts to ground !! With this missing or high-resistant ground the shielding of the module and the audio wires had also gone.

So my solution is simple and fast:

→ **Solder** all the connections and don't use the ground lug.



Cut the ground lug from the 3 black cables.

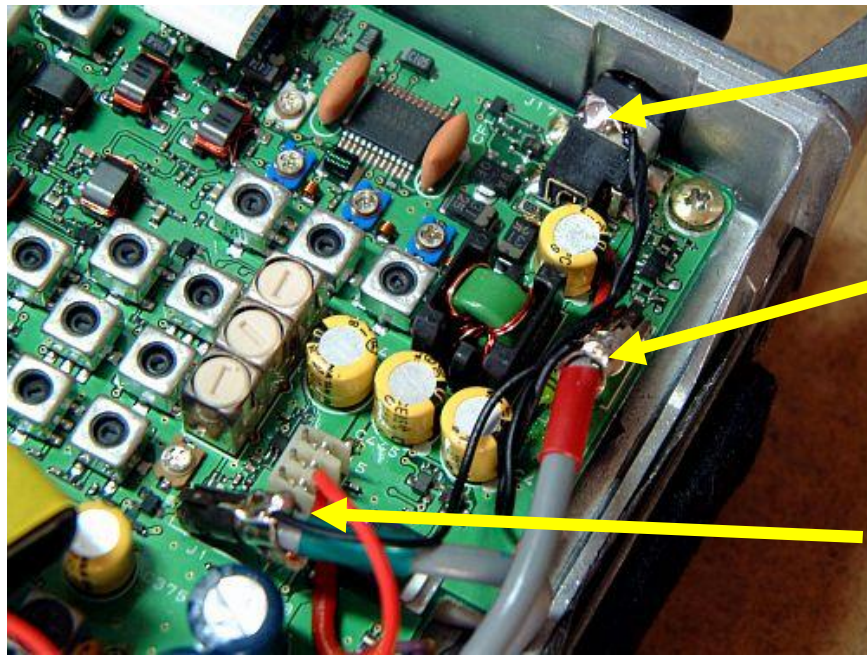


Add two additional ground wires to your FT-817

These two mini-coax plugs might have a bad shielding due to a bad crimped plug. And they might have some contact problems as well due to oxidation.

Solder the shielding of the coax cable to the outer of the mini-coax-plug.

Solder an external ground wire as well to the outer/shielding of the plug.



Ground connection is here.

External ground cable on outer of coax cable (TX, red)

External ground cable on outer of coax cable (RX, green)



bhi NEDSP-1061 module, secured with isolation tape.

Solder the 3 ground wires of the bhi module here.

Now my bhi NEDSP-1061 module works absolutely great. I don't have any audio feedbacks, even not on a bad SWR.

Why did I never check and found that out earlier !?? ☺

Best 73,

Jochen Heilemann
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This 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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