

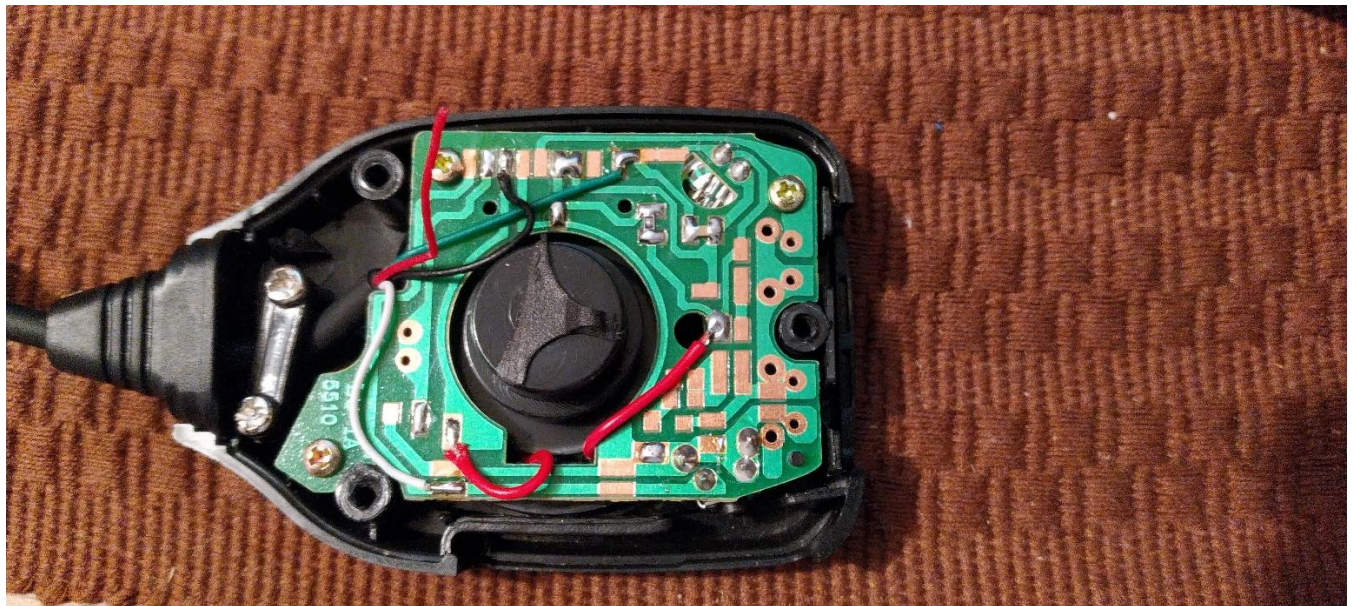
## KX3 Quick Mic

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My Elecraft KX-3 has become my go-to portable QRP rig, and its primarily put in use on CW; yet, there are a few occasions where I want to operate SSB. Usually this is when I am operating remote and explaining to an interested member of the public what all the “stuff” is on the picnic table. Explanation of the stuff is usually met with polite interest and/or blank stares, but engage them in a QSO with someone far away, and the questions and inquires become more excited in nature. Sadly, the latter never occurs by handing them a CW key 😊.

As such, I wanted a microphone to throw in my KX3 QRP remote kit, that I could pull out, and very quickly get on SSB and truly demo ham radio in a manner that those uninitiated would appreciate and even participate in. Yes, the Elecraft MH-3 is undoubtedly the ideal mic, as they designed it for their radio, but in my mind it is an over-priced solution for my limited scenarios. Following is a short project to put in service a quick and cheap microphone, that I don't mind having out in the field, and potentially rained on, dropped, or worst-case lost. It is lightweight and notably smaller than the Elecraft MH-3 mic and may even appeal to the SOTA crowd of KX3 operators.

First step to this easy project is to make a single purchases off of Ebay. You will need to buy a **Y26** Speaker Mic for the Yaesu Vertex VX-3R, VX5R, VX-150 which runs roughly \$13 at this time. Other mic projects I've dealt with required me to separately purchase a coiled mic cord that terminates in a 4 conductor TRRS 3.5mm plug. This particular Y26 already has the proper end connector for plugging into the KX3 and at a 90 degree angle. Following is a picture of the original mic opened up, with a dozen steps to follow detailing the modification.



Step1: Unscrew the back from the microphone and carefully remove the back, paying close attention to how the PTT button on the mic is oriented and set into the slot, along with the orientation of the rubber button grommet. At the final modification step, the PTT button and the case have to line up without forcing and everything has to be reassembled exactly as it was when you opened it up.

Step 2: Make note of your mic wiring to the circuit board as in the photo to insure it matches. You should have green, black, and white wires soldered to the circuit board as shown which come out of the mic cord cable. There will also be a red wire coming out of the mic cord cable and floating free, but needed later on.

Step 3: As this is being modified into a Mic for the KX3, there is no need for the speaker, so unsolder the two red wires coming out from under the circuit board from the circuit board. Cut the two red wires where they begin to go under the circuit board. Speaker is now disabled. There is no reason to physically take it out of the mic case.

Step 4: Unsolder the green, black, white wire from the circuit board. The red one is already free and clear.

Step 5: The black, white and red wires that come out of the mic cord all need to be extended about 2” as a starting point. Find some equivalent sized wire preferably in the same color as existing wires, some heat-shrink, and solder on extensions, with heat-shrink applied to insure no shorts to circuit board anywhere. The green wire needs no extension.



Step 6: The extended red wire, should be trimmed to an appropriate length to reach over and connect to the place where the white wire was before. See photo.

Step 7: The green wire should be routed over and soldered to point where two pads were shorted together. See photo.

Step 8: The extended black wire should be trimmed to an appropriate length to reach and solder to the point that the green wire had formerly been soldered to.

Step 9: Finally, the extended white wire solders to a fresh solder pad near the top of the mic circuit board. Review before and after photos to discern the exact spot for the new connection.



The microphone modification is now complete, but hold off on reassembling the entire thing until the very end, and after you have given it a test out with the KX3.

Step 10: Unlike the MH-3, this mic has no up and down buttons, so go into the KX3 menu and set MIC BTN to Ptt on the radio. As this is an electret mic, also set MIC BIAS to On. Now exit the menu

Step 11: On the radio itself set the Mic Gain at 15. Set CMP to 5. This mic is sensitive, so you are cautioned not to over-drive it. Some very vocal amongst us may even need the gain set down as low as 10-12.

Plug the mic in and do a quick test that pushing the tiny ptt button on side will place radio in transmit mode. Speak in to the mic and watch the ALC or PWR meter readings to validate modulation in SSB mode of your choice. Plug in some headphones to the KX3 and go into KX3 Monitor mode (set to 4) to listen to how your audio sounds when testing into a dummy load. Alternatively, test into a second HF rig with power down and attenuators on. If you can't hear yourself, double-check all preceding steps.

Step 12: Reassemble the case with PTT switch in same manner as when step 1 to disassemble was done. The "Yaesu" adhesive sticker on mic, might look good with your call-sign instead.



(OPTIONAL Step) Given all individuals voice characteristics are different you can play with the TX equalization settings. I have found the 400, 600, 1200 settings benefited my voice with settings of +6-+10, while all others were left alone at 0.

Should I embark on another one of these mic builds, I would probably loosen the mic cord stays at the bottom of the mic to have pulled through another inch or so of cable, and peeled back an inch of the rubber cord cover, so that only the white wire likely would need an extension to its connection point. But that should never occur, unless Murphy leaves this mic at the next park outing, and I lose my \$13 investment. Knock on wood!