

My Icom 7000's main tuning knob stopped working. Everything else in the radio worked just fine, so I started looking for the tuning culprit. First, I tried the microphone. It was able to change the frequency and all the other mic functions were working fine as well. I tried using a remote control program, Ham Radio Deluxe, and it worked great, changing frequencies as it should. I even tried disconnecting everything except the power-supply and doing a full reset. The tuning knob still did not function.

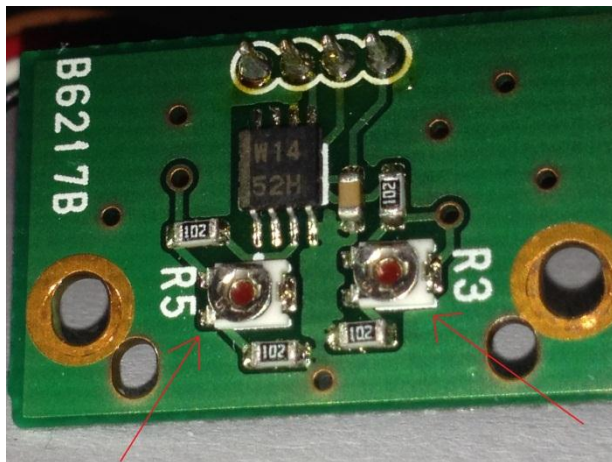
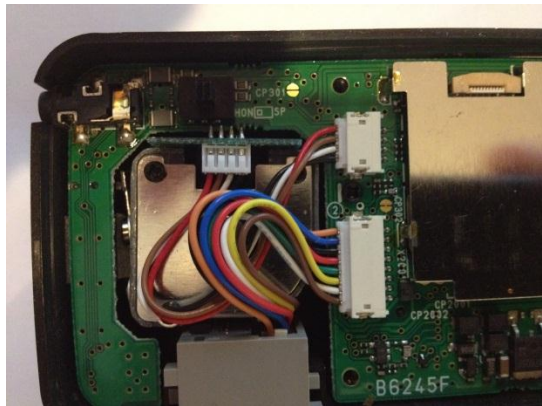
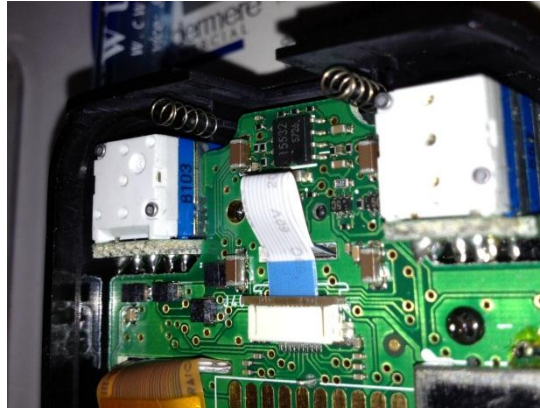
After looking on the web, and downloading the service manual, I started reading and decided the problem was in the encoder. I did not find anything obvious in the service manual about adjusting or calibrating it, but I figured that since these rigs like to run a bit hot, perhaps some values have changed over time and tossed the encoder range out of calibration.

I talked to a couple of ham friends that have experience working on radios like this, and they suggested I try recalibrating the encoder. I was told the encoder must be rotating while tuning is performed. It would have to be removed from the control head to have access to the adjustment potentiometers, R3 & R5. I don't suggest anyone else try this, but this is what I did to fix it.

Making sure the power-supply was off; I started by pulling off the tuning knob. I removed and opened the control head. There are 3 screws on the back and one nut on the front. Being careful not to lose the 2 tiny springs under the control head release button, I carefully removed the encoder. Then I fed the encoder plug back through the tuning knob hole from the front and plugged it back in (see the photo). Then I reassembled the control head, put it back on the radio and put the knob back on the exposed encoder.

I held the encoder unit by its sides and was ready to make the adjustment. I powered the radio back on and had an assistant continuously rotate the dial clockwise. Using an inexpensive non-metallic tuning tool, I carefully adjusted R3 and R5 until the frequencies started changing. I stopped adjusting when it changed up and down correctly. I tested it by tuning in both directions with the tuning knob and saw that it was tracking as it should. At this point it was easy to reassemble the control head. Done!





Happy owner Icom 7000 since 2006.