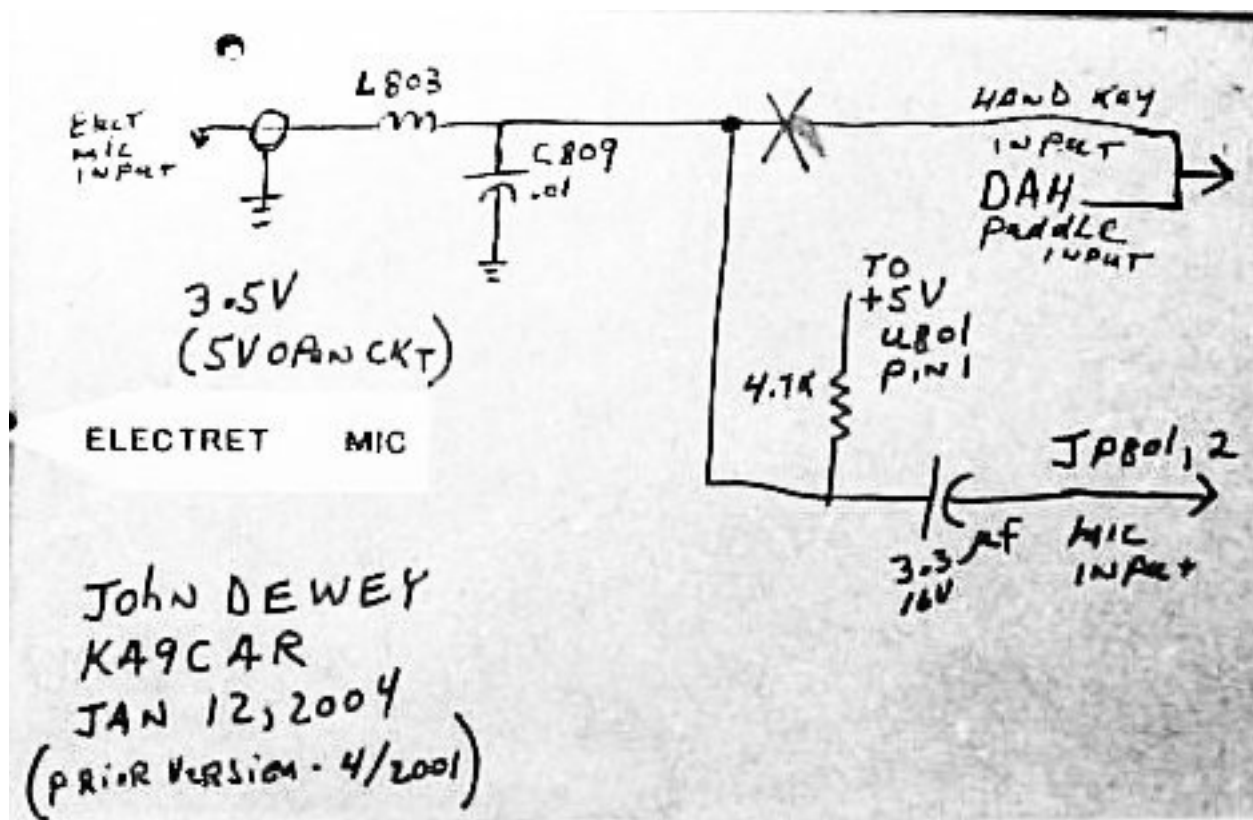


## Using Electret Microphone with Kachina 505DSP

(adapted from a writeup by John, KA9CAR)



I use an electret "Computer" headphone / (electret) microphone for my regular QSO mic on my Kachina 505DSP.

There are two features to this modification:

1. It uses the (cw) KEY jack. While this eliminates the straight key jack, this is not a problem for me, as I do not use a straight Key. If you want to still use one occasionally you should note that the "DAH" paddle contact is the same as the KEY in.

2 K1ND pointed out to me that there is a regulated 5 volt source on the PC board in the control head. According to the schematic this is used only by the microphone preamplifier. What better source for power for the electret microphone!

Here are the modifications I made:

1. Cut the foil for the key jack, to separate it from the dah, but leave L803 and C809 to maintain RF protection on the input.

2. Make the new connections by soldering the component leads to the edges of the surface mount L and C. In a similar fashion solder a wire to pin 1 of U801 the 5

volt regulator.

I found that a value of 4.7k provided adequate bias for a standard computer microphone. If you decrease this value, it will provide more voltage to the microphone but also lower the audio frequency resistance to ground.

The 3.3  $\mu\text{F}$  cap was picked to be at least 10 times the value of the series input capacitor C803 (.1  $\mu\text{F}$ ) inside the Kachina. I used the 3.3 because it was on hand, a 1.0 should be adequate. The electret microphone requires DC+ on the audio line. However, the Kachina has a microscopic 5k pot on the audio line that could be damaged by DC+. This capacitor blocks DC from that pot. One of the techs at Kachina told me I needed to block the DC this way.

NOTE: I previously was doing something very similar using a resistive voltage divider on the 12 volt supply. I did not realize that the lack of regulation on that line was causing problems in my radio, until after I switched to using the 5 volt regulated supply, and some annoying problems went away.

