

Ham Radio 101
The Anatomy of a Restoration
Part 2

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In the last article, I spent time detailing the changes I made to a HW22A. I thought I had everything fixed. I was wrong. The receiver was loud and crisp.

For this article, I will be concentrating on an HW22A Heathkit single band transceiver. It covers the 40M band from 7.2MHz to 7.3MHz. This was the phone band when it was originally designed.



Figure 1
Front of the HW22A

This version covered Upper Sideband and Lower Sideband, even though most of the activity was on Lower Sideband (LSB)

However, an electrolytic capacitor started to fall out of the chassis. The capacitor is shown in figure 2. It looks like round cylinder about .75 inches in diameter and about 2 to 3 inches tall.

Figure 3 shows the capacitor lifted from the circuit board. It is a 20 ufd, 400Vdc capacitor and it is part of the audio circuit.



Figure 2
Original Cap

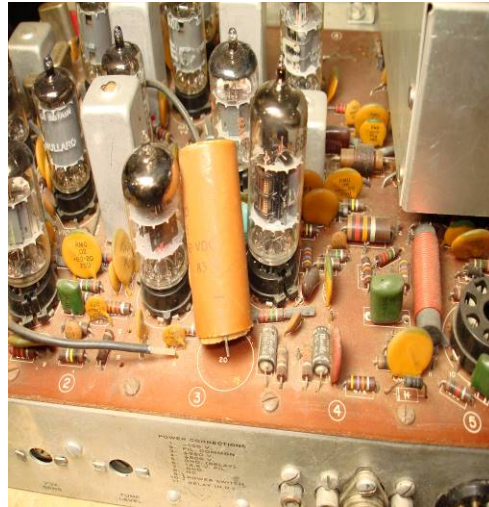


Figure 3
Unsoldered Cap

There were two avenues of repair. The easiest one is to just re-solder the existing capacitor. However, since the radio is 50 years old, I decided to replace the capacitor.

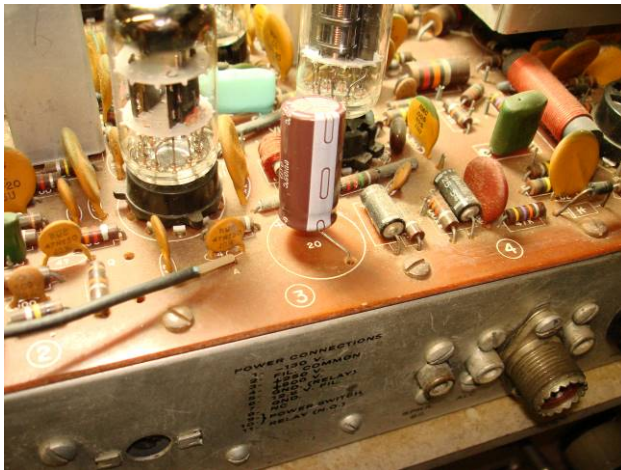


Figure 4
Replacement Cap

The old cap measured 24 ufd shown in figure 3. The new cap measures 22Ufd and is rated at 450 volts DC.

In any event, I felt comfortable with the new cap.

Parts for restoration and repair are readily available on line.

Some of them come from distributors in the Far East or they may come from distributors located in the USA or Canada.

I generally will put all of the covers on and then let the receiver run for several hours. During that time I will cycle the transmitter portion of the radio and measure the output power.

The radio should be operated at an elevated temperature. However, I do not have an oven that can be used to operate radio at an elevated temperature.

Editor's note: The picture in figure 1 is not the rig being restored. It is used only for a sample of an HW22A.

The radio was operated for several days on and off. I did make several contacts during the California QSO party. The radio was sold on line to a ham in Germany.

If there are any questions or comments, please contact me at WB6WXO@SOARA.org