

## Simple Heathkit Mohawk RX-1 Modifications

The only two objections I had to the Mohawk in terms of performance were bassy audio and slow AVC.

Schematic 1 is the audio modification. This circuit replaces the filter at the grid of the 12AT7 audio voltage amplifier. The original circuit, which consisted of a 220k resistor with 500 pF caps at each end, had a roll-off beginning at 1500 Hz. I wanted a higher roll-off frequency to reduce the as-built roll-off, so I chose a 100k resistor with a 470 pF capacitor at the grid point. This resulted in a 3.4k roll-off which reduced the bass, and of course increased the high frequency response. The 500 pF capacitor at the detector side was removed and a 330 pF capacitor was placed at the SSB/CW/AM switch to remove any residual 50 kHz signal and noise. My thinking was, let's remove any residual 50 kHz signal and noise as close to the source as possible. The SSB/CW/AM switch position was the most convenient because there was a chassis screw very near it for mounting the cap and a #6 grounding lug.

The schematic components with a "\*" also shows three other components that were changed: the DC decoupling cap, the cap across the audio output transformer, and a larger value cap across the power amp's cathode resistor. A larger amount of audio is now available with a much better frequency response.

Schematic 2 is the AVC chain which was modified for a quicker attack time and release time - which is based solely on my personal AVC preferences.

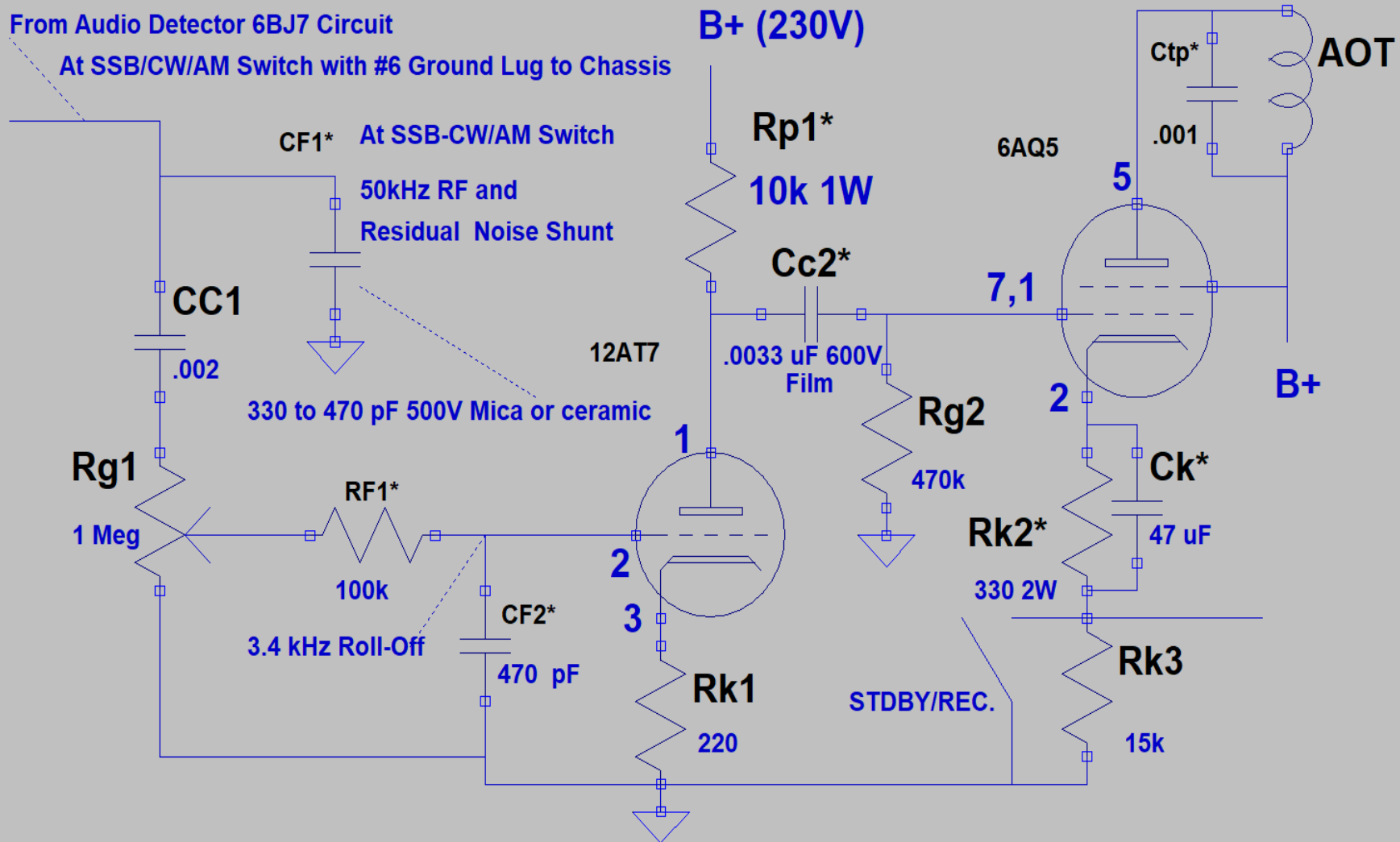
Schematic 3 was built because the tube rectifier failed during some later testing and is presented here only if it you decide not to use the 5V4. An Octal Pin Saver socket from A.E.S. was used to build the replacement rectifier. I upgraded the filter capacitors to 47 uF and 150 uF at 350V on a terminal strip because I wanted to keep the shiny cap can. The B+ only increased by about 7 volts for these mods.

The only original tube replacement was a 12AT7 audio voltage amplifier that later became noisy. All other tubes are still original and test good to excellent on my Hickok 533A tube tester.

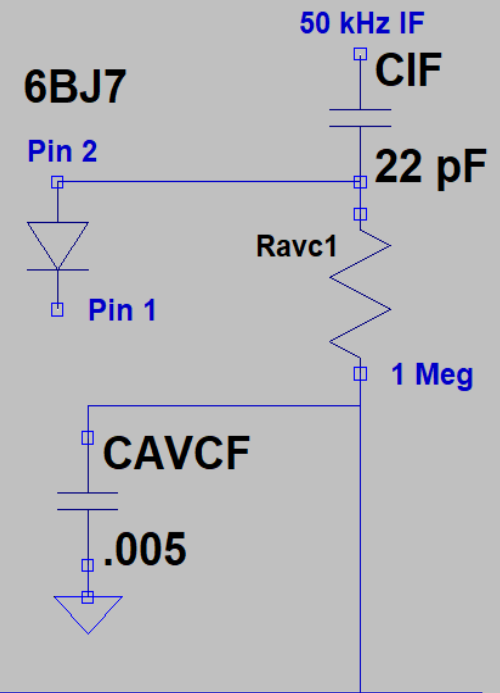
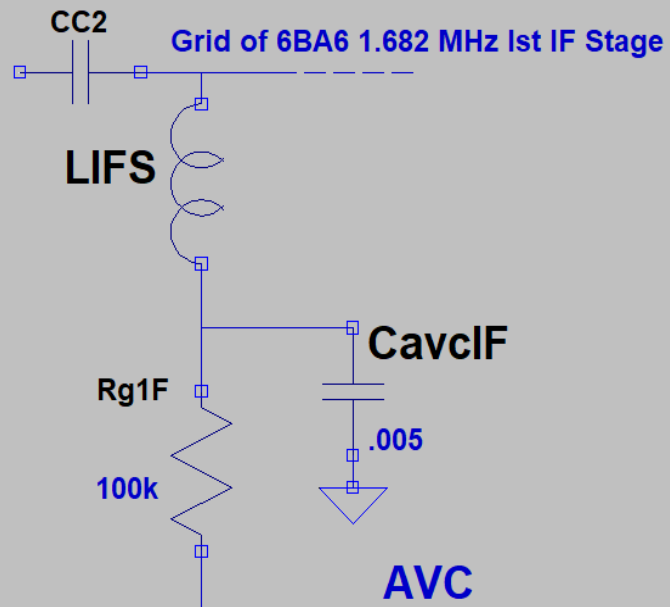
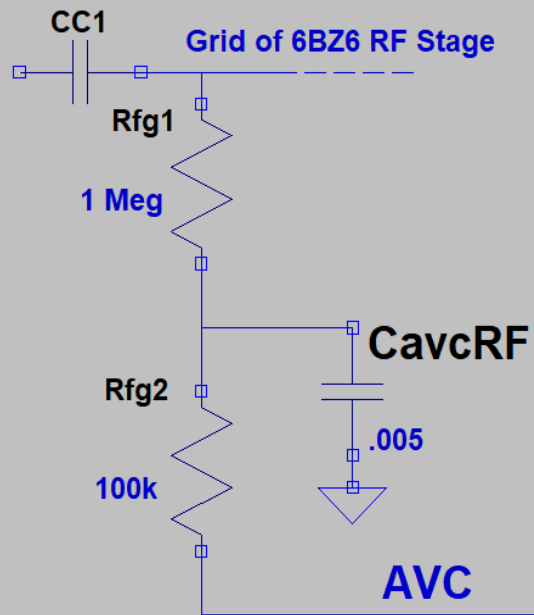
# Mohawk Audio Improvement

From Audio Detector 6BJ7 Circuit

At SSB/CW/AM Switch with #6 Ground Lug to Chassis



## AVC Mods



## Mohawk PS No Tube

