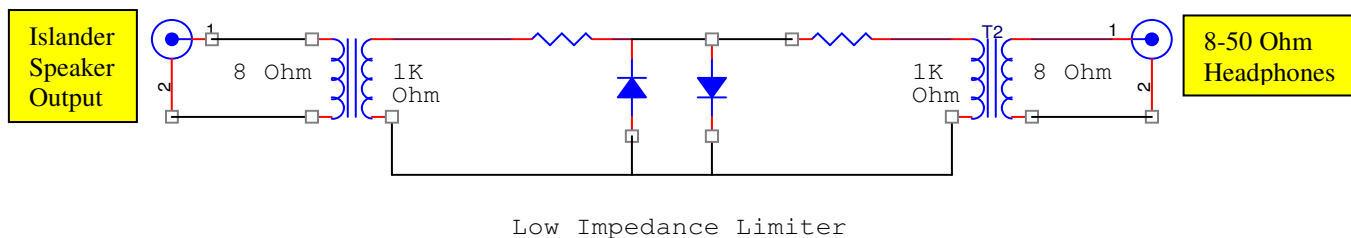
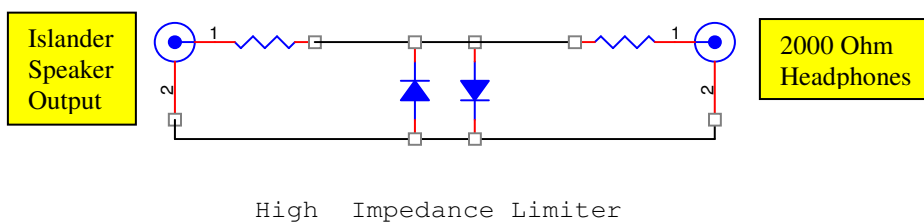


Audio Limiter Circuits For Headphones
Originally Posted On The 2N2xx Yahoo Group
By Bob Johansen WB2SRF with additional
comments by Bob posted here.



Transformers are Radio Shack #273-1380

All Diodes are 1N914 or 1N4148

All Resistors are 1K Ohm 1/4W

Here is an old trick that old time CW Ops have used:

I prefer hard limiting the audio delivered to my headphones for CW reception. Adjust the receiver volume control to a setting below the conduction threshold of the diodes for minimum distortion. If a strong signal is then received, the diodes will conduct and automatically limit the volume. The unit can be built in small mini-box or Altoids tin with the proper mating connectors to use in line with your radio equipment. Two different versions are shown. The high impedance design is for use with high sensitivity 2000-Ohm Headphones these are actually the safest type of headphones to use with low voltage home brew radio equipment because the high impedance tends to limit how much power is applied to your ears! You don't have high impedance phones? No problem, I have included a design for low impedance (8-50 Ohm) phones because these are more common in the world today. Thank you Sony Walkman! Feel free to experiment with the limiter circuit. The component values are not critical; the junk box really comes in handy here; old telephone answering machines or transistor radios are a good source of transformers. You may wish to increase the value of the resistor or put a potentiometer on the headphone side of the circuit to vary or lower the maximum volume delivered to your headphones, a 0.1uF capacitor across the diodes will remove high frequency circuit noise (hissing sound) from getting into your headphones from the radio.

For 600 Ohm mid impedance headphones one transformer can be omitted. Connect the headphones to the side of the circuit where the output transformer primary winding is shown.