

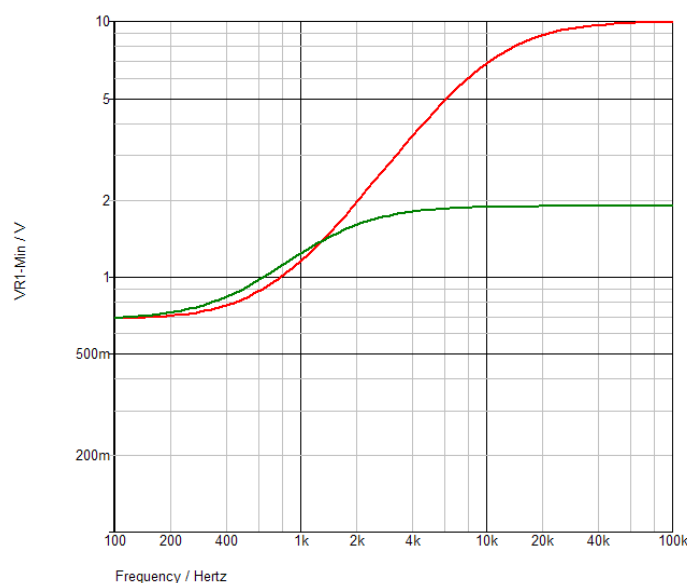
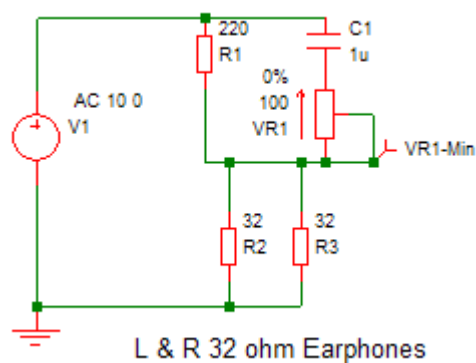
Simple Hearing Aid for Amateur Radio Headphone Listening by Bob Pearson G4FHU

The restricted bandwidth of a single sideband AM receiver adds to difficulties caused by the most common type of high audio frequency hearing loss that many people suffer with advancing years.

Modern hearing aids usually include a very clever circuit that tries to reject any frequencies not in the usual speech sound spectrum. These can work well in many circumstances, but can produce unpleasant artefacts when triggered by a constant pitch tone such as often occurs in SSB reception owing to heterodynes. Some hearing aids allow one to switch off this circuitry (which is usually termed "Noise reduction"), and that's the best thing to do for SSB listening..

Another problem that can reduce the benefit of a hearing aid is caused by echoes if used in a room with few soft coverings. This can be reduced considerably by wearing headphones. It is still possible to use a conventional hearing aid with some types of headphone that completely enclose the ear, but do not always work very well in that situation.

The following is a simple "treble boost" circuit that can be used with headphones to give some worthwhile compensation for typical hearing loss. The 10 V AC signal test source replaces the headphone output from the receiver. The output is connected to both L and R earphones R2, R3.



When the variable VR1 is short circuited, the response curve is the top (red) one.
If this proves satisfactory, VR1 can be omitted.