

# Audio Enhancer

By S. Latham

THIS circuit was originally designed to add a touch of bass to an audio signal when using rather cheap headphones. The circuit could also be used to give a "big speaker sound" to smaller, bookshelf type speakers.

The enhancement section of the circuit consists of IC1a operating as a simple amplifier with variable gain.

The gain of the op-amp, and thus the amount of bass enhancement is controlled by RV1. Rotary switch SW1 selects a number of capacitors which are then connected across R2.

The combination of the resistors and the different value capacitors changes the effective impedance to AC signals and thus provides certain cut-off points at which the op-amp provides gain over the bass frequencies. IC1b is used as voltage follower to supply the next stage. This part of the circuit is optional and may be omitted if required. Its purpose is to provide a degree of rejection at 60Hz, i.e. power hum. The circuit is the familiar Twin T-notch filter type circuit used here

with two op-amps. RV2 is used to adjust the filter for best rejection at or near 60Hz according to personal taste.

For a pair of stereo headphones, two such circuits are required and could easily be built on Veroboard or similar.

