

Anti-Acoustic Feedback System For Group or Disco

G.T. Edwards

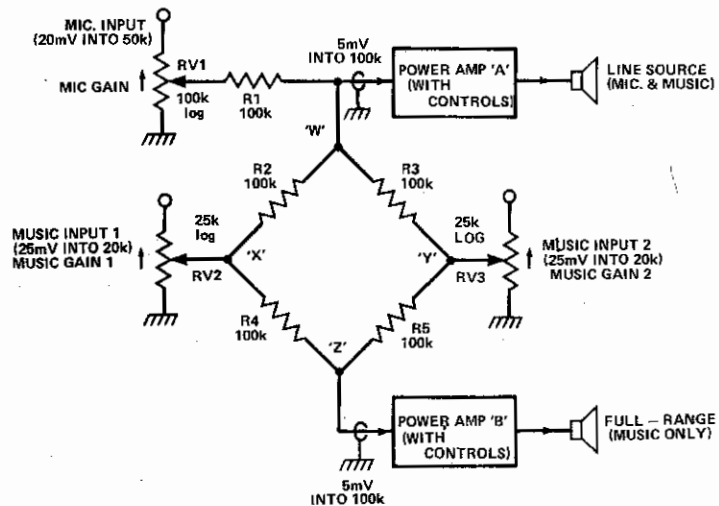
The directional properties of Line-Source Loudspeakers are best for minimising acoustic feedback ("Howl-Round"); unfortunately their bass response is usually inadequate for the full musical range. The ideal system would consist of a completely separated amplifier system for microphone inputs terminating in line-source loudspeakers, the "music" being amplified independently and fed at suitable power levels to less-directional full-range loudspeakers. However, as this is costly and increases transportation problems, a system was evolved in which a full-range non-directional loudspeaker would respond to "music" inputs only, a line-source being used at the same time responding to both "music" and "mic." inputs.

The principle has been proved in practice using the passive network shown in the diagram. As the microphone input is attenuated successively by three potential dividers before reaching the full-range loudspeaker system, the risk of feedback from this speaker is negligible. Typically there is at least 26 dB reduction in microphone signal voltage between the input to amplifier 'A' and the input to amplifier 'B'.

The circuit is easily adapted to other signal levels and impedances by modifying component values on a proportional basis; a more elaborate "active" system is possible using virtual-ground summing amplifier stages.

Simulated stereo is possible from monophonic programme material by connecting a capacitor (about 2n2) between point 'Z' and ground; another capacitor (about 1n0) being connected in series at 'W'.

An inherent advantage of the system is that a "music" output is obtained even if one of the power amplifiers, or one of the loudspeakers, should go faulty during a performance.



Revolutionary!
Sinclair SC110 low power portable Oscilloscope

thandar
 BY
sinclair

*Revolutionary 2" diagonal CRT in a case only 1½" thick and weighing less than 2 pounds!
 *Full-sized performance with 10MHz bandwidth, 10mV per division sensitivity, and triggered sweep. *Runs on "C" cells or AC adapter, making the SC110 ideal for field or bench use. Probes and carrying case available. Suggested net. \$499.00

Call or write for nearest distributor. **audiex ELECTRONICS** 1736 Avenue Rd., Suite B, Toronto Ont. M5M 3Y7 (416) 787-7367.