

ABSTRACT:

Signal combining circuit, signal processing circuit including the signal combining circuit, stereophonic audio reproduction system including the signal processing circuit, and an audio-visual reproduction system including the stereophonic audio reproduction system.

A signal combining circuit (1) has a first input (2) and a second input (3) for receiving signals which have frequencies in the audio frequency spectrum, and an output (4). A signal path between the first input (2) and the output (4) has a first transfer characteristic ($H_1.H_3$). A signal path between the second input (3) and the output (4) has a second transfer characteristic ($H_2.H_3$). The transfer characteristics show discrepancies which cause a phase shift to occur between signal components passed through the first signal path and signal components passed through the second signal path. The amplitude transfer determined by the transfer characteristics decreases above a predetermined frequency. There is a phase difference between phase transfer characteristics which decreases with frequency. For frequencies below said predetermined frequency the amplitude transfer determined by the first transfer characteristic exceeds that determined by the second transfer characteristic. By interconnecting the first input (2) and the second input (3), the amplitude transfer ($(H_1 + H_2).H_3$) between the interconnected inputs and the output as a function of frequency is substantially constant.

The signal combining circuit is used in a stereophonic audio reproduction system to enhance the stereo image, which stereophonic audio reproduction system forms part, for example, of an audio-visual reproduction system.

20 Fig. 1.