

ABSTRACT

A sound reproduction system includes a controller configured to cause a plurality of speakers to reproduce two channels of sound. The controller applies an approximate inverse matrix, which approximates an inverse of a plant matrix representing transfer paths from the plurality of speakers to both ears, to a left recording signal and a right recording signal to cause the plurality of speakers to reproduce sound. The approximate inverse matrix is expressed as a product of a gain correction term that corrects the signal intensity of direct components according to a frequency band, a coefficient correction term that corrects a difference in intensity between the direct components and cross components according to the frequency band, a phase inversion term that inverts the phase of the cross components, and a delay correction term that provides a time difference according to the frequency band of the cross components. The controller has a plurality of circuits that implement the gain correction term, the coefficient correction term, the phase inversion term, and the delay correction term.

Fig.1