



SQ DESCRIPTION

SQ records are produced by combining four channels of program material into two through a matrix encoder. The encoding process shifts the phase of the rear channels 90° and combines them with the front channels in a specified ratio. Mastering and pressing procedures for SQ records are standard, allowing SQ records to be played back with regular stereophonic pick-ups.

The SQ matrix decoder extracts the four signals corresponding to the Left Front, Left Rear, Right Front, and Right Rear channels of the original program. Each input signal to the decoder is amplified, then processed by two phase-shifting networks. Each network shifts the phase of the signal as a function of frequency without affecting frequency response or level of the signal. The characteristics of each network are similar except that the signals at the output of each pair are in quadrature. (The signals applied to the bases of Q204 and Q209 lag 90° behind the signals applied to Q202 and Q207 respectively.) The outputs of the four networks are amplified, then summed at two matrix junctions, and fed to the output terminals through isolating amplifiers.