

In an encoding section (100), a downmix section (110) forms first and second channels (L_1, L_2) of a downmix signal as linear combinations of first and second groups (401,402) of channels, respectively, of an M-channel audio signal; and an analysis section (120) determines upmix parameters (α_{LU}) for parametric reconstruction of the audio signal, and mixing parameters (α_{LM}). In a decoding section (1200), a decorrelating section (1210) outputs a decorrelated signal (D) based on the downmix signal; and a mixing section (1220) determines mixing coefficients based on the mixing parameters or the upmix parameters, and forms a K-channel output signal ($\tilde{L}_1, \dots, \tilde{L}_K$) as a linear combination of the downmix signal and the decorrelated signal in accordance with the mixing coefficients. The channels of the output signal approximate linear combinations of K groups (501-502, 1301-1303) of channels, respectively, of the audio signal. The K groups constitute a different partition of the audio signal than the first and second groups, and $2 \leq K < M$.