

Rapidly changing spectra may lead to performance limitations in adaptive systems for broadband active noise control, especially in multichannel systems. This paper presents techniques to address the negative consequences of two main causes. First, the dynamics of the transfer paths between the noise control sources and the error microphones is compensated for by using a regularized state-space based adaptive filtered-error scheme. Second, for the reference signals a modified adaptive scheme is used, taking into account the nonwhiteness of these signals as well as the correlation between the individual signals. Examples are given for simulated data and for real-time implementations.