

Abstract

The present invention discloses a dual-microphone adaptive filtering algorithm for collecting body sound signals, characterized in that, using at least two microphones, a primary microphone and a secondary microphone, to collect signals; the primary microphone is used to collect noisy body sound signals, and the secondary microphone is used to collect environmental noise; applying a same high-pass filtering to signals collected by the primary microphone and signals collected by the secondary microphone; using a normalized least mean square algorithm on the primary microphone signals and the secondary microphone signals after the high-pass filtering to calculate a weight of the adaptive filter and to calculate an error signal to filter out environmental noise in the primary microphone signals; processing the error signal for a first time by a low-pass filtering to restore the body sound signals, to obtain the body sound signals output by the adaptive filtering algorithm. This algorithm not only may achieve rapid convergence of filter weights, but also avoid signal distortion, and suppress environmental noise interference quickly and reliably.