

Limit-cycle oscillation in noise-shaping D/A converters is one of serious problems because it interrupts their noise-shaping operation. We propose a new noise-shaping structure that prevents limit-cycle oscillation. We have used this structure in an audio D/A converter that we fabricated. The measured result shows that limit-cycle oscillation is prevented and noise-shaping operation is maintained even when the input data is real zero. This D/A converter achieves the S/N+THD of 101 dB.