

CONTINUOUS MODE VELOCITY CONTROL OF VOICE COIL MOTOR

ABSTRACT

A method of controlling the velocity of a voice coil motor (VCM), including sensing a voltage difference between the VCM and a sense resistor and driving a velocity control loop (VCL) based on the voltage difference. There is also a control loop circuit, including a current output connected to drive a voice coil motor, the voice coil motor producing a back electromagnetic field (BEMF) voltage. The circuit also includes a sense resistor connected to the BEMF output, and a BEMF resistive network comprising a first resistor and a second resistor. The circuit also includes a velocity control loop (VCL) connected to control the voltage output according to a voltage difference between (i) a junction of the sense resistor and the current output and (ii) a junction of the first resistor and the second resistor.

FIG. 1