

Appendix B

Design of the voltage to current amplifier to drive inductive micro-actuators

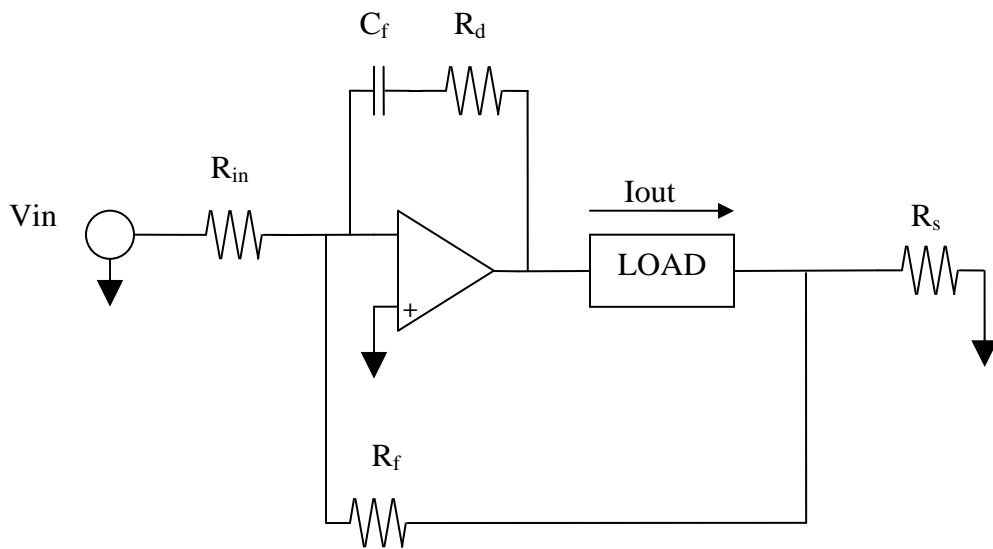


Figure B.1: A schematic of the voltage to current amplifier used to drive the voice coil in the characterization system and inductive micro-actuators.

The voltage to current amplifier was designed to have a gain of 0.4 A/V and a bandwidth of DC to 10 kHz. The output of the amplifier is given by the following equation:

$$I_o = \frac{-R_f}{R_s R_{in}} V_{in} \quad (\text{B.1})$$