

Appendix D

Circuit diagrams

In this chapter, some circuit drawings used in the present work are shown.

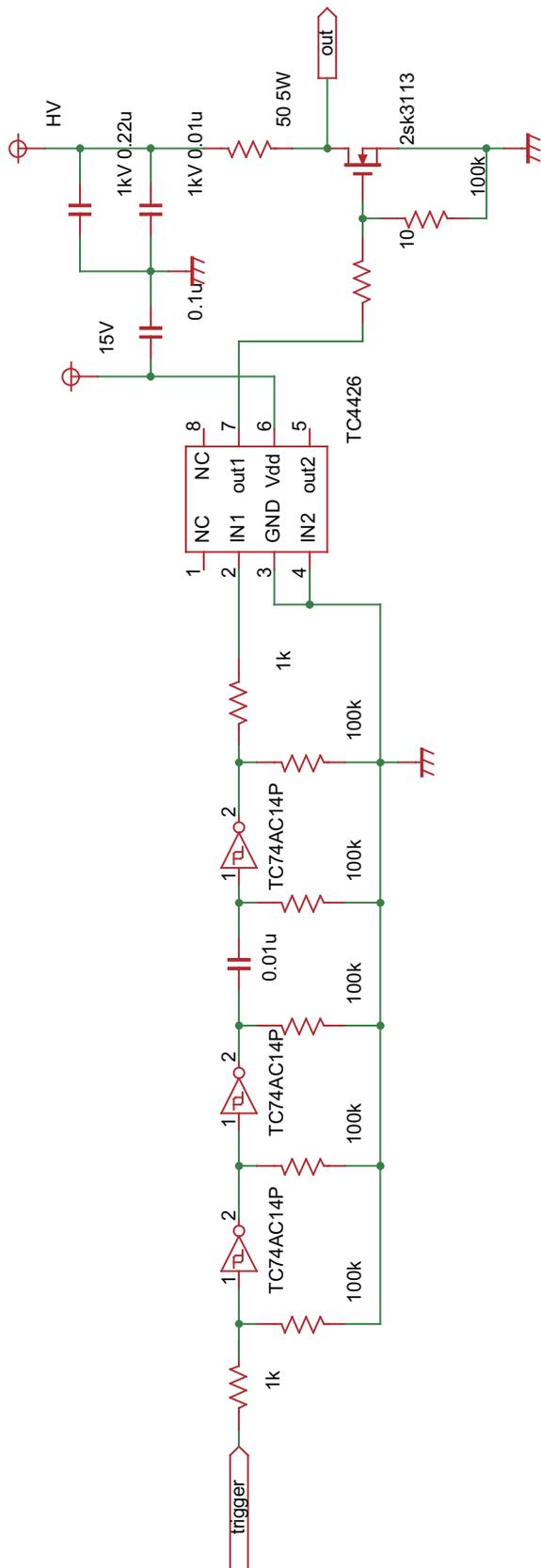


Figure D.1: A circuit drawing of the high voltage switch used to extract and capture positrons (HV switch 1 and HV switch 3).

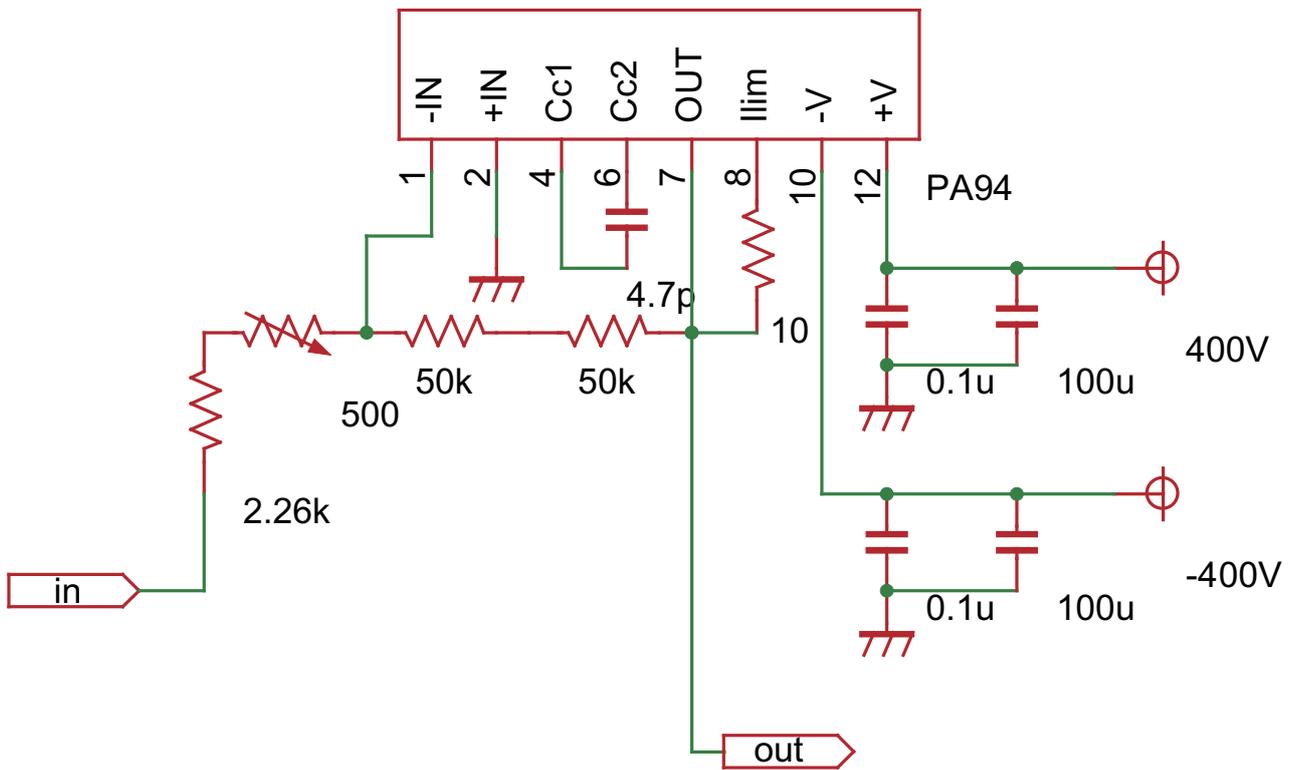


Figure D.3: A circuit drawing of the power amplifier used to control the voltage applied to the MRE of the cusp trap (cusp power amp).

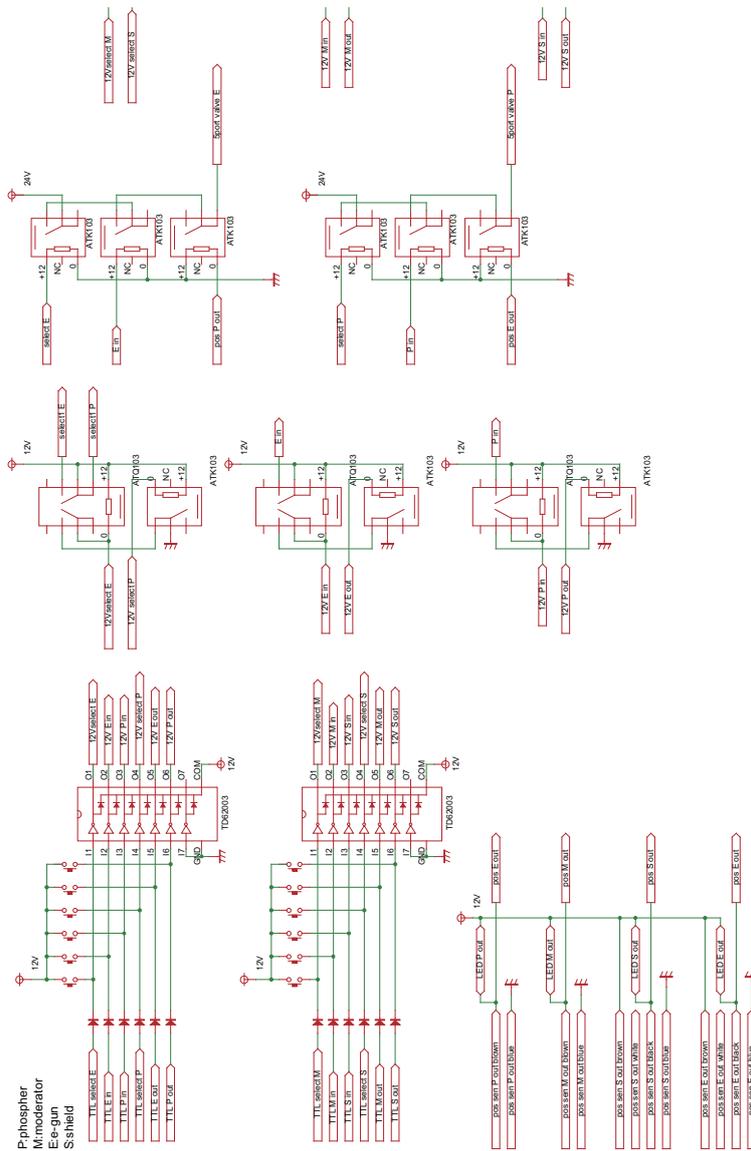


Figure D.4: A circuit drawing of the controller of the compressed air used in the positron accumulator.

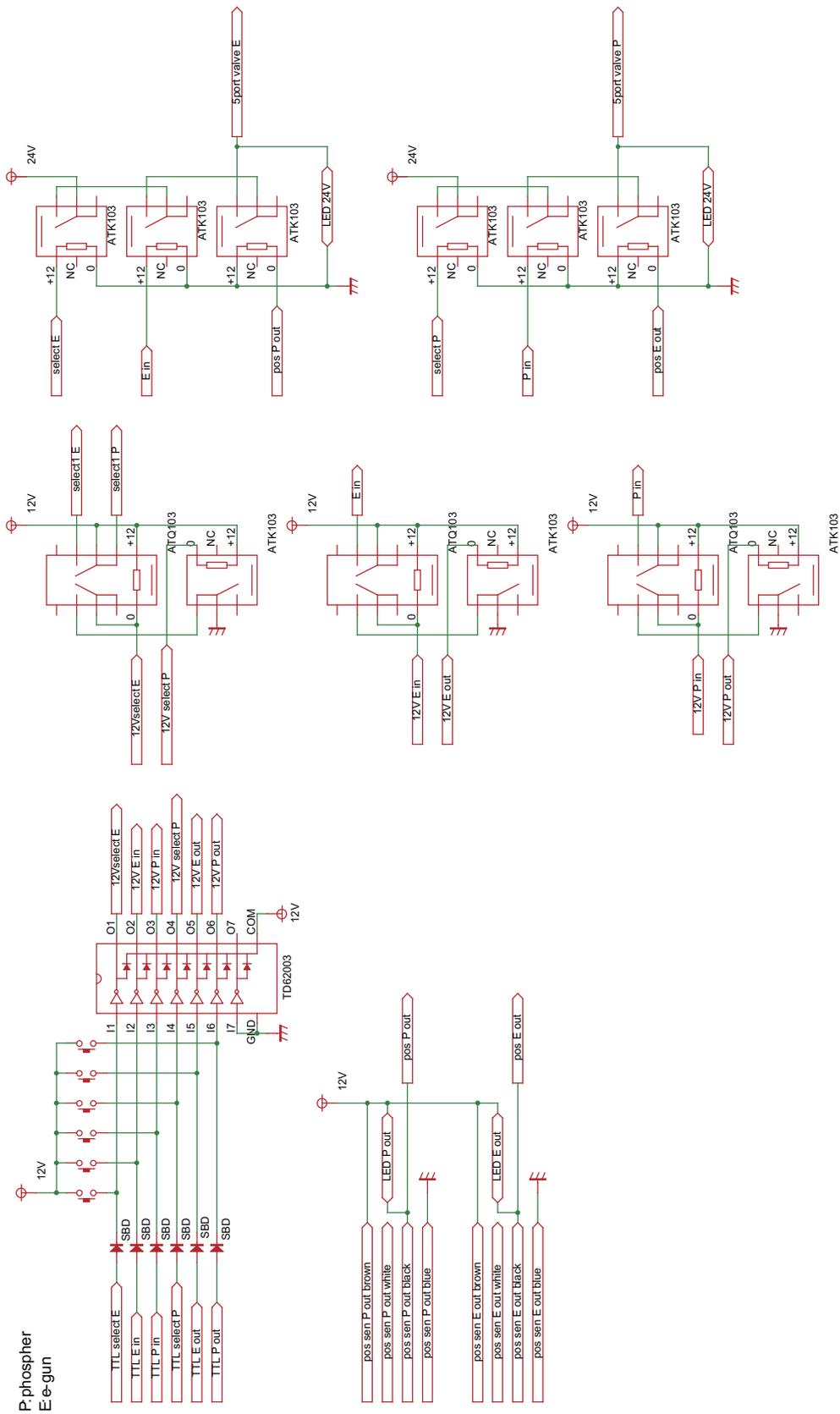


Figure D.5: A circuit drawing of the controller of the compressed air used in the cusp trap (for the electron gun and the MCPPPS detector).

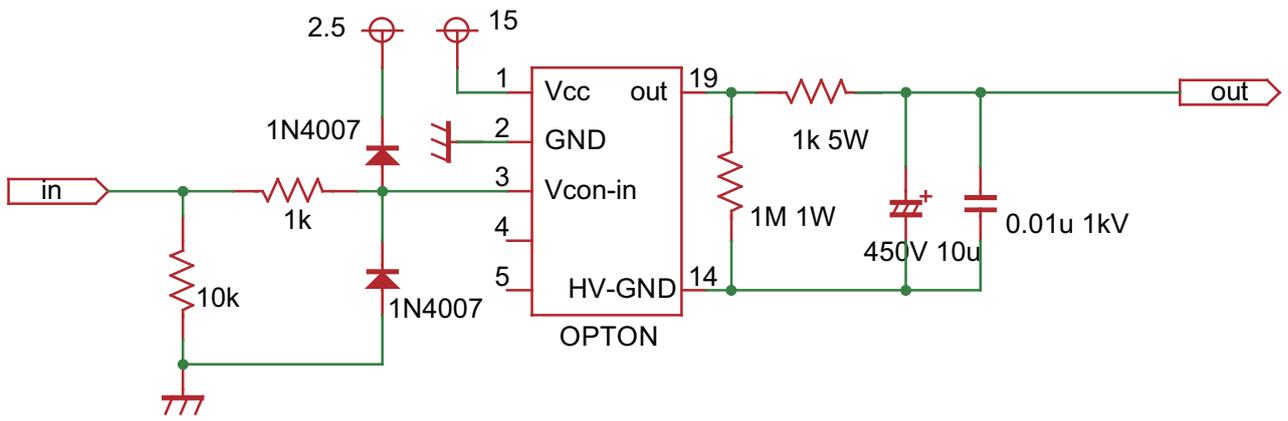


Figure D.6: A circuit drawing of the power amplifier used to control the voltage applied to the MRE of the positron accumulator (OPTON-1PC).

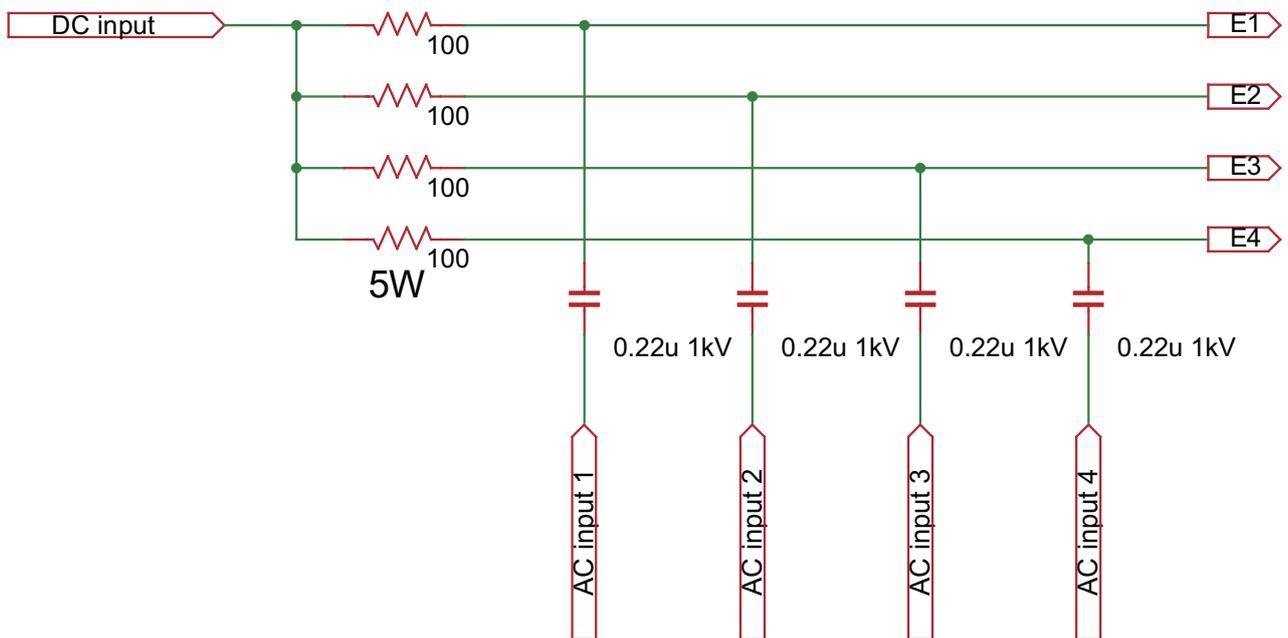


Figure D.7: A circuit drawing of the RC mixer used to mix the signals from function generator (NF, WF1974) with the DC voltage (RC mix 2).

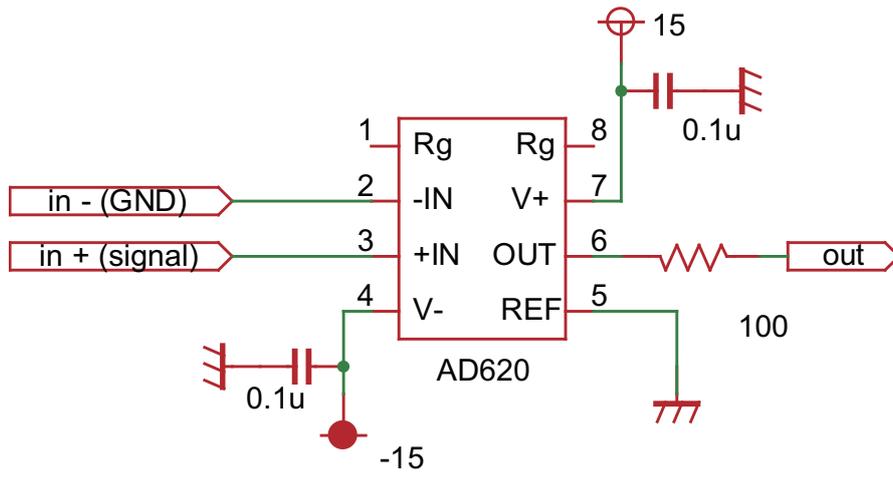


Figure D.8: A circuit drawing of the instrumentation amplifier used in the cusp trap

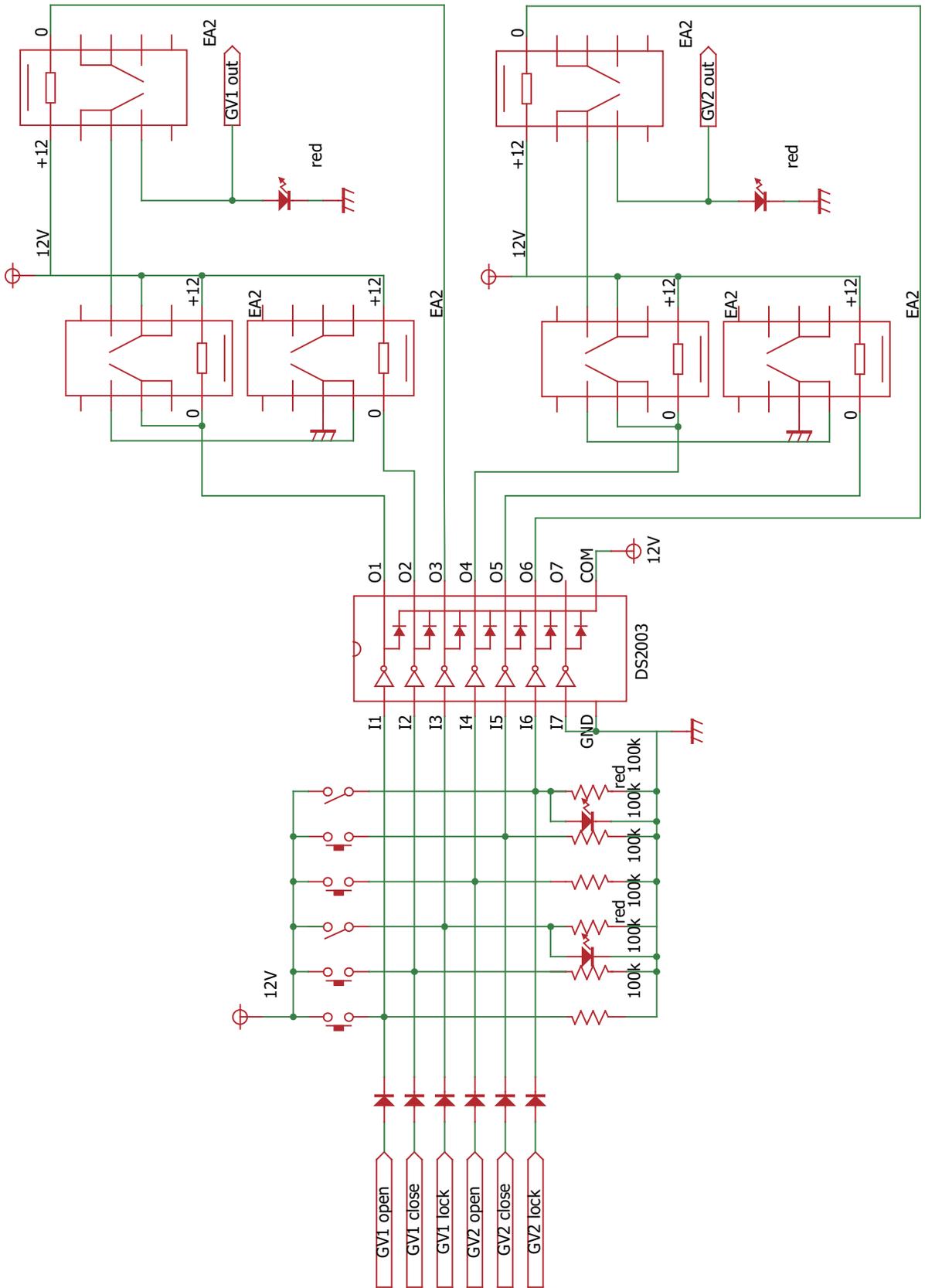


Figure D.9: A circuit drawing of the vacuum valve controller.

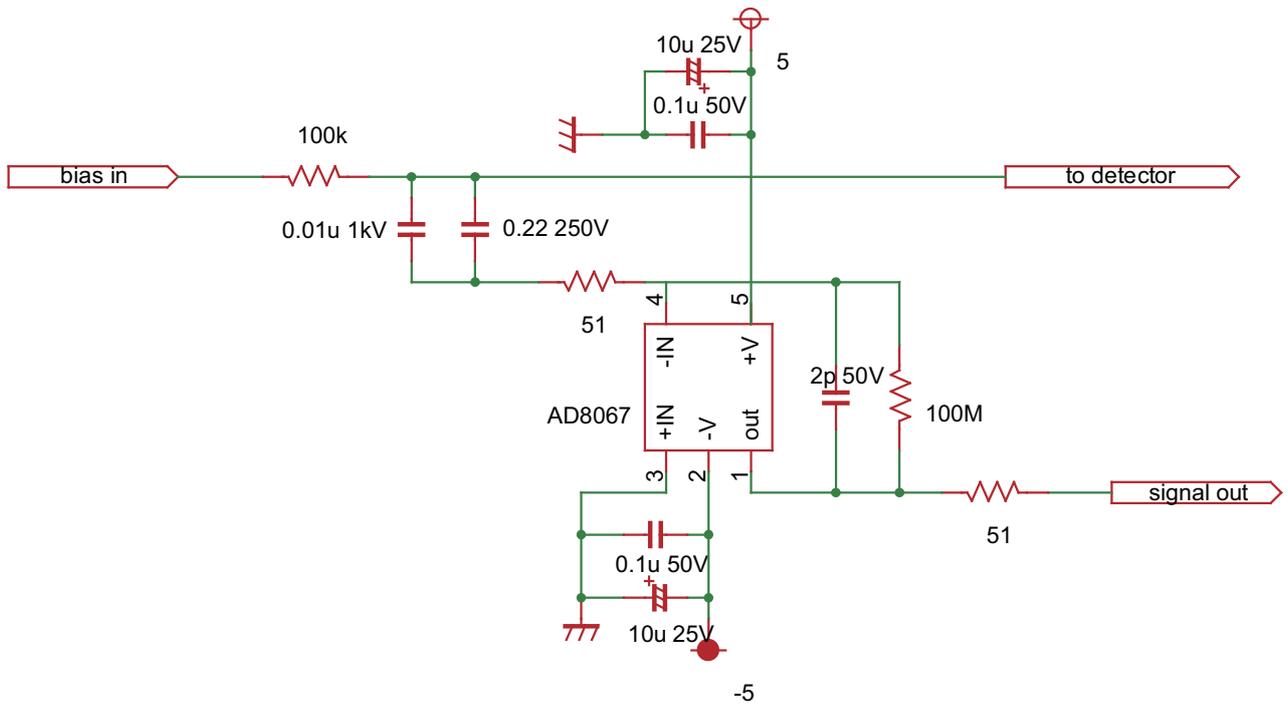


Figure D.11: A circuit drawing of the charge amplifier used to measure the number of positrons.

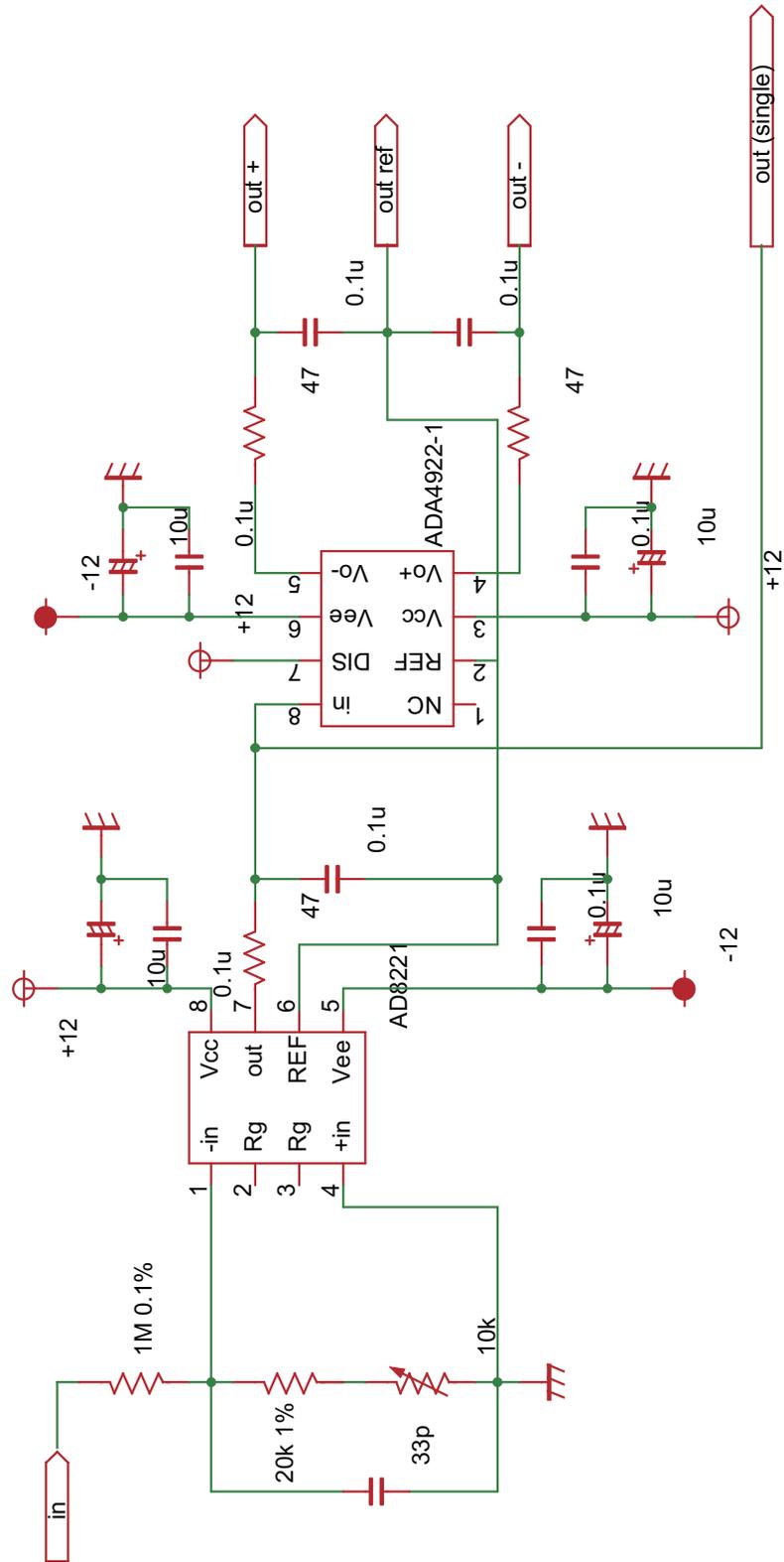


Figure D.12: A circuit drawing of the buffer amplifier used to drive ADC of the PXI express DAQ module (PXIE-6224) (Buffer amp 1).

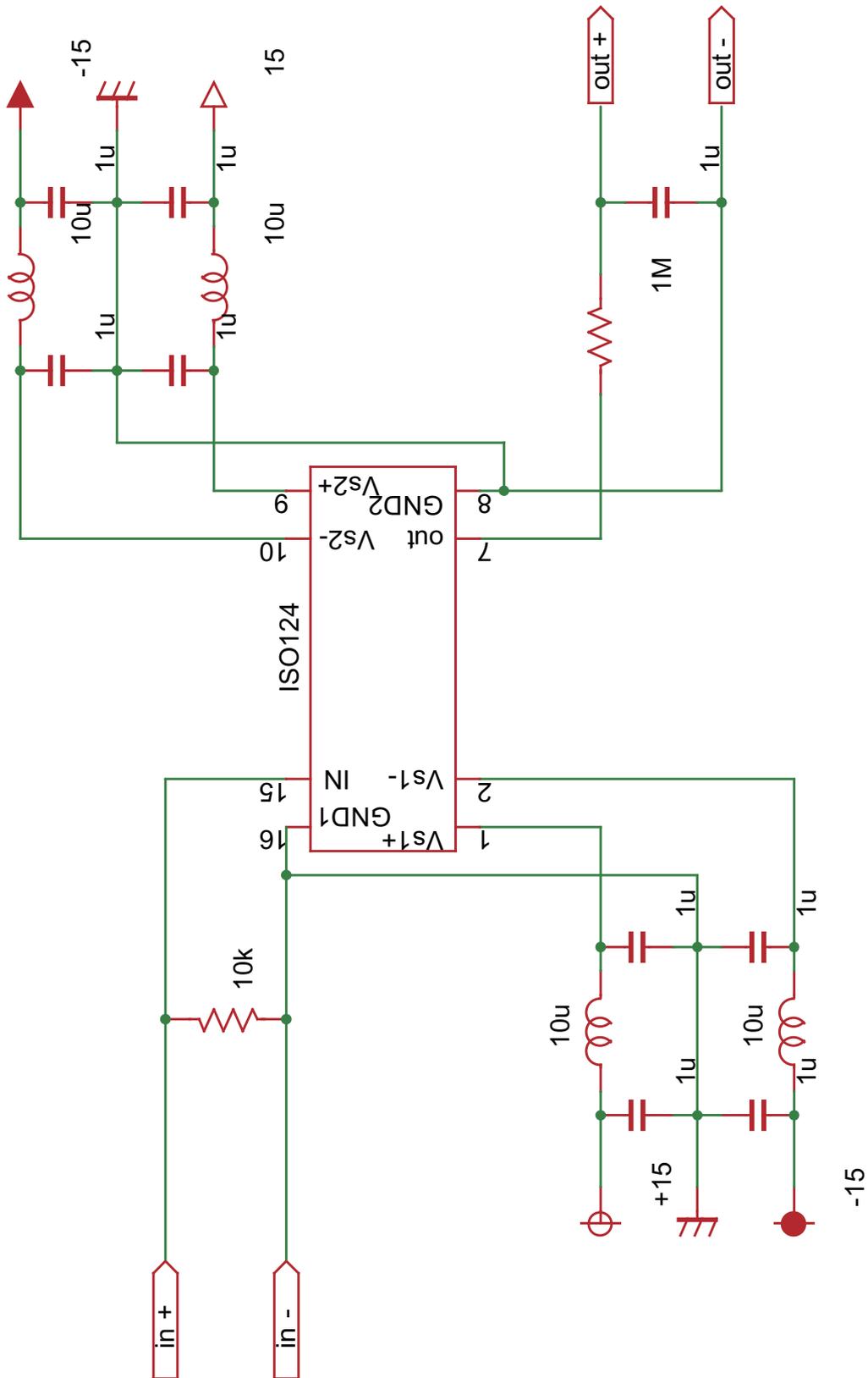


Figure D.14: A circuit drawing of the isolation amplifier between the DAC and DC power supplies (isolation amp 1).

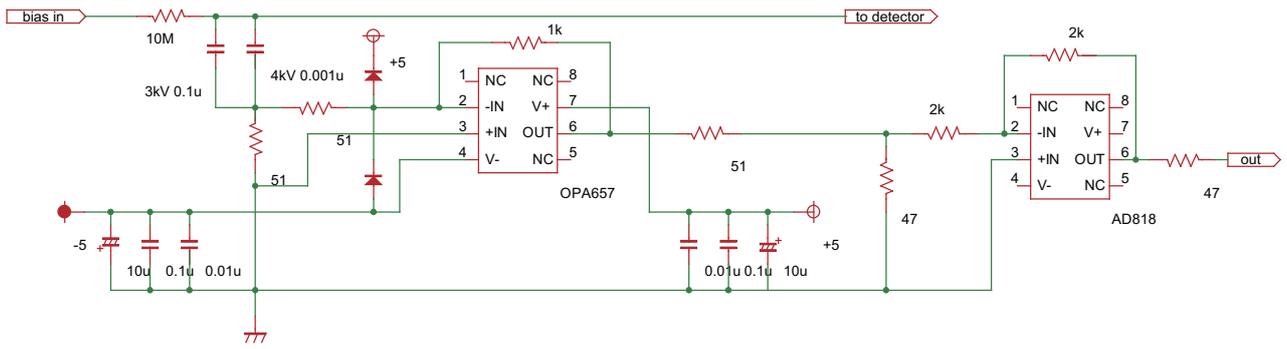


Figure D.16: A circuit drawing of the fast voltage amplifier used to count the number of positrons (pre amp 1).

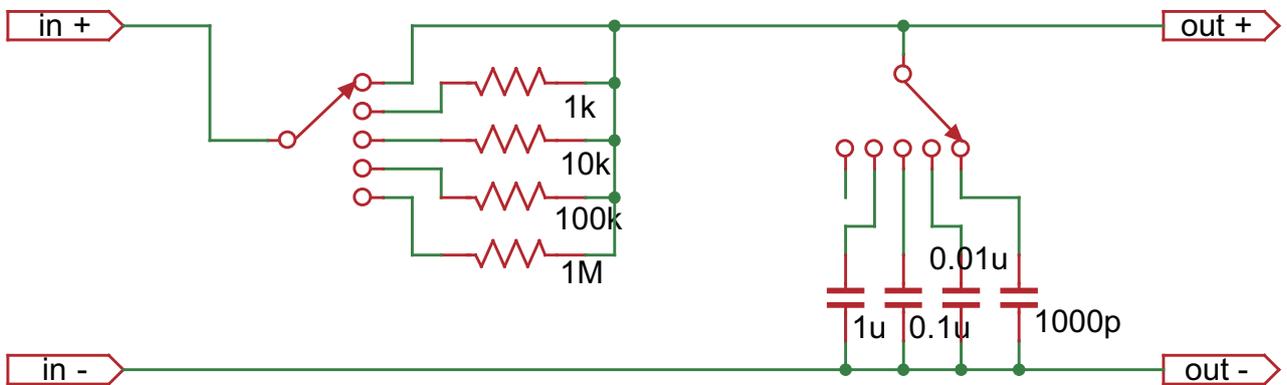


Figure D.17: A circuit drawing of the variable constant RC row pass filter used in the cusp trap voltage control system (RC LPF 1).

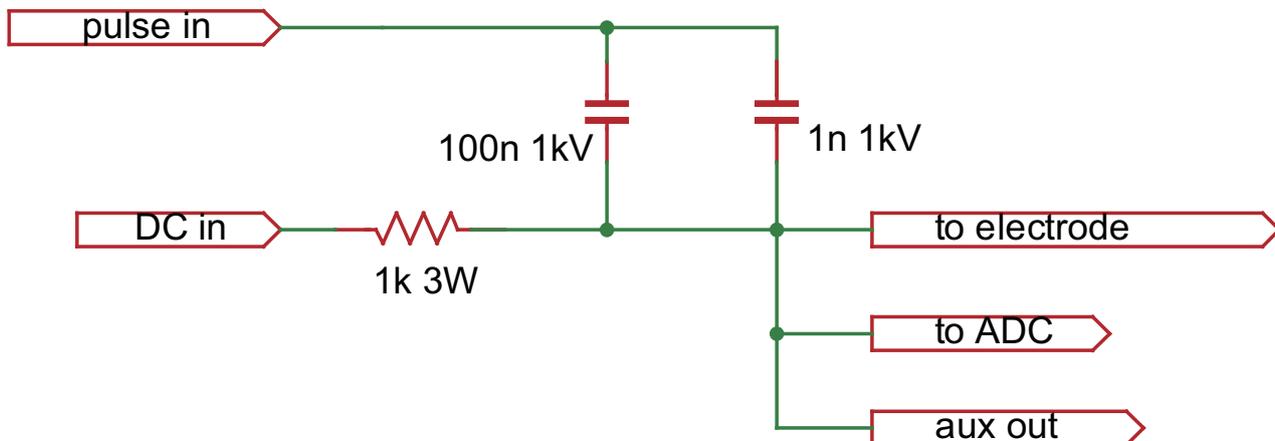


Figure D.18: A circuit drawing of the RC mixer used to superimpose pulses signal on the DC voltage used in the cusp trap (RC mix 1).

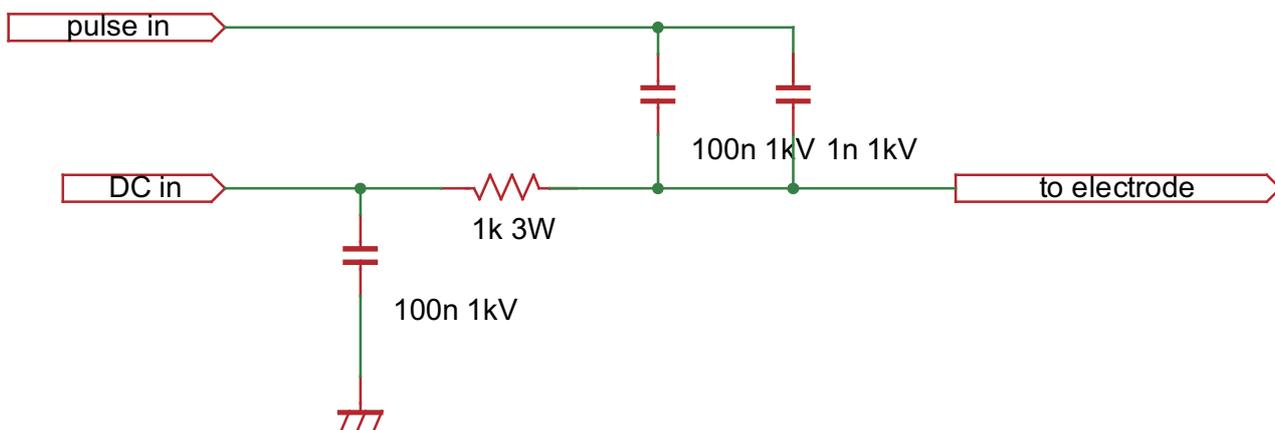


Figure D.19: A circuit drawing of the RC mixer used to superimpose pulses signal on the DC voltage used in the positron accumulator (RC mix 2).

