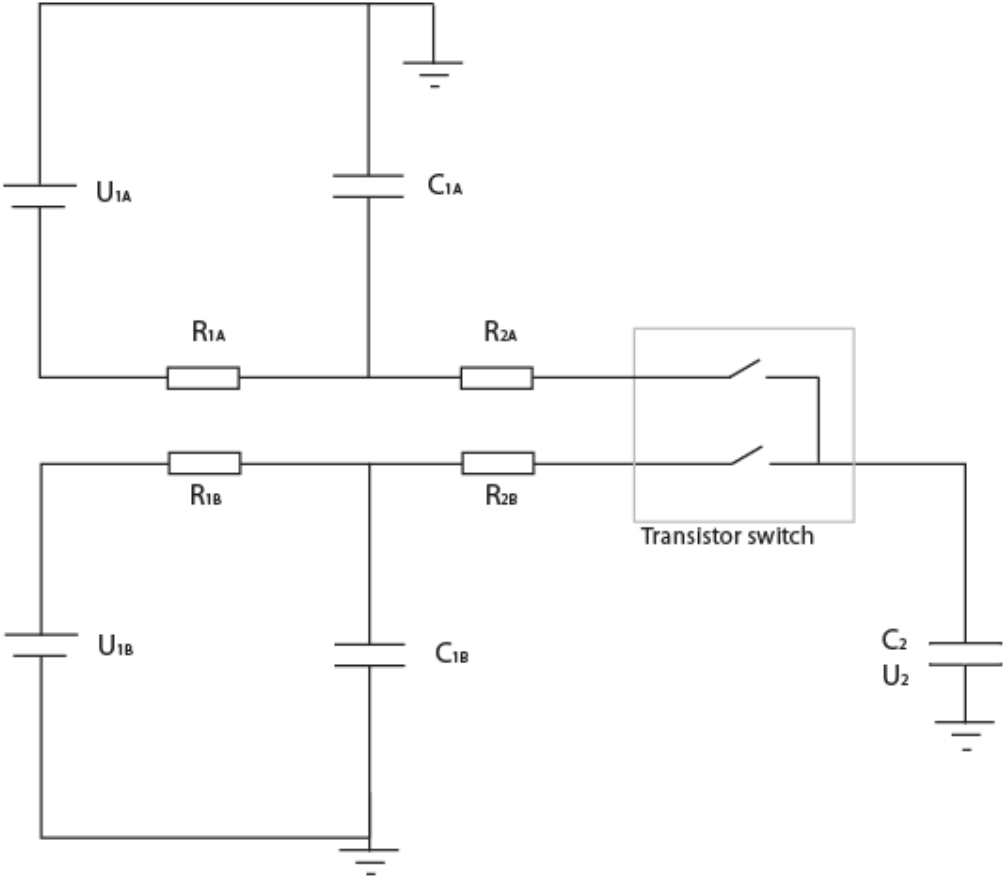


High voltage Switch

Specifications:

- Voltage: +/- 30 kV
- Frequenzy: 1 kHz
- Wave shape: DC

Circuit diagram:



Application:

Pulses that we want to generate:

- single square pulse with or without DC bias
- rapid square pulse train (with or without bias).

With such a generator, it will be possible to perform high voltage impulse testing with or without DC bias as well as simulation of switchmode power supply circuits.

$U_{1A} = U_{1B} = +/- 30kV$ (might be replaced with voltage sources with a higher voltage later) charging up

The voltage sources will charge the capacitors C_{1A} and C_{1B} . The voltage drop is limited to max 10% during switching. There is also a resistance R_2 in series with the C_2 (U_2).

The circuit above will be put into a steel box with a safe distance to earth for highest planned voltages and for personal safety reasons.