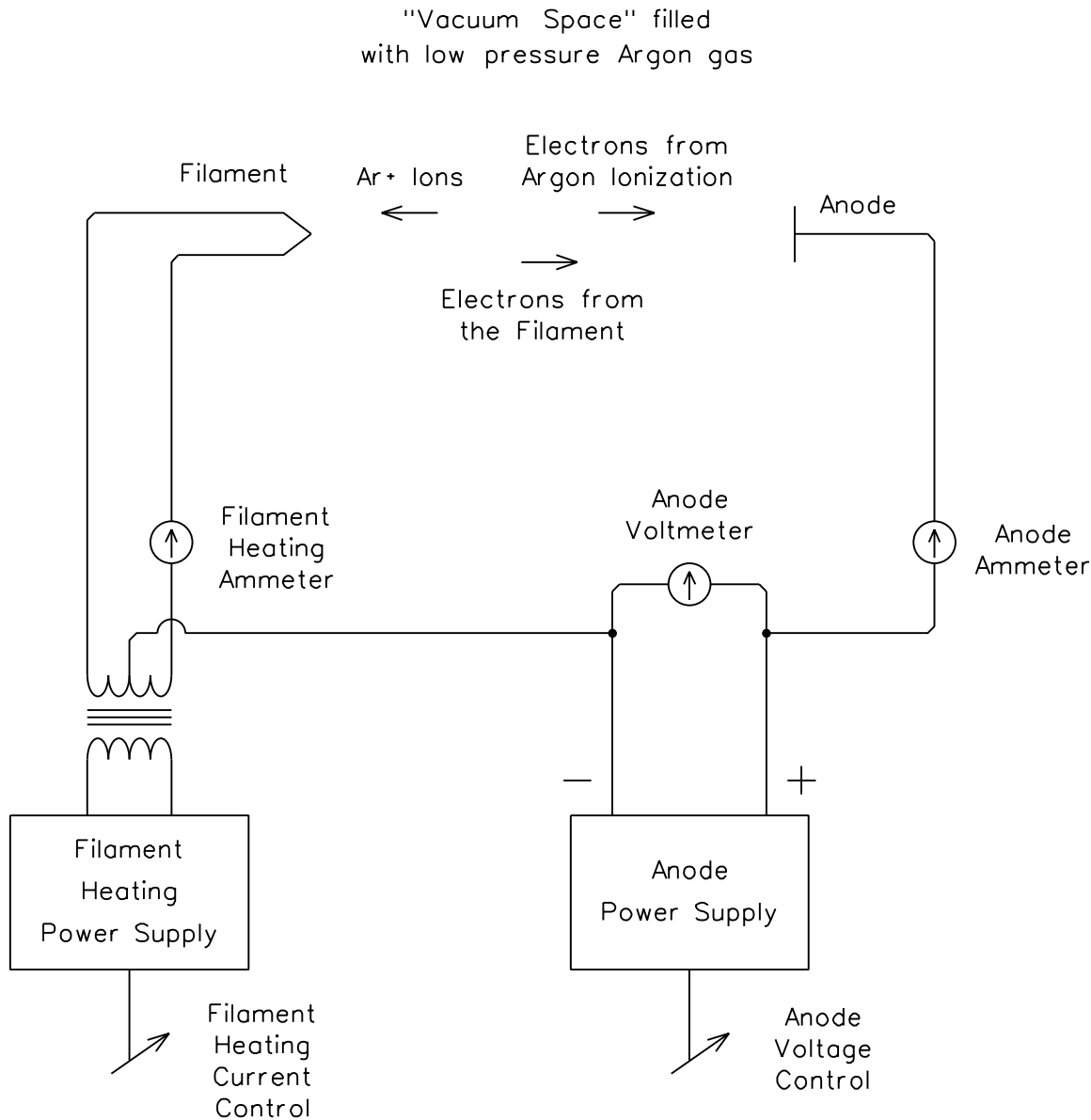


Sputtering Gun & Its Power Supplies Step #2



Gas Filled Diode or Gas Filled Rectifier

By the time that the electrons emitted by the filament are only a short distance out away from the filament they have gained enough energy to ionize an Argon atom. The resulting Ar⁺ ions move towards the Filament while the electrons from this ionization move towards the Anode.

The Ar⁺ ions near the filament mostly cancel the repulsive effect of the space charge near the filament on the electrons that are trying to leave the filament.

The I-V curve is basically a flat voltage drop of about 10 Volts at up to a few 10s of Amps forward current.