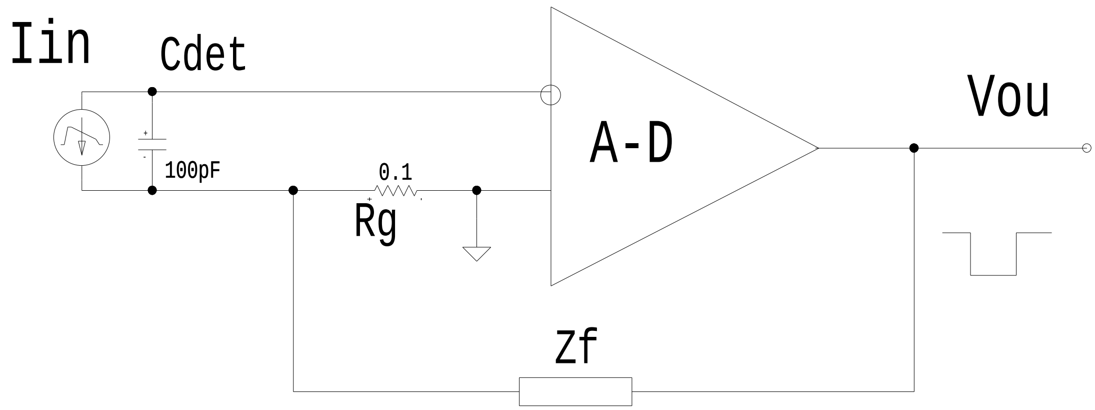
Simplified diagram of the chip internal feedback



$$Qfb = Vou * \frac{Rg * Cdet}{Zfb + Rg} n = Vou \frac{Cdet}{1 + Zfb/Rg} n$$

Qfb - fraction of output signal goes to the input of the amplifier

Vou - unballansed fraction of output pulse

Cdet - capacitance of the detector and input network

Zfb - Composite feedback impedance

Rg - ground wire resistance

Iin - model of the chamber signal source

n - number of channels integrated in one chip

If Vou = 100mV, Cdet=150pF, n=16 and Qfb = 60fQ - oscillation level,

we can estimate Zfb/Rg ratio - output / input isolation factor:

$$Zfb/Rg = Vou * Cdet/Qfb * n =$$

$$=100mv*16*150pF/60fQ = 4000$$