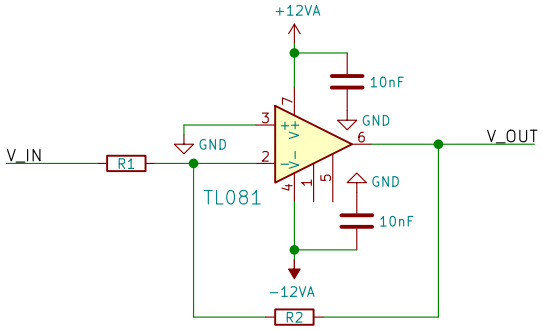
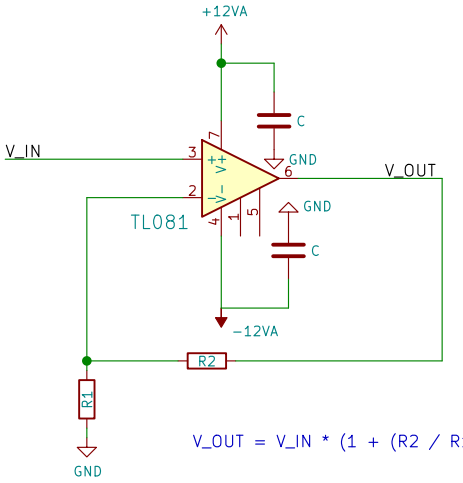
Inverting amplifier



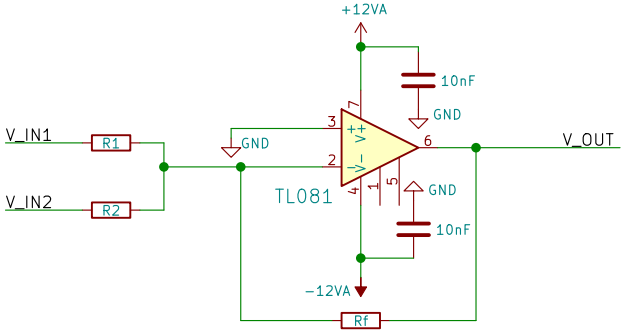
V_OUT = − V_IN * (R2 / R1)

non−inverting amplifier



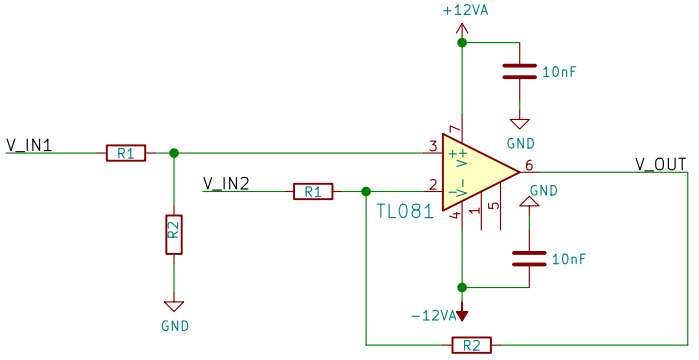
V_OUT = V_IN * (1 + (R2 / R1))

summing amplifier



V_OUT = − Rf * (V_IN1 / R1 + V_IN2 / R2)

difference amplifier



V_OUT = − (R1 / R2) * (V_IN2 − V_IN1)

Dan Weatherill
Oxhack

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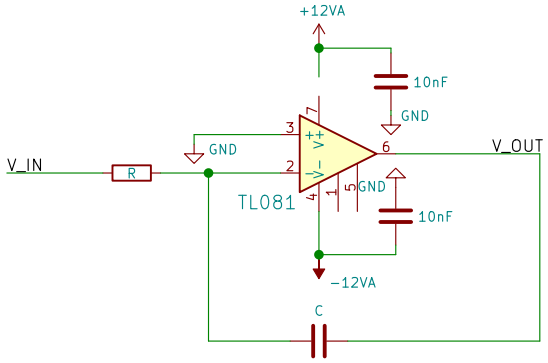
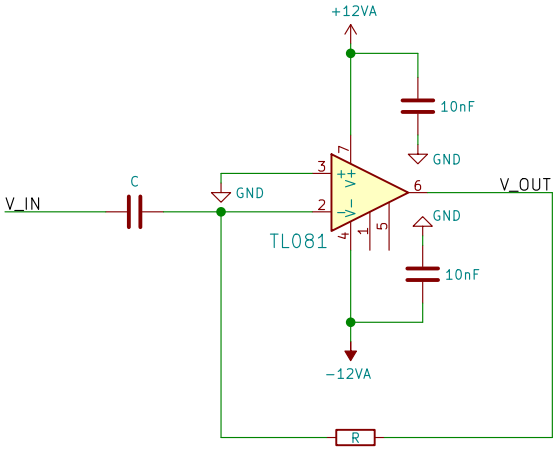
Integrating amplifier



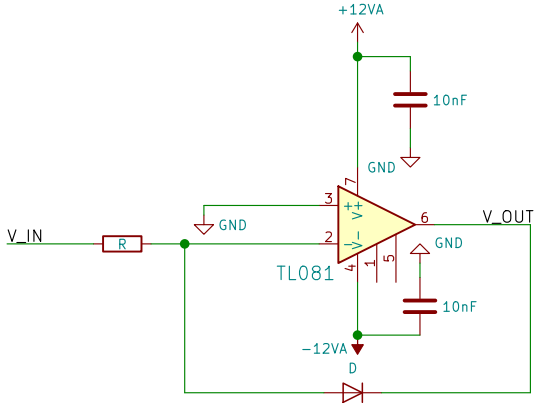
V_OUT = − 1/(RC) * INT(V_IN)dt

differentiating amplifier



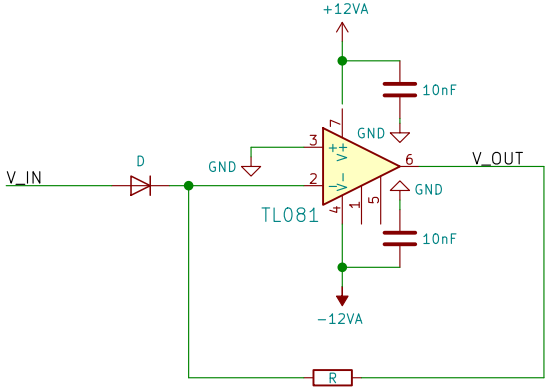
V_OUT = − RC * d(V_IN)/dt

logarithm amplifier



V_OUT = −Vt * ln(V_IN / (Is * R))

exponential amplifier



V_OUT = − R * Is * exp(V_IN / Vt)

at room temperature, Vt = 25.8 mV

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