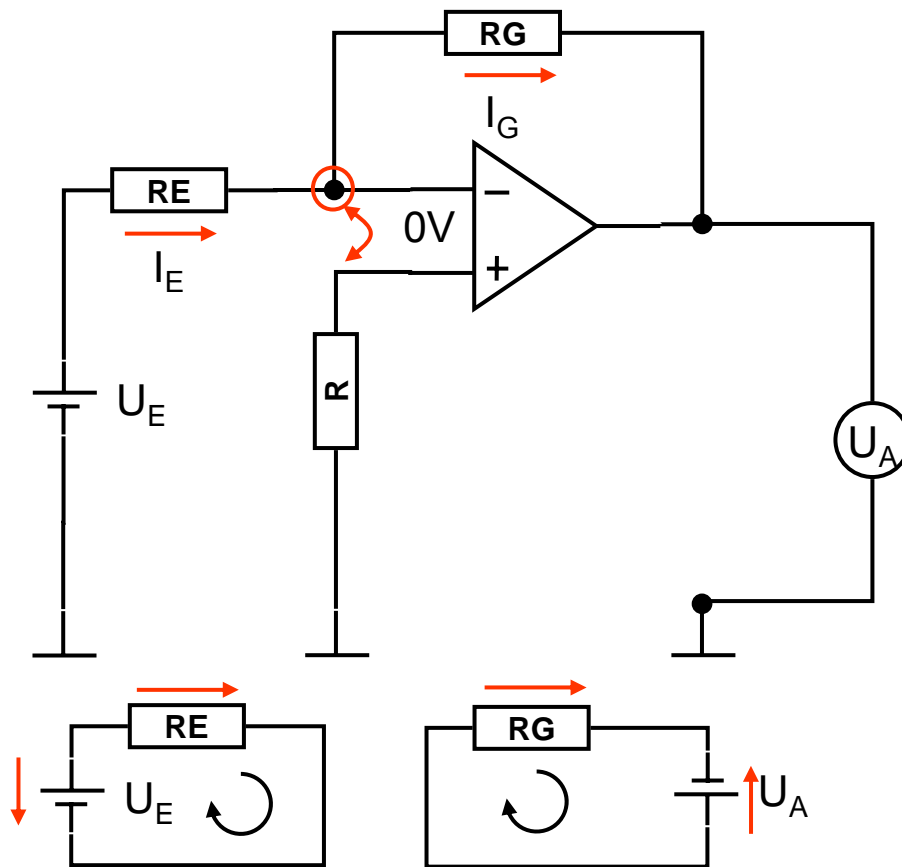


Operationsverstärkerschaltungen

Invertierender Verstärker



$$U_A = -U_E \cdot \frac{R_G}{R_E}$$

$$R = R_E$$

Herleitung:

$$0 = +I_E - I_G$$

$$I_E = I_G$$

$$0 = -U_E + I_E \cdot R_E$$

$$U_E = I_E \cdot R_E$$

$$0 = +U_A + I_G \cdot R_G$$

$$U_A = -I_G \cdot R_G$$

$$V_U = \frac{U_A}{U_E} = \frac{-I_G \cdot R_G}{I_E \cdot R_E} = -\frac{R_G}{R_E}$$

$$V_U = \frac{U_A}{U_E} = -\frac{R_G}{R_E}$$

$$U_A = -\frac{R_G}{R_E} \cdot U_E$$