

Non-inverting Operational Amplifier

Student Group

First Name	Surname	Matrikel Nr.

Table of Contents

Non-inverting Operational Amplifier	2
Op-Amp as current source	2

Non-inverting Operational Amplifier

Op-Amp as current source

An Op-Amp can not only amplify voltages and currents, it can also act as a current source itself. Here is the schematic of a typical Op-Amp current source:

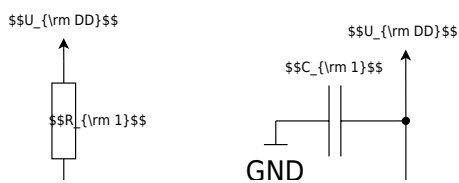


Fig. 1: Non-inverting Op-Amp: current source

$U_{DD} \approx 10\text{V}$, $U_{SS} \approx -10\text{V}$, $R_1 \approx 100\text{k}\Omega$, $R_2 \approx 10\text{k}\Omega$, $R_3 \approx 100\Omega$, $D_1 \approx 100\text{nF}$, $D_2 \approx 100\text{nF}$

Measure the values given in the table below.

Potentiometer	U_{R2}	U_{R3}	I_{OUT}	U_{OUT}	I_{OUT}	U_{OUT}
0%						
50%		...				

Tab. 1: Op-Amp as current source: measured and calculated values

Why does the current remain constant at the output of the Op-Amp?
Give a brief explanation of the circuit's operating principle.

- $\{\text{rm}\}$
- $\{\text{rm}\}$
- $\{\text{rm}\}$
- $\{\text{rm}\}$
- $\{\text{rm}\}$
- $\{\text{rm}\}$
- $\{\text{rm}\}$
- $\{\text{rm}\}$
- $\{\text{rm}\}$

$\{\rm \dots\}$

$\{\rm \dots\}$

$\{\rm \dots\}$

$\{\rm \dots\}$

$\{\rm \dots\}$

$\{\rm \dots\}$

From:
<https://first.mexle.te.hs-heilbronn.de/> - MEXLE Wiki

Permanent link:
https://first.mexle.te.hs-heilbronn.de/lab05_en/non_inverting_op-amp_current_source?rev=1777968178

Last update: **2026/05/05 10:02**

