

# 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

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

Measure the values given in the table below.

Potentiometer	$U_{R2}$	$U_{R3}$	$I_{OUT}$	$U_{OUT}$	$I_{OUT}$	$U_{OUT}$	$I_{OUT}$	$U_{OUT}$
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.

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

$\{\rm \dots\dots\dots\}$

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

Permanent link:  
[https://mexle.te.hs-heilbronn.de/lab05\\_en/non\\_inverting\\_op\\_amp\\_current\\_source?rev=1777377598](https://mexle.te.hs-heilbronn.de/lab05_en/non_inverting_op_amp_current_source?rev=1777377598)

Last update: **2026/04/28 13:59**

