

# Display of periodic signals on the oscilloscope

## Student Group

First Name	Surname	Matrikel Nr.

## Table of Contents

Display of periodic signals on the oscilloscope .....	2
---	---

## Display of periodic signals on the oscilloscope

Build the following circuit in [figure 1](#) with the function generator and the oscilloscope.

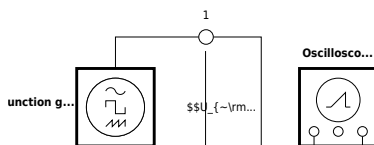


Fig. 1: Periodic signals on the oscilloscope

Set the signals listed in [table 1](#) on the function generator and draw the corresponding oscilloscope screen images. The signal display on the oscilloscope should optimally fill the screen

Signal shape	Frequency	Amplitude
Sine	1.0 kHz	1.8 V
Triangle	4.0 kHz	3.0 V
Square (unipo...	2.0 kHz	5.0 V
Square (bipol...	5.0 kHz	2.0 V
Sine...	2.5 kHz	4.0 V...

Text is not SVG - cannot display

Tab. 1: Signals

Also document the settings of the used channels, the time base, and the GND line on the left side of the screen drawings.



Fig. 2: Sine,  $f = 1 \text{ kHz}$ ,  $U = 1.8 \text{ V}$

Channel 1:  $\frac{V}{\text{DIV}} = \$$

Time basis:  $\frac{T}{\text{DIV}} = \$$

---

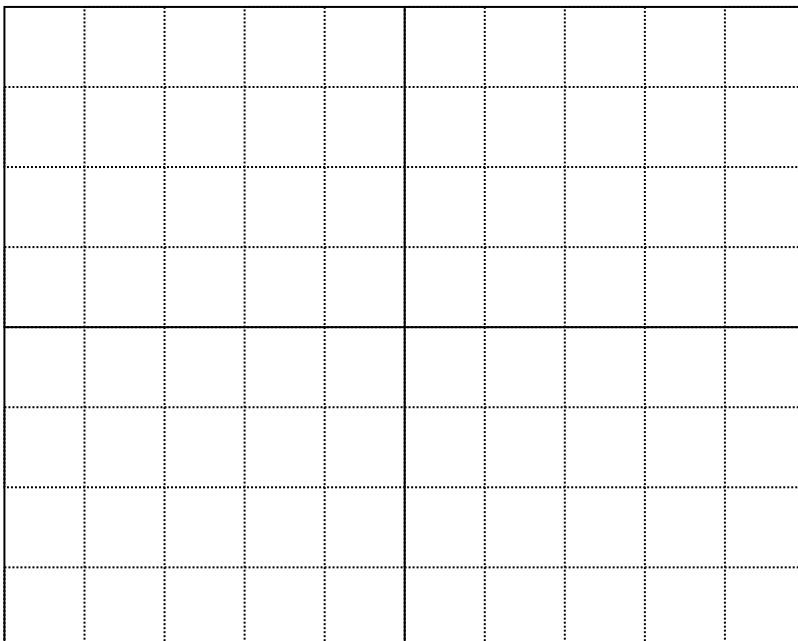


Fig. 3: Triangle,  $f = 4 \text{ kHz}$ ,  $U = 3 \text{ V}$

Channel 1:  $\frac{V}{\text{DIV}} = \$$

Time basis:  $\frac{T}{\text{DIV}} = \$$

---



Fig. 4: Rectangle, unipolar,  $f = 2 \text{ kHz}$ ,  $U = 5 \text{ V}$  Channel 1:  $\frac{V}{\text{DIV}} = \$$

Time basis:  $\frac{T}{\text{DIV}} = \$$

---

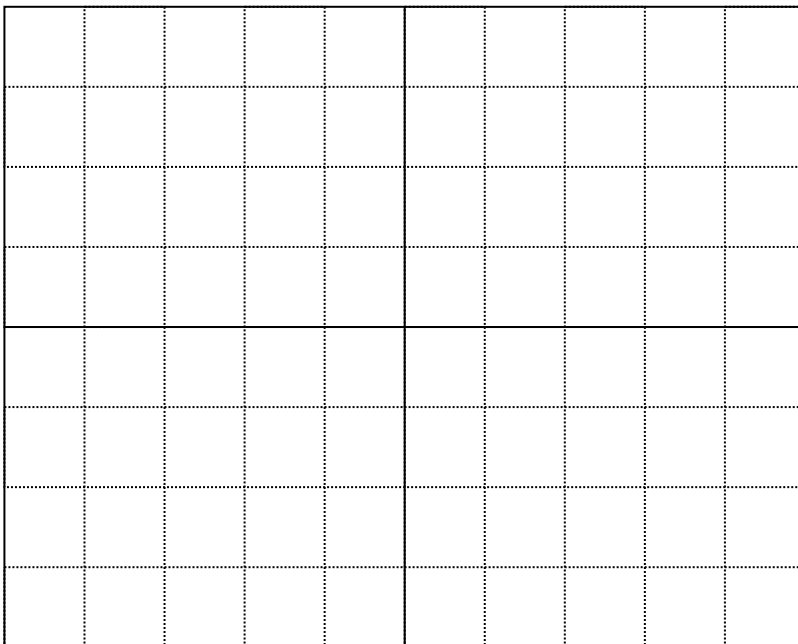


Fig. 5: Rectangle, bipolar,  $f = 5 \text{ kHz}$ ,  $U = 2 \text{ V}$

Channel 1:  $\frac{V}{\text{DIV}} = \$$

Time basis:  $\frac{T}{\text{DIV}} =$  \$

---

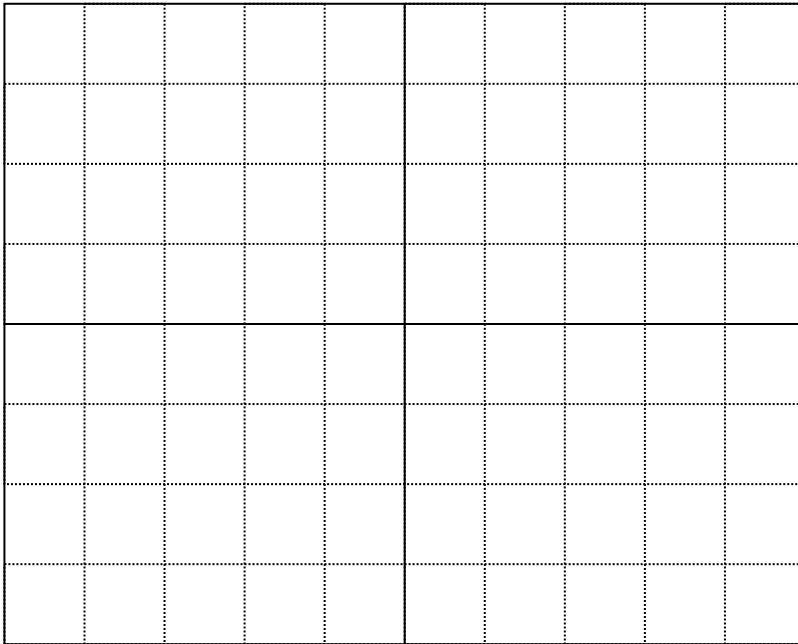


Fig. 6: Sine DC Offset,  $f = 2.5 \text{ kHz}$ ,  $U = 4 \text{ V}$ ,  $UDC = 2 \text{ V}$

Channel 1:  $\frac{V}{\text{DIV}} =$  \$

Time basis:  $\frac{T}{\text{DIV}} =$  \$

---

From:

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

Permanent link:

[https://mexle.te.hs-heilbronn.de/lab\\_electrical\\_engineering/2\\_capacitors/periodic-signals-on-scope?rev=1774129537](https://mexle.te.hs-heilbronn.de/lab_electrical_engineering/2_capacitors/periodic-signals-on-scope?rev=1774129537)

Last update: **2026/03/21 22:45**

