

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.

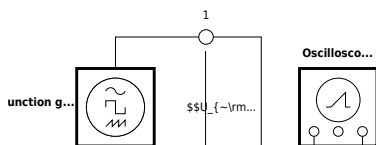


Fig. 1: Periodic signals on the oscilloscope

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...

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.

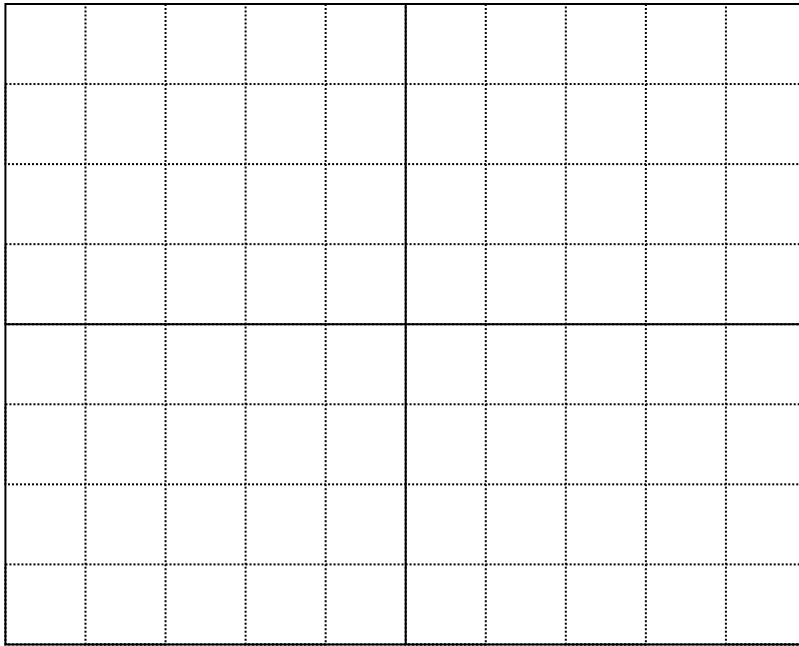


Fig. 2: Sine, $f = 1 \text{ kHz}$, $U = 1.8\text{V}$

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

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

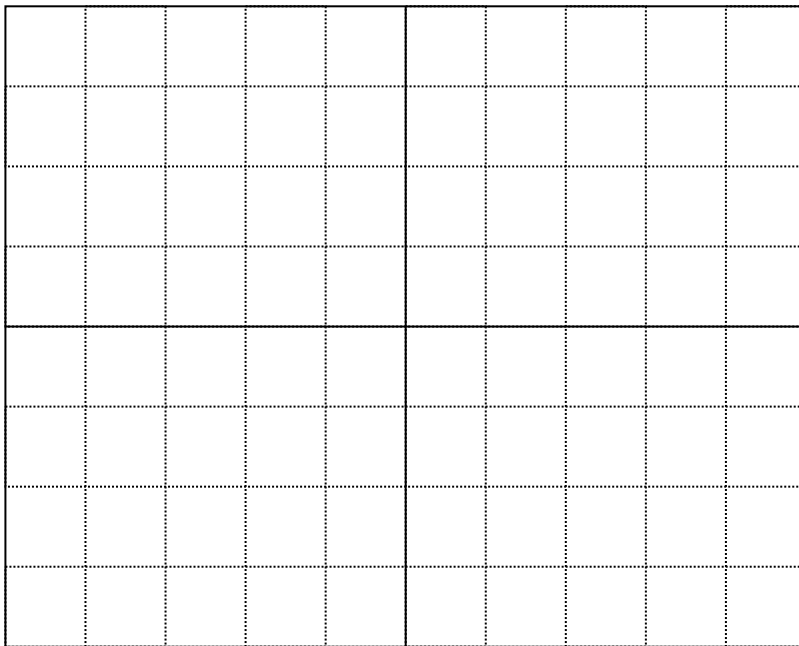


Fig. 3: Triangle, $f = 4 \text{ kHz}$, $U = 3 \text{ V}$

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

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

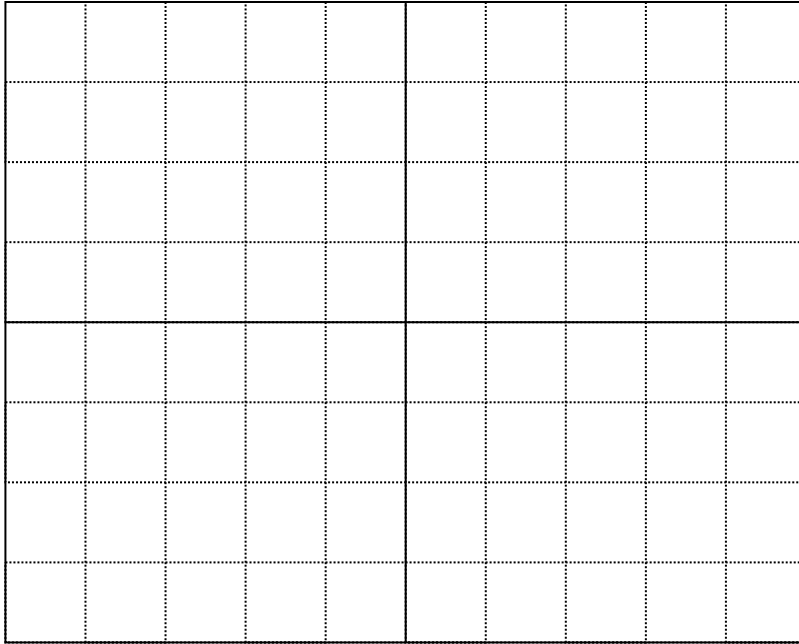


Fig. 4: Rectangle, unipolar, $f = 2 \text{ kHz}$, U

$= 5 \text{ V}$ Channel 1: $\frac{V}{\text{DIV}} = \$$

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

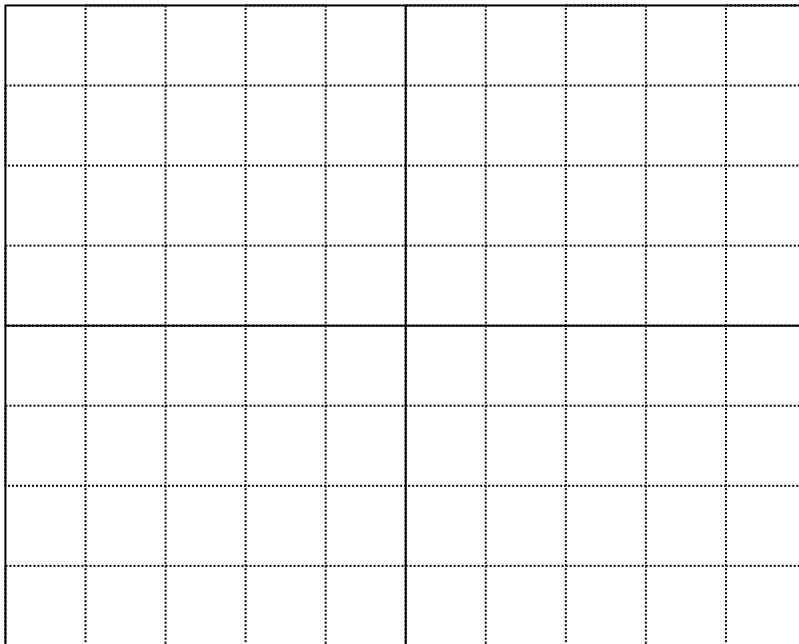
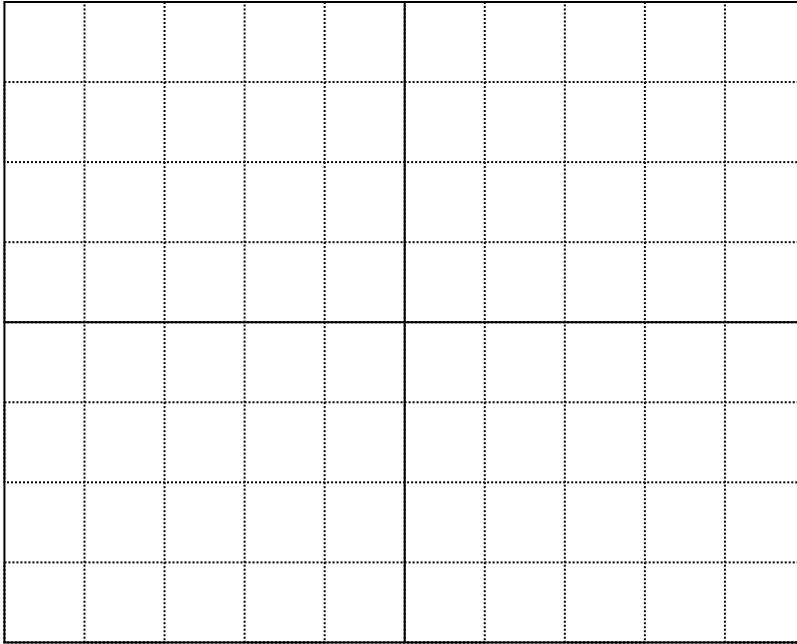


Fig. 5: Rectangle, bipolar, $f = 5 \text{ kHz}$, $U =$

2 V

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

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

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

$V, UDC = 2 \text{ V}$

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

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

From:

<https://wiki.mexle.org/> - **MEXLE Wiki**

Permanent link:

https://wiki.mexle.org/lab_electrical_engineering/2_capacitors/periodic-signals-on-scope

Last update: **2026/03/21 23:00**

