Induction

A test coil is positioned in between two field coils. The function generator is used to input different waveforms into the field coils. It is also possible to connect dc-voltage. The signals of the test coil and the field coils is shown with an oscilloscope.

NB: The amplitudes of the signals are irrelevant. Focus on the shape and phase of the signals. Phase relates to the time difference between signals.

Draw the function of the test coil voltage when...

1) there is dc-voltage in the field coils.

2) there is a triangle wave in the field coils.

![Triangle Wave](image)

3) there is a square wave in the field coils.

![Square Wave](image)

4) there is a sine wave in the field coils.

![Sine Wave](image)

Why isn’t the signal of the test coil “ideal”? Why do we have to use a small frequency from the function generator? How could we improve the setup?