

## Acesso ao VISIR



Link para acesso:

<http://openlabs.bth.se/electronics/index.php/en>

### OpenLabs Electronics Laboratory

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OPENLABS  
BTH  
TEKNISKA HOGSKOLEN

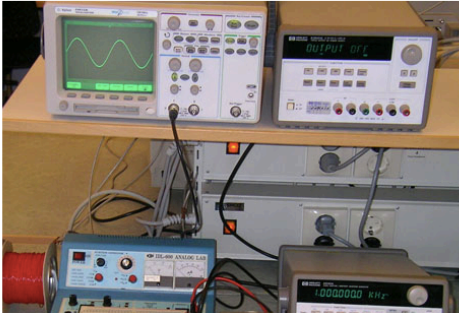
Login  

## Welcome

Welcome to the open electronics laboratory.

Here you will find the resources needed to experiment in electronics via the internet. We have developed a system where you can make electronic experiments, right here in your browser. We supply basic equipment, such as oscilloscope, multimeter, function generator and power supply. With these and a number of electronic components you can build circuits on our virtual breadboard. None of the measurements are simulated. The circuits you build will be formed and measured on, and the real measurement results will be displayed.

Interested? Go to our [demo page](#).





Clique em **Demo**

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## Demonstration

To give an idea of how the electronics laboratory is operated, a few video clips are available, demonstrating:

1. How to measure the resistance of a resistor using the multi-meter if you have problems interpreting the color code. [Show clip](#) (2.2MB)
2. How to measure U1 and U2 defined in the first circuit of an excerpt of a [lab instruction manual](#) using the oscilloscope. Please download and print the excerpt before showing this clip. [Show clip](#) (1.6MB)
3. How to perform an experiment on the operational amplifier uA741. [Show clip](#) (1.6 MB)

## Guest login

The laboratory is open for guests when its not used in regular lab sessions. Guest sessions are limited to 30 minutes.

To be able to perform the guest experiments you will have to download its [lab instruction manual](#). It describes AC experiments using passive components and experiments on an operational amplifier. When you start the experiment, you can choose from two laboratory setups at the bottom of the screen, choosing either the AC experiments or the op amp ones. This will provide all the needed components for either experiment. (No additional components need to be added).

When doing the measurements, a *virtual instructor* will check that the circuits wired will not damage components or instruments used. Please refer to the [FAQ](#) if you are not familiar with a breadboard. The oscilloscope manual can be downloaded from [manufacturers homepage](#). Please note that not all functions of the instruments are implemented.

After logging in a *virtual instrument shelf* will show up. Press Done to select the default instruments.


[Login in as a guest](#)

If you have any questions about this page or the laboratory, contact the [administrator](#).

Clique em **Login as a guest**

Abrirá outra janela para entrar com o e-mail.

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**Guest login**

In order to test out laboratory you will have to enter your email address. The information is used to track how many guests we have had.


E-Mail



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Clique em **Guest Course**

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Logout 

**MAIN MENU**


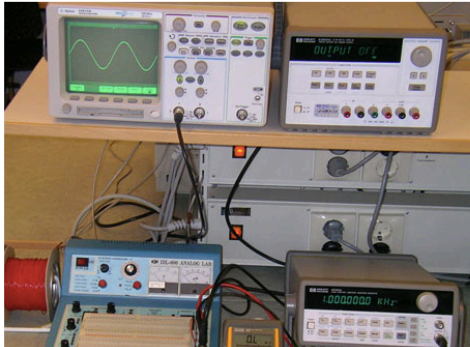
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Clique em **Start Experimenting**

**OpenLabs Electronics Laboratory**

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**Guest Course**

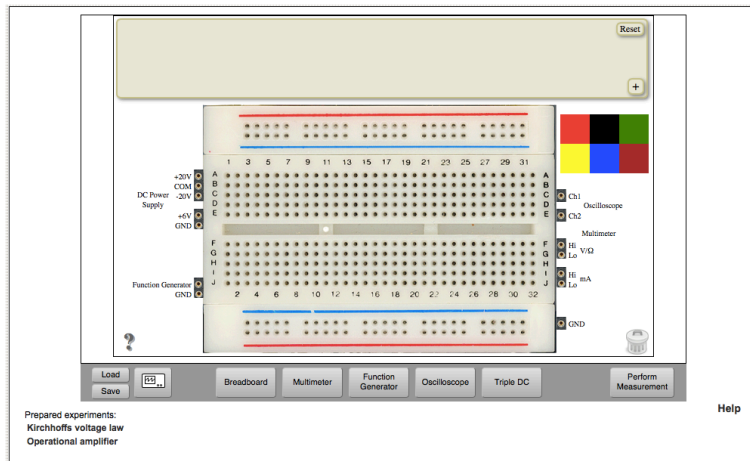
**Start Experimenting (with flash client)**

Starting an experiment without a reservation gives you one hour of experimentation time. Experimenting without a reservation has lower priority and you will be kicked out if a reservation needs your seat.



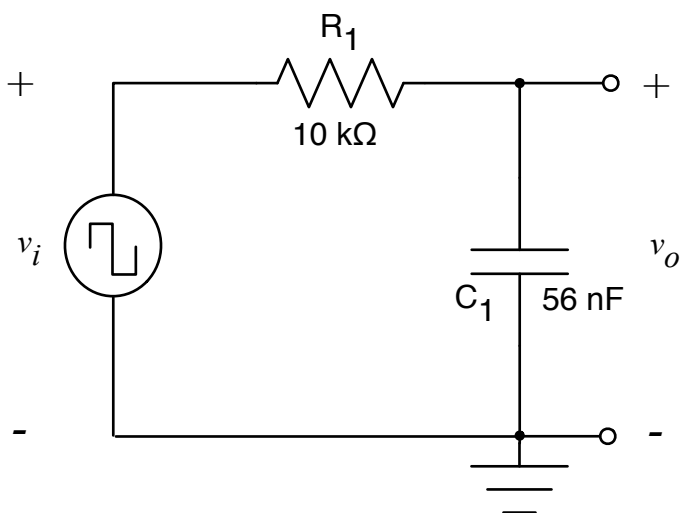
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Abrirá outra janela com o **Laboratório**



## Experimento 1

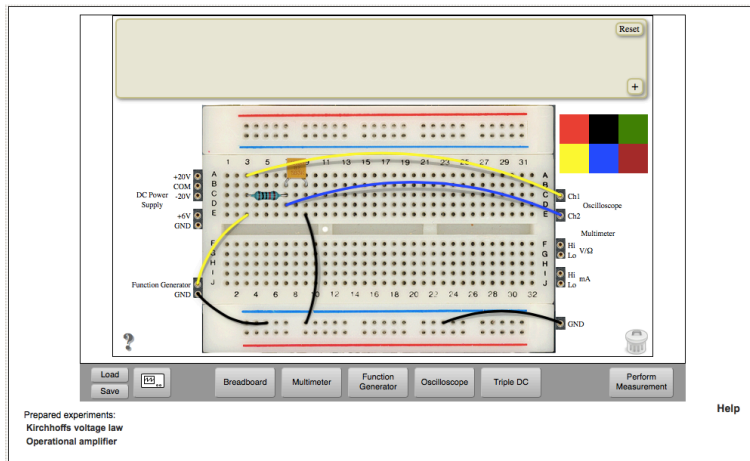
Monte o circuito da figura abaixo no Visir.



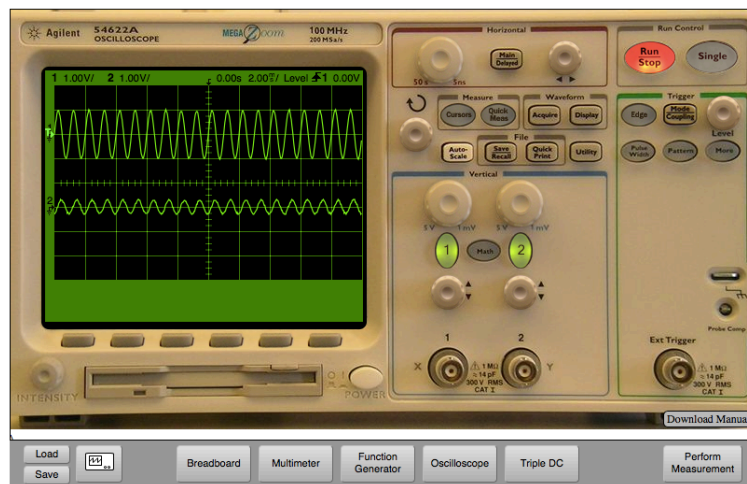
Ajuste o gerador de sinais para uma frequência de 1 kHz, sinal senoidal, tensão com amplitude de pico de 1 V e valor contínuo de 0 V (nulo).

Conecte o gerador ao circuito e osciloscópio para medir a tensão de entrada  $v_i$  e a tensão de saída  $v_o$ .

Execute o experimento, clicando em **Perform Measurement**.



O resultado no osciloscópio deverá ser algo do tipo:

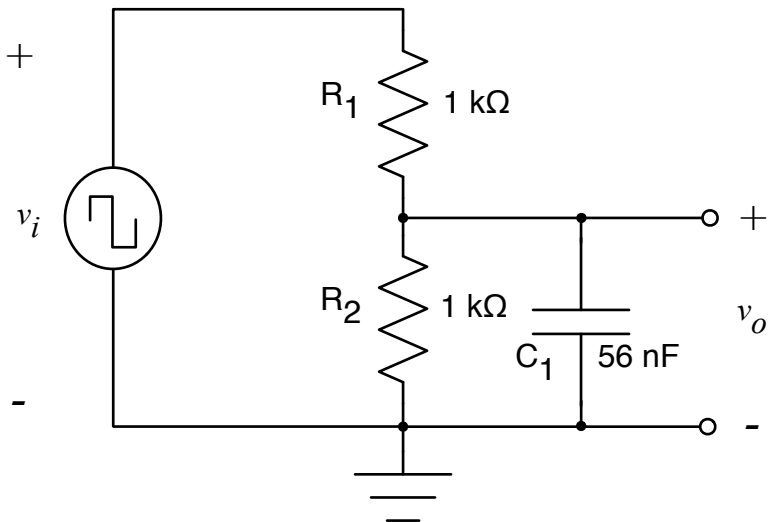


A seguir, meça o valor de pico da tensão de saída e anote os valores na tabela abaixo. Note que a tensão de entrada tem valor pico a pico de 2 V.

Frequência [kHz]	Valor de pico da tensão de saída [V]				
	Ganho Calculado	$V_o$ Calculado	$V_o$ Simulado	$V_o$ Experimental	$V_o$ Remoto
1					
2					
3					
4					
5					
10					

## Experimento 2

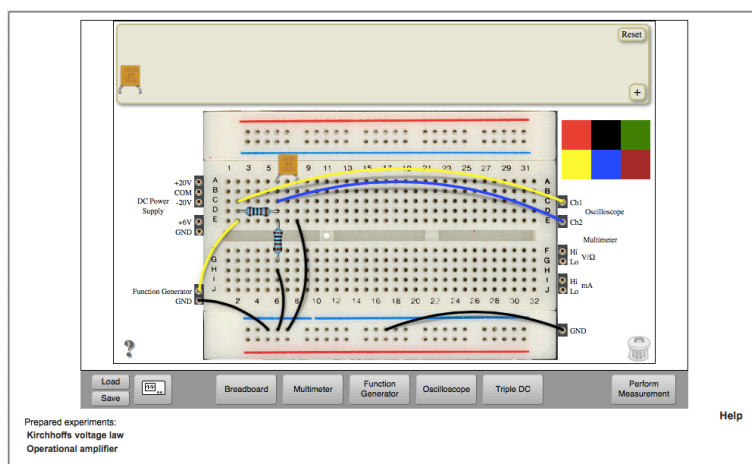
Monte o circuito da figura abaixo no Visir.



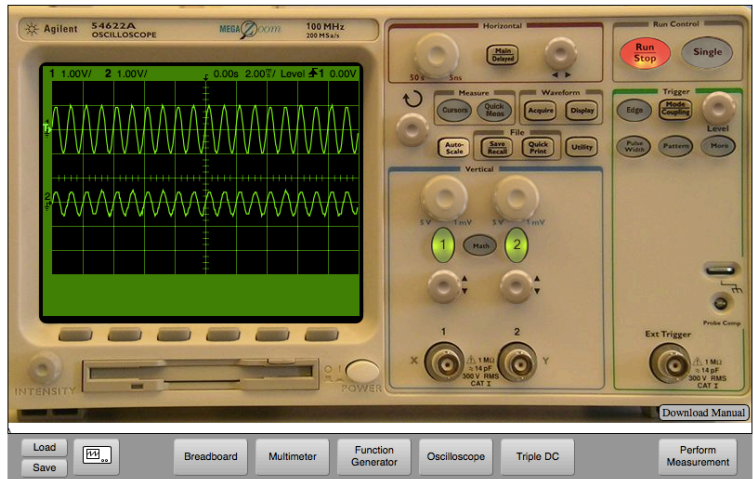
Ajuste o gerador de sinais para uma frequência de 1 kHz, sinal senoidal, tensão com amplitude de pico de 1 V e valor contínuo nulo (*offset*).

Conecte o gerador ao circuito e osciloscópio para medir a tensão de entrada  $v_i$  e a tensão de saída  $v_o$ .

Execute o experimento, clicando em **Perform Measurement**.



O resultado no osciloscópio deverá ser algo do tipo:



A seguir, meça o valor de pico da tensão de saída e anote os valores na tabela abaixo. Note que a tensão de entrada tem valor pico a pico de 2 V e valor médio nulo.

Frequência [kHz]	Valor de pico da tensão de saída [V]				
	Ganho Calculado	$V_o$ Calculado	$V_o$ Simulado	$V_o$ Experimental	$V_o$ Remoto
1					
4					
8					
10					
20					
30					