

類比電子電路實作



ANALOG ELECTRONIC CIRCUIT PRACTICES


2017 WEEK 1

本周重點

- 了解 Circuit Lab 的基本使用方法
 - 拖拉元件
 - 更改電容值
 - 設立節點
 - 模擬電路

CIRCUIT LAB


<https://www.circuitlab.com/>



搜尋

我的工作室 論壇 部落格

未登錄。
登入 或 創建帳戶。




Effortless schematics. Powerful simulation.

Choosing the right design tools makes your job easier.

- 使用我們的簡易原理圖編輯器進行設計。
- Accurate analog & digital circuit simulations in seconds.
- Professional schematic PDFs, wiring diagrams, and plots.
- 無需安裝任何軟體 — 立即嘗試。

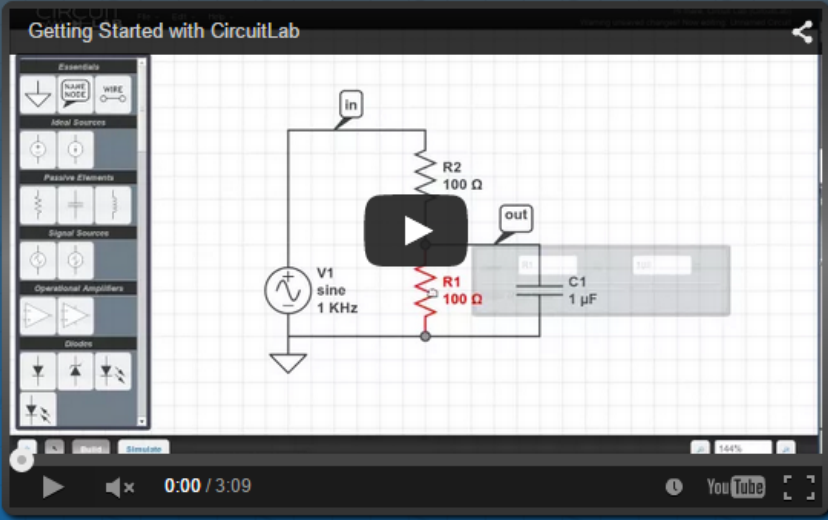
Try the CircuitLab



no

or watch a quick demo video →

Getting Started with CircuitLab



0:00 / 3:09

YouTube

EDITOR

CIRCUIT
LAB

檔案 ▾ 編輯 ▾ 運行 ▾ 說明 ▾

Press 'f' to search

要素

理想源

波動元件

訊號源

運算放大器

二極管

BJTs

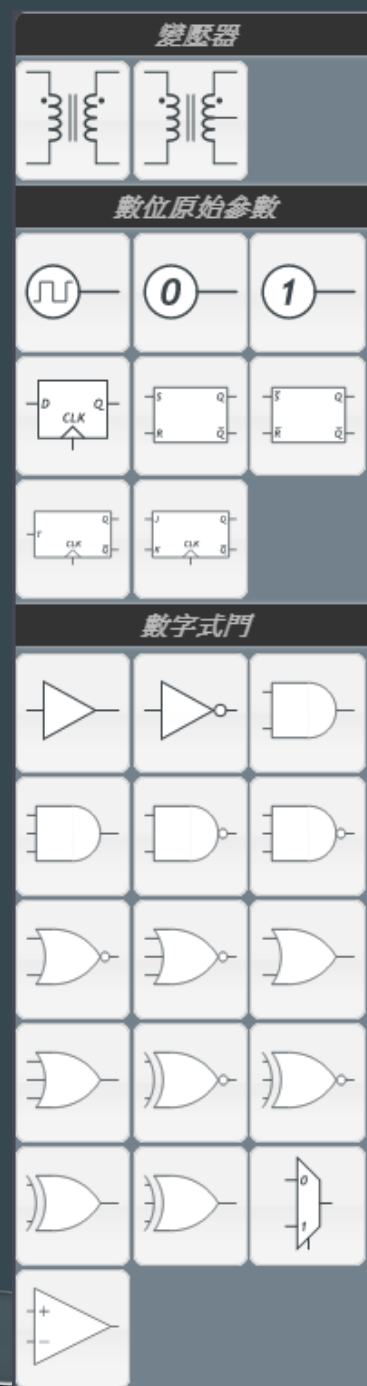
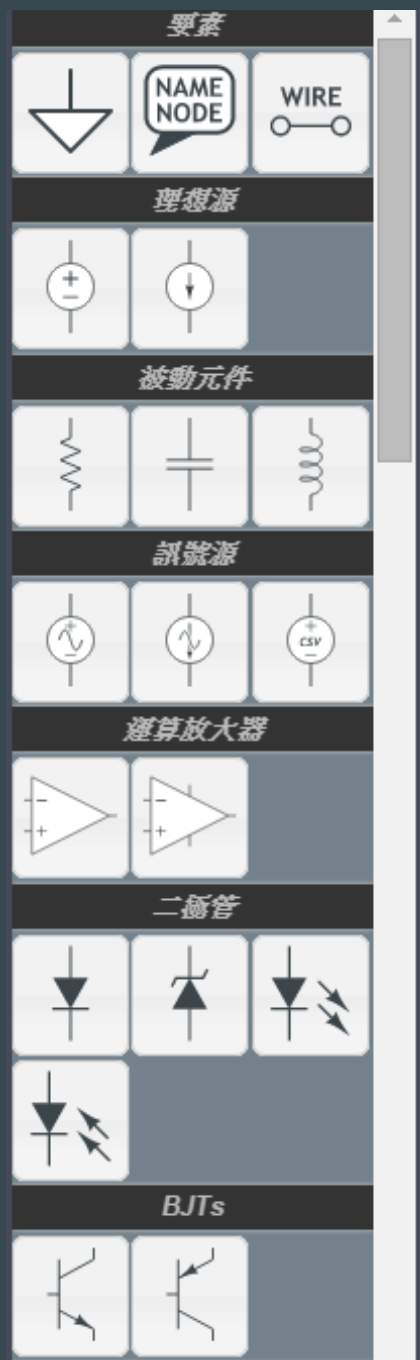
Welcome to CircuitLab!

This is a quick demo circuit to introduce you to the CircuitLab user interface.

- 1) Zoom and pan around the schematic with Ctrl+click, mousewheel, or by using the pan and zoom tools along the bottom toolbar.
- 2) Run the simulation from the "Simulate" tab at the bottom of the screen. (click Simulate, then click "Run Time Domain Simulation")
- 3) Modify the circuit by double-clicking any circuit element on the schematic, or try the right-click context menu. (for example, change C1 to be 47uF)
- 4) Insert new components by dragging from the toolbox on the left. (for example, add an LED in series with R_LOAD)

If you'd like to see more advanced examples, use the Help menu (Help -> Examples).
If you'd like to start from a blank schematic, use the File menu (File -> New).
To unlock the full, unlimited version of CircuitLab, use the Help menu (Help -> Upgrade CircuitLab).

AVAILABLE ELEMENTS

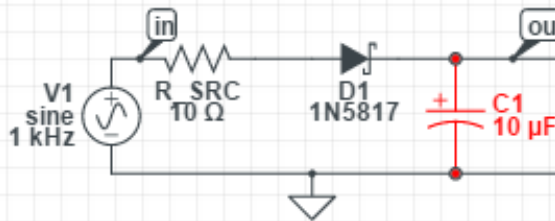


更改電容值

- double click the element

or try the right-click context menu. (for example, add an LED in series with R_L)

4) Insert new components by dragging from the component list
(for example, add an LED in series with R_L)



If you'd like to see more advanced examples
If you'd like to start from a blank schematic, u

To unlock the full, unlimited version of CircuitLab
(Help -> Upgrade CircuitLab). Thanks!

name: C1 C: 10u F

R_ESR: 0 Ω DISP: Polarize ▾

[View All 10uF Capacitors In Stock](#)

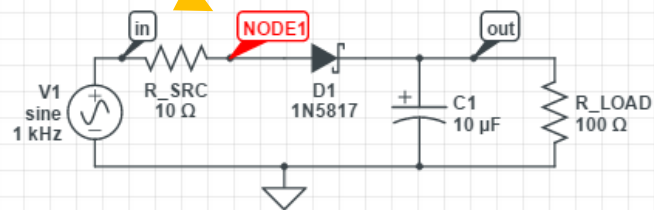
設立節點



Welcome to CircuitLab!

This is a quick demo circuit to introduce you to the CircuitLab user interface.

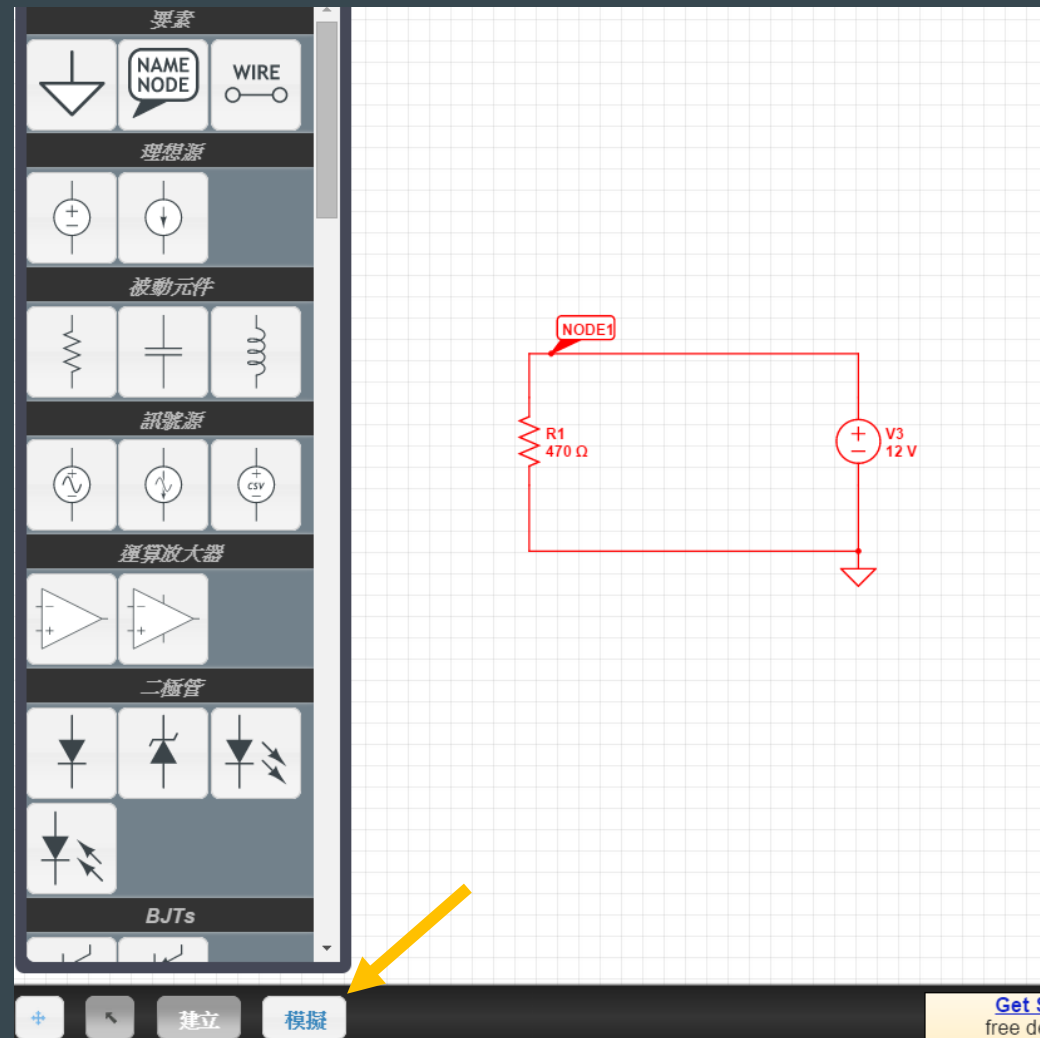
- 1) Zoom and pan around the schematic with Ctrl+click, mousewheel, or by using the pan and zoom tools along the bottom toolbar.
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- 4) Insert new components by dragging from the toolbox on the left. (for example, add an LED in series with R_LOAD)



If you'd like to see more advanced examples, use the Help menu (Help -> Examples).
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To unlock the full, unlimited version of CircuitLab, use the Help menu
(Help -> Upgrade CircuitLab) thanks!

SIMULATE



SIMULATE

▼ 直流 (DC)

按一下任何電線或元件終端，測量電壓和電流。

+ 新增表達式

Export Results...

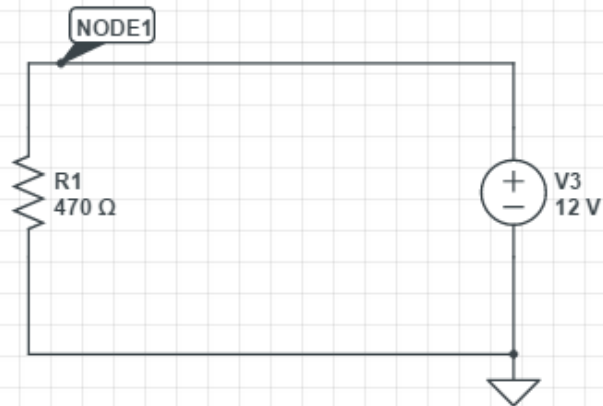
運行直流解算器

▶ 運行直流掃描 (DC Sweep)

▶ 時域

▶ 頻域





DC Operating point solve done in 0.01 seconds. ✕





SIMULATE

- 按下電線或元件終端，得知電壓與電流

▼ 直流 (DC)

V(NODE1)	12.00 V		
I(R1.nA)	25.53 mA		

 新增表達式

 Export Results...

運行直流解算器

▶ 運行直流掃描 (DC Sweep)

▶ 時域

▶ 頻域

