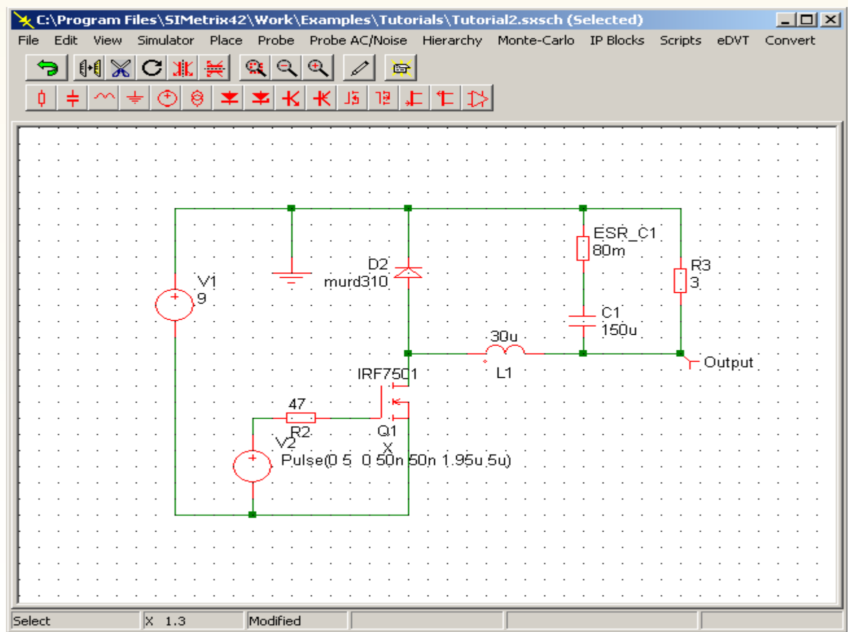
Part I:
Introductions and Quick start with SIMetrix



Exercise1: Say “Hello” to you!!

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Contents

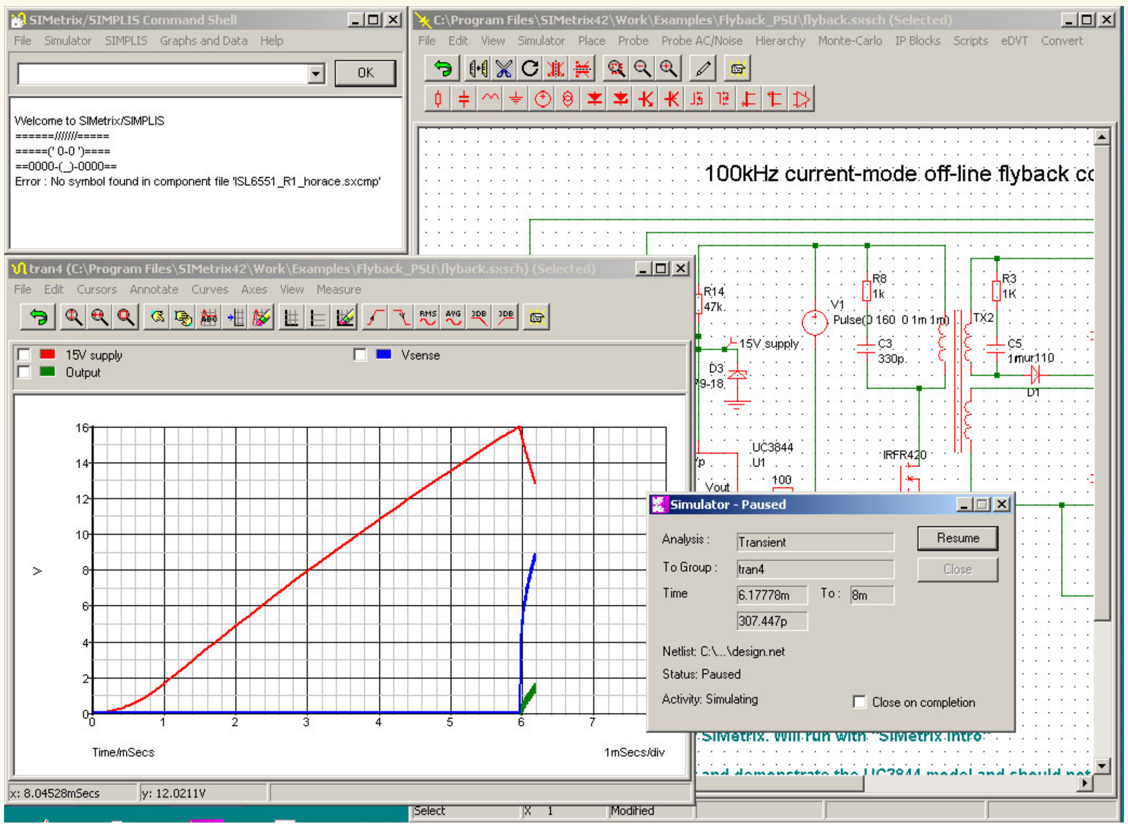
A1: What is SIMetrix Simulator

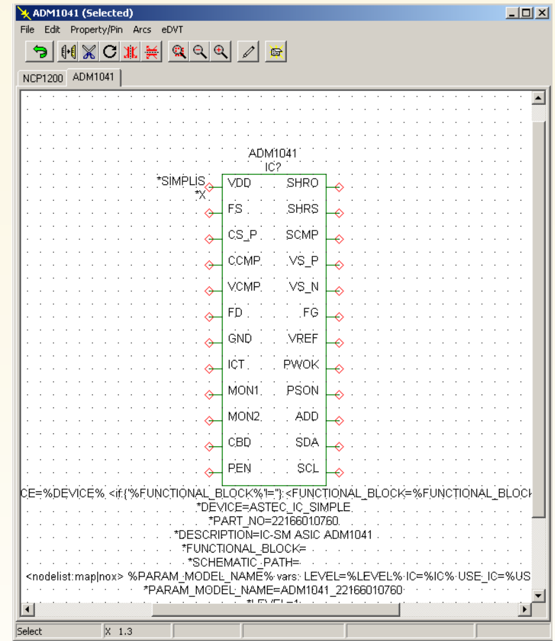
- Based on two publicly available programs --- SPICE & XSPICE
- Simulator provide new feature & improve in convergence problems
- New schematics entry and waveform analysis feature, independent to SPICE

A2: Why simulate ?

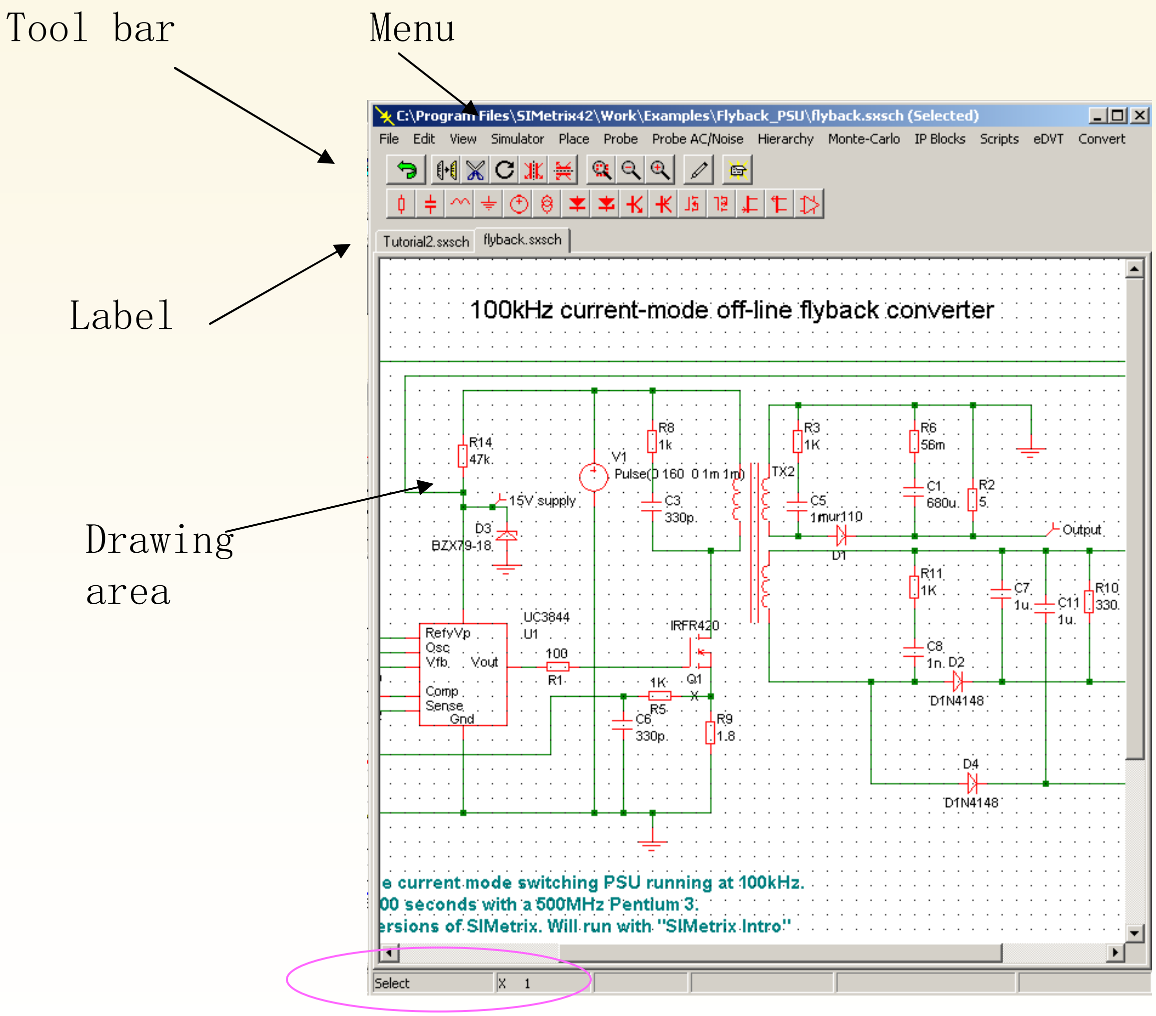
- Help to reduce product development timescale & the number of PCB revisions
- Do job which can not be achieved with practical approaches
  - Remove parasitic elements
  - Run components outside of their safe operating area

B. User Interface introduction





- Command window
- Simulation report window
- Symbol editor window
- Schematics editor window
- Graph window



- •Command window
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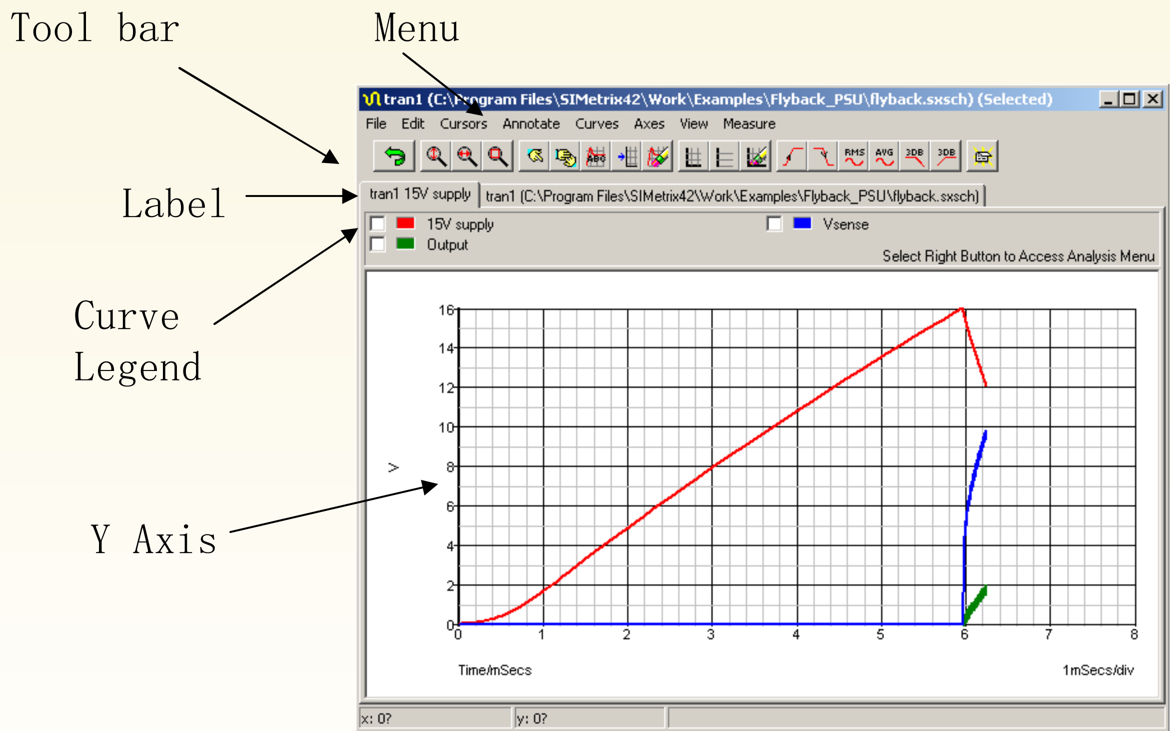
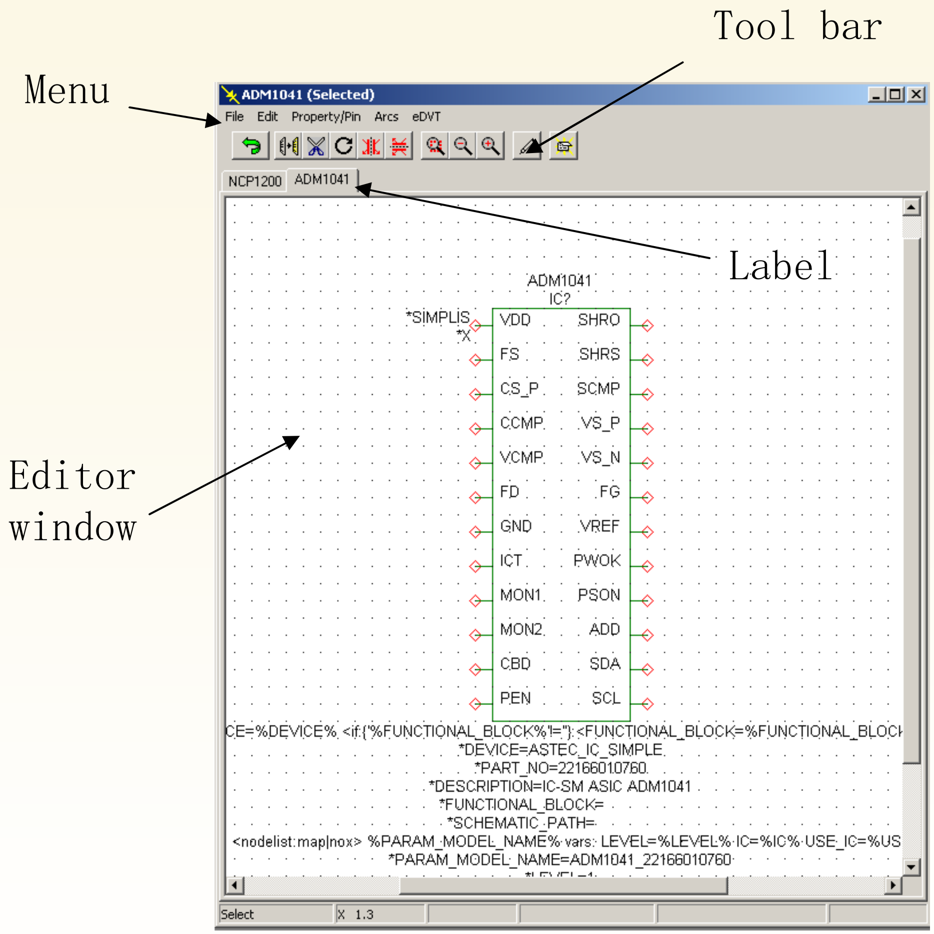
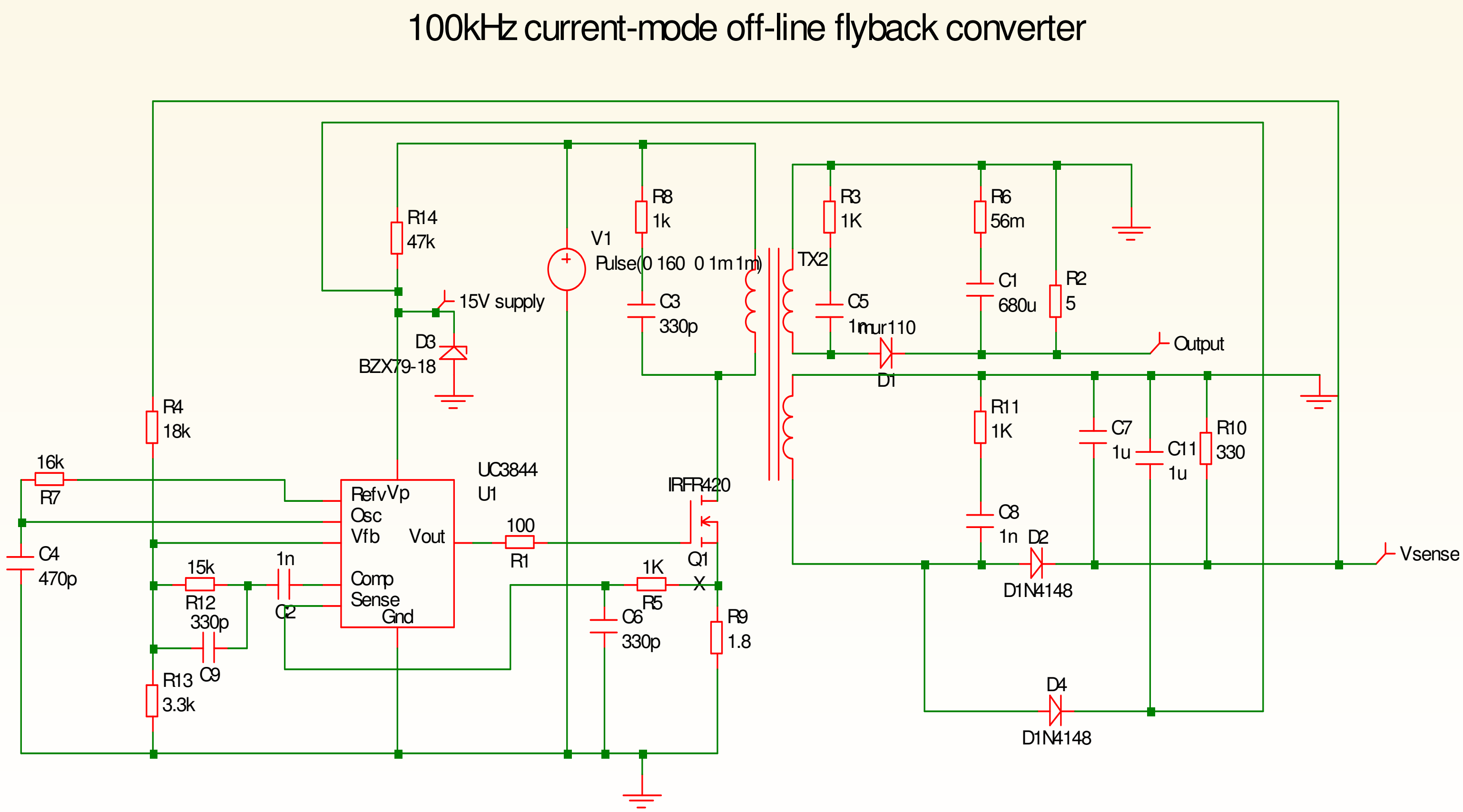


- Command window
- Simulation report window
- Schematics editor window
- **Graph window**
- Symbol editor window

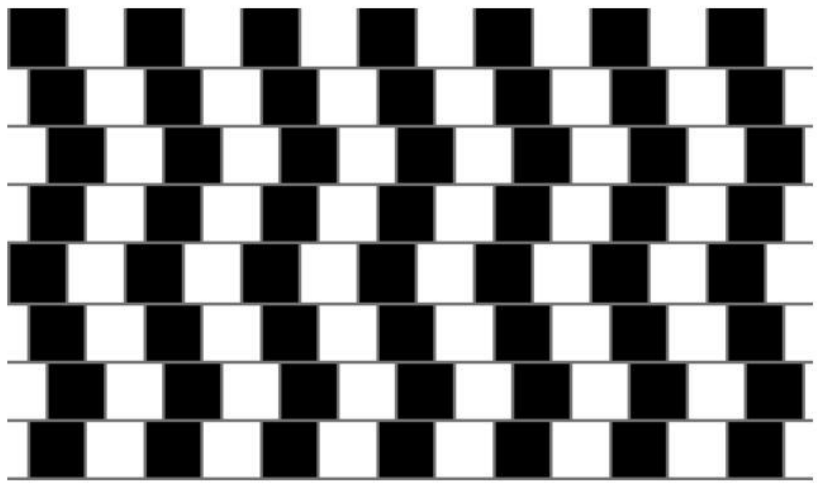


- •Command window
- •Simulation report window
- •Schematics editor window
- •Graph window
- •Symbol editor window

Run the flyback converter now!!



Break !



Are the horizontal lines parallel or do they slope?

• Schematics window (exercise 2)

--- Place/Delete a component l shortcut keys: c, r, l, d, n, v, g,

--- Change value or device type l resistance, inductance…models for diode & MOSFet (F7)

--- Change reference (F8)

--- Rotate (F5), Mirror (F6) or Flip a component

--- Wiring l Left, middle & right button

--- Probe l shortcut keys: u, b

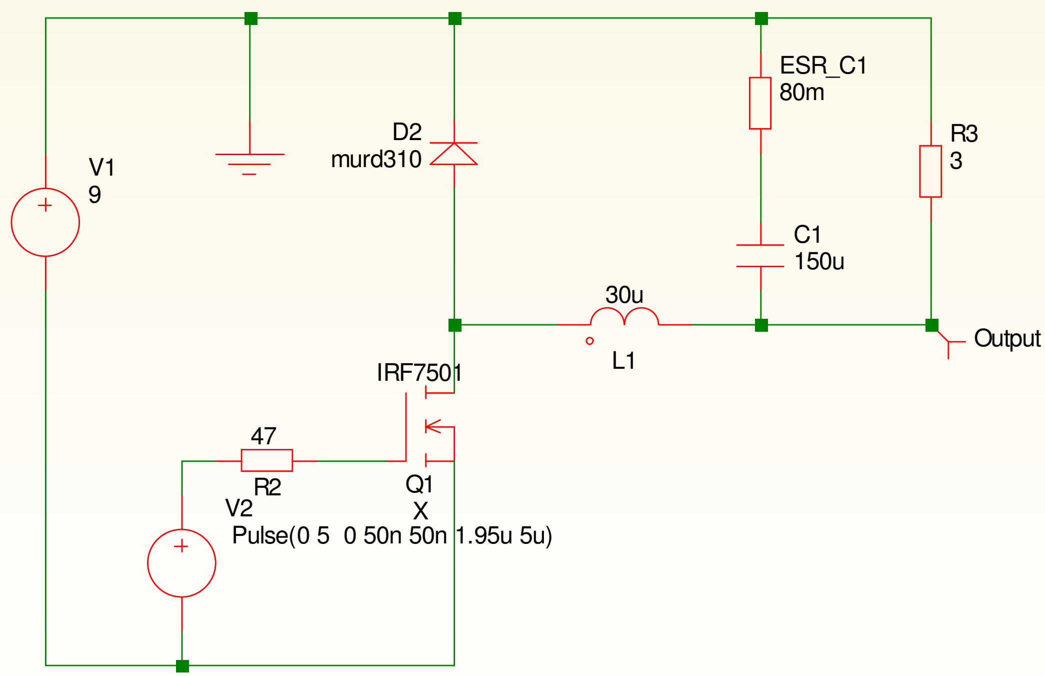
--- Select, Move, Copy & Paste a component

--- Select parts, wires with holding down "Shift" or "Alt" key

--- Zoom schematics (F12)

--- F11 Window

C. Exercises



Exercise 3: A simple SMPS

- Graph window

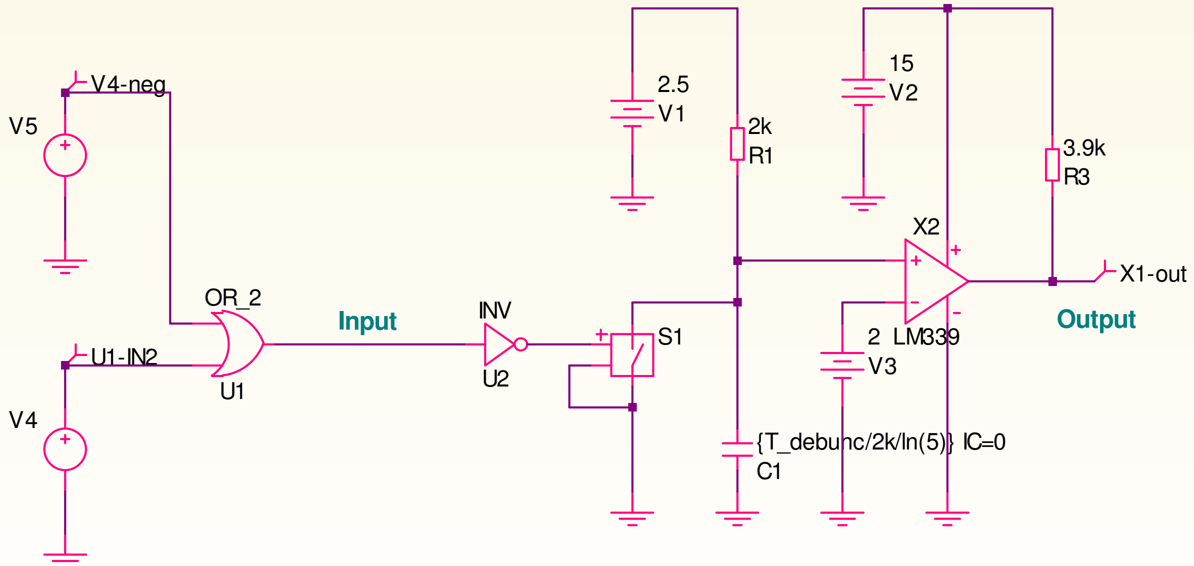
--- New graph window, close sheet

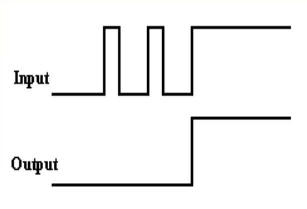
--- Create new grid, new axis, erase axis

--- Zoom the curve

--- Cursors

C. Exercises





Exercise 4: A debounce circuit

What we learn today --- Quick start with SIMetrix

Draw Schematics (add probes) --> Choose analysis… --> Run

Try your best !!