A Brief Introduction to MM-Logic v1.2

MM-Logic v1.2 is a program that allows you to design and test small digital circuits. A shortcut to MM-Logic can be found at Q:\Computer Science\Icons\MM-Logic v1.2

When you run MM Logic you should see the following window with the tool palette. You may need to click the palette button (7th from the left with AND OR gate symbols) to display it. The palette on the right allows you to click and drag various components to the screen. Click on that tool to make it active.

![Tool Palette](image)

Important tools are

**Arrow** (1, 1): used to select and move/delete objects. To delete select and hit the (del) key. Double clicking on a selected item will bring up a context sensitive menu for it.

**Wiring Tool** (1, 2): used to wire objects. Wire right to left (←→).

**AND, OR, XOR** gates on row 2. Three or Four input and/or NAND, NOR and NXOR versions available via context sensitive menu (see Arrow tool).

**NOT** (inverter) Gate (3, 1)

**LED** (light) (3, 3): Circuits terminate in lights. Red, yellow, and green versions thru context sensitive menu.

**Switch** (4, 1): circuits begin with switches. Toggle and push button versions thru context sensitive menu.

**Text Tool** (5, 2): used to label diagrams

**Gnd** or **0** (7, 3) and **Plus** or **1** (8, 1): provides inputs which are always off (grounded) or on (connected to Vcc)

**To draw a circuit**

1. Position switches on left, LED's on right, gates in middle. Circuits flow left to right (←→)
2. Wire components right to left beginning from LEDs on Right back to switches on Left
3. To change component attributes, select and right click on component to bring up context sensitive menu.

To **run** (test) a circuit use Simulate | Run or click on the run simulation button (left pointing triangle). To **stop** a simulation click on the stop simulation button (square to the right). Don’t worry about saving a file when prompted.