

**Sciencetech 2614 Digital Circuits Development Platform** is designed to fulfill requirement of performing experiments of digital electronics in a single platform. This makes it easy to design, experiment with, and test circuitry without soldering. Students can explore a wide variety of electronic concepts simply by sticking components into the breadboard. All connections and controls are clearly marked and conveniently located. It is very useful in digital electronics laboratories for performing digital experiments. It is also useful to build and test circuits as well as making projects related to digital electronics or when learning the subject.

### Digital Lab comprises of following blocks

- DC Power Supplies
- Pulser Switches
- Logic Probe
- TTL/CMOS Mode Selector
- Pulser Generator
- 16 bit Data Switches
- Seven Segment Display
- 16 bit LED Display

### Features

- Self contained & easy to operate
- Functional blocks indicated on board mimic
- Solderless breadboard
- On board DC Power Supplies
- On board Pulse Generator with TTL/CMOS mode
- Pulser switches and 16 bit Data switches
- Bicolor 16 bit LED display
- BCD to Seven segment display and Logic probe
- CMOS/TTL output
- Free e-learning course

### Scope of Learning

#### Study of:

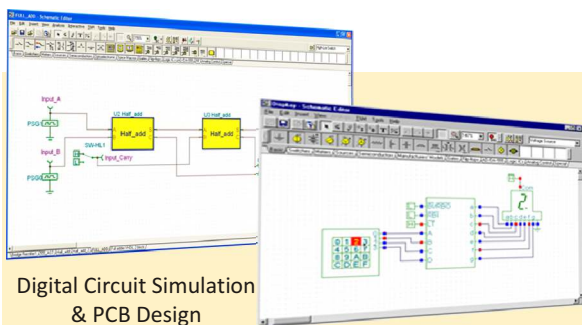
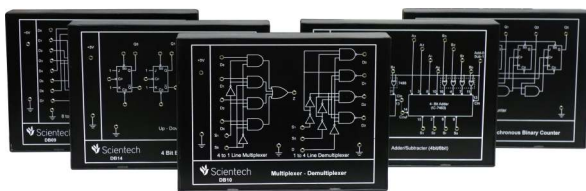
- 8 bit Equality detector using IC-74HC688
- 1:16 De-multiplexer using IC-74HC154
- 16 to 4 Line encoder
- 8:1 Multiplexer using IC-74HC15
- 12 bit Odd Parity generator and 13 bit Parity checker
- 12 bit Even parity generator and 13 bit Even parity checker
- 4 bit Arithmetic logic unit
- Data writing in and reading from SRAM memory

### Technical Specifications

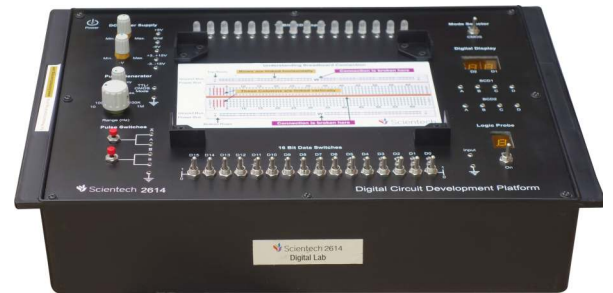
- Size of Breadboard** : 172.5 mm x 128.5 mm
- Tie Points on Breadboard** : 1685 nos (solderless)
- DC Power Supplies** : +5V, 1A; -5V, 500 mA (fixed)  
+3V to +15V, 500 mA (variable)  
-3V to -15V, 500 mA (variable)
- Pulser Generator** : 1Hz to 1MHz in 6 steps (Variable in between the steps)
- Amplitude** : +3V to +15V (CMOS), 5V (TTL)
- Duty Cycle** : 50 %, TTL/CMOS output
- Pulser Switches** : 2 nos (Push to 'On')
- Data Switches** : 16 nos (Toggle switches) (TTL/CMOS output)
- Bicolor LED Display** : 16 nos (TTL/CMOS input)
- BCD to 7 Segment Display** : 2 nos
- Logic Probe** : Logic level indicator (H/L)for TTL/CMOS mode (7 segment display)
- Mains Supply** : 110-220V ± 10%, 50/60Hz
- Weight** : 3 Kgs. approximately
- Dimensions (mm)** : W 326 x H 52 x D 252
- Product Tutorial** : Online (on [www.ScientechLearning.com](http://www.ScientechLearning.com))
- Included Accessories :**
  - Breadboards (solderless) : 2 nos
  - Connecting wires : 20 nos
  - 2mm to 1mm Patch cords : 16 nos
  - 2mm to 2mm Patch cords : 16 nos
  - Mains cord : 1 no

### Experimental board of DB Series (optional):

Ready to use Digital Experiment Boards (covering device characteristics and study of various logic circuits) with wired components and schematic drawn on top, compatible to use with Scientech 2614.

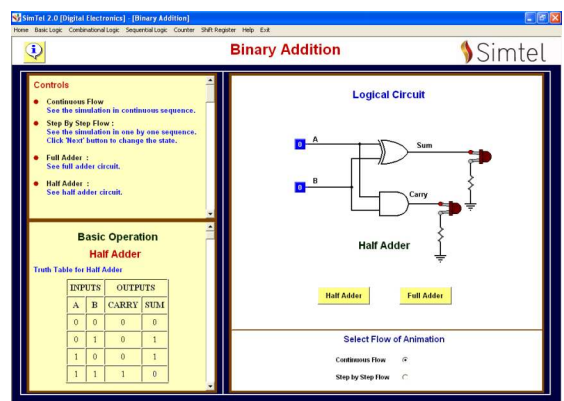
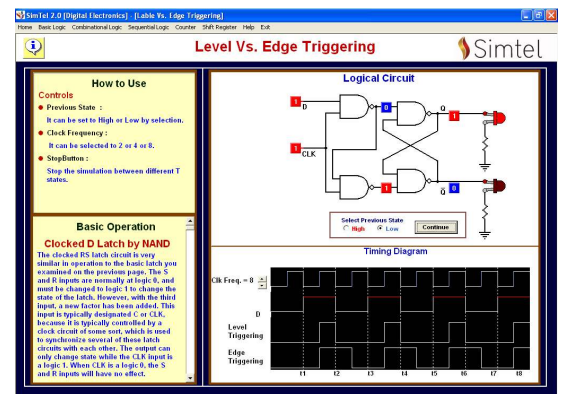


Digital Circuit Simulation & PCB Design



Scientech 2614

### Screen shots of Simtel Digital Electronics (optional)



### Tina Design Software (optional)

## Enhance your Analysis with Tina Design Suite

Analyze circuit through more than 20 different analysis modes including DC Analysis, AC Analysis, Transient Analysis, Digital step by step analysis, Symbolic Analysis, Network Analysis, Noise Analysis, Tolerance Analysis, Optimization, etc.