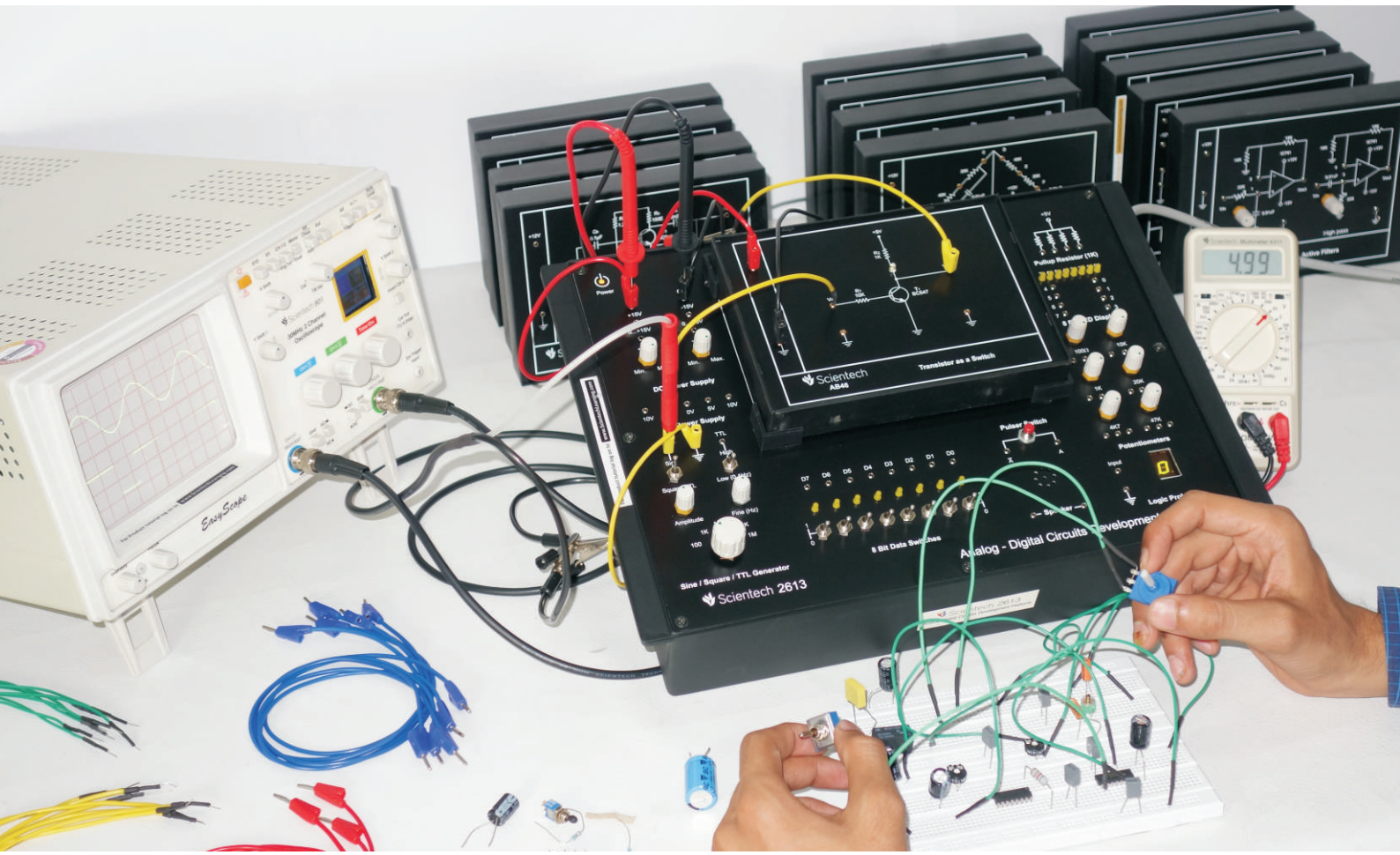
Scientech

Analog-Digital Circuits Development Platform

Scientech 2613



Scientech 2613 Analog-Digital Circuits Development Platform is designed to fulfill requirement of performing experiments of analog and 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 analog and digital electronics laboratories for performing experiments in colleges and universities. It is also useful to build and test circuits as well as making projects related to analog electronics or when learning the subject.

Analog Digital Lab comprises of following blocks :

- DC Power Supplies
- Sine/Square/TTL Generator
- Speaker
- Potentiometers
- Pulser Switch
- AC Power Supply
- 8 bit Data Switches
- Logic Probe
- 8 bit LED Display

Features

- **Self contained and easy to operate**
- **Functional blocks indicated on board mimic**
- **On board DC and AC Power Supplies**
- **On board Sine/Square/TTL Generator**
- **On board 8 bit Data switches and 8 bit LED display**
- **On board Logic Probe, Speaker, and Potentiometers**
- **Solderless Breadboard**
- **Free e-learning course**

Scope of Learning

Study of :

- Active Notch filter
- Zener Diode as a Voltage Regulator
- Transistor series Voltage Regulator
- Transistor shunt Voltage Regulator
- Low Pass Filter
- High Pass Filter
- Band Pass Filter
- CE configuration of NPN transistor
- CB configuration of NPN transistor
- CC configuration of NPN transistor
- Gain Characteristics of a Noninverting Amplifier
- Voltage Follower Configuration
- Op Amp in Inverting Configuration
- Operations of Wheatstone Bridge
- CE amplifier circuit

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- Universal Gate
- Logic Gate
- Binary Adder
- 2 Bit Binary Subtracter
- Binary to Gray code conversion
- Gray code to Binary code conversion
- Binary to Excess-3 code conversion
- Characteristics of various types of Flip-Flops
- Crystal Oscillator
- 4Bit Binary Up-Down Counter
- Johnson Counter
- 4 Bit serial in parallel out Shift Register
- 8 to 3 Line Encoder
- 3 to 8 Line Decoder

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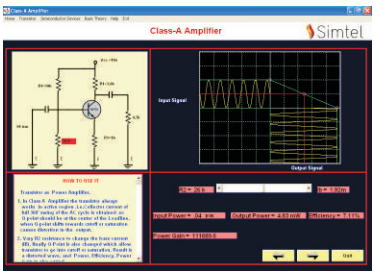
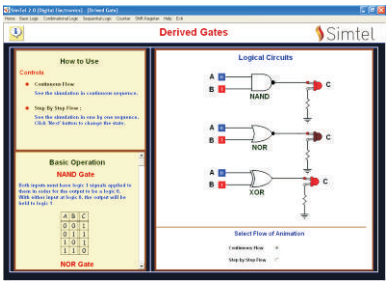
Screen shots of Simtel
Analog & Digital Electronics (optional)





Technical Specifications

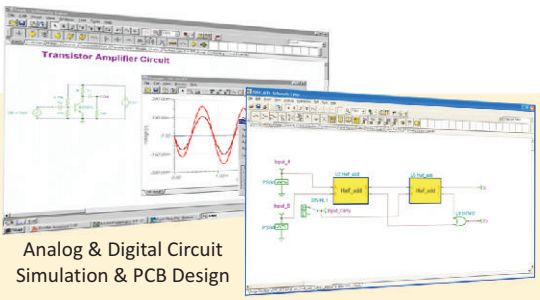
Size of Breadboard	:	172.5 mm x 128.5mm
Tie Points on Breadboard	:	1685 nos (solderless)
DC Power Supplies	:	+5V, 1A (fixed) +15V, 200mA (fixed) -15V, 200mA (fixed) +15V, 1A (variable) -15V, 1A (variable)
AC Supply	:	5V-0V-5V, 10V-0V-10V can be used as 5V, 10V, 15V, 20V AC & also as center tap
Sine/Square/TTL Generator	:	10Hz to 1MHz in 4 steps (variable in between the steps)
Amplitude	:	Sine wave- 0 to15Vpp Square Wave- 0 to 10Vpp TTL-5V (fixed)
Fixed TTL (Clock)	:	0.1Hz
Data Switches	:	8 nos (Toggle switches)
Pulser Switch	:	1no
LED Display	:	8 nos
Logic Probe	:	Logic level indicator H/L for TTL level (7 segment display)
Potentiometers	:	6 nos (100Ω to 47KΩ)
Speaker	:	8W/2W for audio use
Power Supply	:	110-220V ±10%, 50/60Hz
Power Consumption	:	8VA
Weight	:	4 kgs approximately
Dimensions (mm)	:	W 326 x H 52 x D 252
Product Tutorial	:	Online (on www.ScientechLearning.com)

Included Accessories :

Breadboards (solderless)	:	2 nos
Connecting wires	:	20 nos
2mm to 1mm Patch cords	:	8 nos
2mm to 2mm Patch cords	:	8 nos
Mains cords	:	1 no

Experimental board Optional Accessories :

Ready to use Analog and Digital Experiment Boards (covering device characteristics and study of various analog and digital circuits) with wired components and schematic drawn on top, compatible to use with Analog-Digital Circuits Development Platform Scientech 2613.



Analog & Digital Circuit
Simulation & PCB Design

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.

Subject to Change

Designed and Manufactured in India by -
Scientech Technologies Pvt. Ltd.
94, Electronic Complex, Pardesipura, Indore-452010, India.
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