

## Electronic WorkStation

### **Soldering / De soldering Station**

- *60W Microcontroller based Temperature Controlled Soldering and De Soldering Station with Set / Read of temperature, Menu keys to set temperature,*
- *Digital calibration to avoid analog components tolerances*
- *Burn proof silicon cable with thermal resistance up to 600°C*
- *Blower with 12V DC Iron*
- *De soldering pump diaphragm type*
- *Input voltage for soldering and de soldering 170 to 270 V*
- *Temperature range for soldering 180° to 270°C and for de soldering 180° to 480°C.*
- *Provide with Soldering stand, Desoldering stand, Sponge, Fibre Filters (primary/small) (secondary/big, Glass Tube and Cleaning Spring.*

### **Dual Tracking DC Power Supply**

- *DC Output DC: 0 to  $\pm 30V$ ,/2 A Dual Tracking Continuously Variable by means of Coarse and Fine controls and fixed*
- *5 V/2 A, 100mV Voltage resolution*
- *10mA Current resolution.*
- *100mA - 2A Adjustable current limit. =10m $\Omega$ (30V), =0.6m $\Omega$ (5V), Stability is 2.5mV at 30V / 2A, 5mV at line voltage variations of up to 10 % for 5V/ 2A. it has Load and Line Regulation.*
- *3 digit display for Voltage & Current.*
- *Ripple & Noise is =1mVrms ( $\pm 0$  - 30V, 2A) and =5mVrms (5V/2A). Built-in overheat.*
- *Over voltage Short Circuit And. Overload (current) Protection is available.*
- *Fuse socket along with extra fuse is provided.*

### **70MHz 4-Channel Digital Storage Oscilloscope**

- 70MHz 4 analog channel Digital Storage oscilloscope supports 1 GSa/s (single-channel), 500 MSa/s (dual channel), 250 MSa/s (three/four-channel)
- Memory Depth is minimum 24 Mpts
- Vertical rage 1mV/div -10V / div
- Horizontal range 5ns/div to 50 s/div
- The instrument has interface like RS232/UART, I2C, SPI for protocol analysis
- It is also has at least 26 nos automatic measurements and 6 bits hardware counter, advance and multi triggering facility
- 7 inches WVGA TFT Display
- I/O USB, LAN.
- Math functions like A+B, A-B, A×B, A/B, FFT, A&&B, A||B, A^B, !A, Intg, Diff, Sqrt, Lg, Ln, Exp, Abs., wide PC Interface USB Host & Device and LAN
- Component Tester to work with DSO is provided to test short circuit, open circuit, polarity testing of diode and transistors comparative test for trouble shooting of electronic circuits.

### **2 Channel 30 MHz Arbitrary Waveform Generator**

- Sine: 1  $\mu$ Hz - 30 Mhz
- Square: 1  $\mu$ Hz - 30 Mhz
- Pulse: 1  $\mu$ Hz - 12.5 Mhz
- Ramp: 1  $\mu$ Hz - 500 kHz
- Arb: 1  $\mu$ Hz - 6 Mhz
- Sampling Rate more than 140MSa/Sec
- Memory more than 14Kpt
- Waveform Sine, Square, Pulse, Ramp, Noise
- More than 150 built in waveforms Sinc, Exponential Rise & Fall, ECG etc...
- Display 3.5 inch TFT
- Vertical Resolution 14 bits
- Built in 200MHz frequency counter
- Amplitude (50Ohms) , <10MHz 1mVpp to 10Vpp and <30MHz 1mVpp to 5Vpp
- Built in 8 order harmonic generator ( harmonic type Even, Odd, All )
- Modulation AM, FM, PM, ASK, FSK, PSK, PWM, Linear/Logarithmic Sweep Mode, Burst Mode
- PC Interface USB Host & Device, LAN



**3½ Digit Digital Multimeter**

LCD display to test AC/DC Voltage and Current, Resistance, Temperature and Transistor ( $h_{FE}$ ), duty cycle, Diode and Continuity measurement Data Hold, DC voltage range upto 1000V, DC current Range upto 10A, AC Voltage upto 750V, DC current Range upto 10A, resistance range upto 200Mohm, frequency upto 200MHz capacitance 20nF to 200  $\mu$ F, diode test, AC Frequency response upto 200KHz.

**Classroom/laboratory Teaching, Learning and Simulation Content:**

The content is easy explanation of various complex topics with animation and simulation for ease of student learning. It is also support learning through videos, graphs, charts, along with mandatory rich content and theory to understand fundamental concepts, interactive learning objects, FAQ, MCQ etc. The content is supply license protection.

Basic Electronics & Electrical Analog and Digital Electronic to understand fundamental concept of Atom, Charge, Introduction to Electricity, DC and AC Sources of Electricity, Electronic Components, Series and Parallel Circuits, Voltage Divider and Current Divider Circuit, Circuit Analysis: Ohm's Law, Kirchhoff's Law, Loop and Mesh Analysis, Star and Delta Network, Network Theorems: Thevenin's, Norton's, Superposition, Maximum Power Transfer, Millman's, Reciprocity, Magnetism, Electromagnetism, Alternating Current Circuits, Transformer, Rectifier, Filter, Semiconductor Devices: Diode, BJT, FET, Operational Amplifier, Power Amplifier, Thyristor Family, Measuring Instruments: Oscilloscope, Multimeter with simulations, animations, theory, multiple choice questions, notes and question bank.

**Product Accessories**

- Operating manual
- 2 nos. BNC to BNC,
- 2nos. BNC to Crocodile
- BNC to Test Probe

## Electronic WorkStation

An integrated workbench consisting of instrument panel and working table suitable for students to learn and perform various experiments of electronics and electrical related subjects. Instruments are internally electrically connected and fitted in the panel such that only front panel and necessary interfaces are easily accessible to use. Structure of workbench is made up of 1.5 mm thick CRC powder coated pipes with top made up of good quality 19 mm thick plywood and covered with 1.8 mm off white colour mica. The bench working area is covered by 2 mm thick antistatic mat which help students to control static discharge as static cause interference or damage to students, equipment and circuitry. There is detailed training at consignee end for 1/2 days on how to use Workbench and utilization of this bench for various applications.



Note Shown image is just for illustration original may differ

Structure and design of WorkStation with following specifications:

- The basic structure is made of 38 x 38 x 1.5 mm CRC powder coated pipes for sturdiness.
- The overall dimensions of WorkStation W = 1220 mm; D = 770 mm; H = 1360 mm
- MS drawers 03 numbers W = 275 mm; D = 375 mm; H = 100 mm and thickness 1.2mm with handle & separate lock on each drawer.
- For the panel section, raised back height of 1200mm from floor with matching height support from the side at a depth 500mm for instrument housing with a MS Panel strip below it for housing Electrical Sockets and Switches for external use.
- Two Pole MCB (16A – Havells / Siemens) is provided for safety of WorkStation
- WorkStation works on Mains Supply - 230V AC, 50 Hz