



Dhanbad Instruments LLP is in ISO 9001:2008 certified company. We are leading provider of Electronics & Communication Engineering Lab products in East India. We have entire range of solution for Electronics & Communication Engineering. For any kind of solutions related to EC Engineering please feel free to contact us.

1. Basic Communication

- a. Amplitude Modulation and Demodulation
- b. Frequency Modulation and Demodulation
- c. Pulse amplitude modulation and demodulation
- d. Pulse Width Modulation And Demodulation
- e. Pulse Position Modulation And Demodulation
- f. PAM,PPM,PWM Modulation And Demodulation
- g. Frequency Shift Keying Modulation And Demodulation
- h. Phase Shift Keying Modulation And Demodulation
- i. Pulse Code Modulation And Demodulation
- j. DSB-SC Modulation And Demodulation
- k. Frequency Division Multiplexer And Demultiplexer (FDM)
- l. Quadrature Amplitude Modulation And Demodulation (QAM)



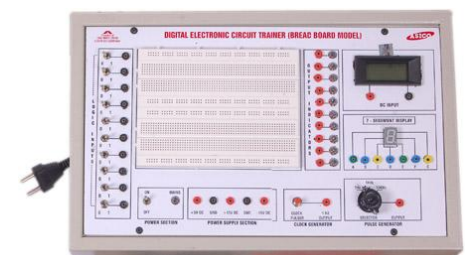
2. Advance Communication

- a. Frequency Modulation And Demodulation Trainer
- b. Delta, Adaptive Delta And Delta Sigma Modulation And Demodulation Trainer
- c. TDM Pulse Code Modulation Transmitter Trainer
- d. TDM Pulse Code Modulation Receiver Trainer
- e. Data Formatting And Carrier Modulation Transmitter Trainer
- f. Data Reformatting And Carrier Demodulation Receiver Trainer
- g. Analog Signal Sampling And Reconstruction Trainer
- h. TDM Pulse Amplitude Modulation And Demodulation Trainer
- i. 8 Bit Variable Data Generator DSB-SSB AM Transmitter Trainer
- j. DSB-SSB Am Receiver Trainer Transmission Line Trainer

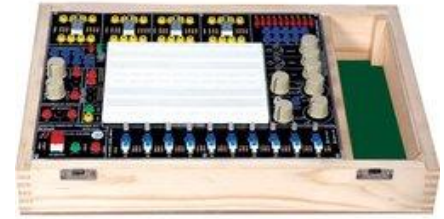


3. Digital Electronics

- a. To Study Operation Of Logic Gates (6 In 1)
- b. Study Of Rtl Logic Gates (5 In 1)
- c. Study Of DTL Logic Gates (7 In 1)
- d. To Study Digital Logic Trainer (Logic Gates, Boolean Identities And Demorgan's)
- e. To Study Operation Of Truth Tables Of Logic Gates Using Universal Gates
- f. Circuit Designer Board
- g. To Study Logic Gate Circuit Trainer
- h. Study 4 Bit Adder And Subtractor
- i. Study Digital Full Adders And Subtractors
- j. Study Various Types Of Flip Flops
- k. Study 4 Bit Synchronous And Asynchronous Counters
- l. Study 4 Bit Shift Register



- m. Study Encoder And Decoder Circuits
- n. Study 16 : 1 Line Multiplexer And 1 : 16 Line Demultiplexer
- o. Study 4 : 1 Line Multiplexer
- p. Study 4 : 1 Line Demultiplexer
- q. Study Of Ram Circuit Study Interfacing Of TTL-Cmos, Cmos-Ttl Interfacing
- r. Study Of Arithmetic/Logic Unit (ALU)
- s. Study Of Crystal Oscillator
- t. Study Of Pulse Stretcher Circuit 2/3 Bit Simultaneous Type A/D Converter



4. Electronics Lab Training Modules

1. Transistor Characteristics Trainer
2. SCR Characteristics Trainer
3. FET Characteristics Trainer
4. Tunnel Diode Characteristics Trainer
5. Zener Diode Voltage Stabilization Characteristics Trainer
6. UJT Characteristics And UJT As Relaxation Oscillator
7. MOSFET Characteristics Trainer
8. Basic thyristors (SCR,DAIC,TRAIC,UJT) Characteristics And Application Trainer
9. Diac Characteristics Trainer Traic Characteristics Trainer
10. Traic Characteristics Trainer Led Characteristics Trainer
11. Measurement Of Peak, Average And Rms Value Of Ac Signal
12. Varification Of KCL And KVL Trainer
13. Resistance In Series And Parallel Trainer
14. Ohm's law Trainer Without Power Supply
15. Ohm's law Trainer With Inbuilt Power Supply
16. Charging And Discharging Of Condenser Trainer
17. Voltage Doubler And Tripler Circuit Trainer
18. LCR Resonance Trainer
19. LCR Impedance Trainer
20. RC Circuit As Low Pass And High Pass Filter Trainer
21. Clipping And Clamping Circuit Trainer
22. Half Wave, Full Wave And Bridge Rectifier Trainer
23. Voltage Regulation Using Zener Diode And Transistors Trainer
24. SCR ring counter
25. Linear IC Trainer
26. Digital IC Trainer
27. Diode Valve Characteristics Apparatus with Two Analog Round Meters
28. Triode Valve Characteristics Apparatus with Three Analog Round Meters
29. Tetrode/Pentode Valve Characteristics Apparatus with Five Analog Round Meters
30. Ionization Potential of Mercury using Thyatron Valve with Two Meters
31. IGBT Characteristics & Application
32. Plank's Constant Apparatus
33. Photo Cell Characteristics Apparatus
34. Work Function of Diode (Richardson Law)
35. Solar Cell Characteristics Apparatus
36. Transistor Designer Kit (Discrete Components Trainer)
37. H' Parameter of PNP Transistor in Common Emitter mode
38. Microphone and Loudspeaker Characteristics Apparatus
39. PN Junction Diode Characteristics Apparatus with 2 meters
40. Zener diode V-I Characteristics Apparatus (Forward & Reverse)
41. Opto Coupler Characteristics Apparatus
42. LDR Characteristics Apparatus
43. Opto Electronic Devices Characteristics (LED, LDR, Photo Transistor & Photo Diode)



44. Photodiode Characteristics Apparatus
45. Photo Transistors Characteristics Apparatus
46. Flashing & Quenching of Neon Bulb
47. B.H. Curve Apparatus
48. Conversion of Galvanometer into voltmeter & Ammeter
49. LCR Resonance Apparatus with builtin sine wave Oscillator
50. Study of AC Fundamentals
51. Voltage Regulation using IC 317 V
52. Voltage Regulation using 78
53. Series Voltage Regulators
54. Ripple factor Apparatus (Half wave, full wave and Bridge rectifier)
55. DC Regulated Power Supply Trainer
56. DC Regulated Power Supply Trainer
57. Analog Lab Trainer (with Bread Board)

5. Multivibrators and Oscillators Trainers

- a. 555 IC Application Trainer
- b. Bistable Multivibrator Trainer Using Transistors
- c. Monostable And Free Running Multivibrator Trainer Using Transistors
- d. Hartley Oscillator Trainer
- e. Colpitt Oscillator Trainer
- f. Phase Shift Oscillator Trainer
- g. Wein Bridge Oscillator Trainer (Using Operational Amplifier Ic 752)
- h. Relaxation Oscillator Trainer (Using UJT)
- i. Tuned Collector Oscillator Trainer
- j. Wheatstone Bridge Trainer
- a. De Sauty's Bridge Trainer
- b. Phase Shift Oscillator Trainer (Using Operational Amplifier IC 752)



6. Microprocessor & Microcontroller Lab

- a. 8031 Microcontroller Training Kit inbuilt power supply
- b. 8085 Microprocessor Training Kit with inbuilt power supply
- c. 8086 Microprocessor Training Kit with inbuilt power supply



7. Optical Communication Lab

- a. Fiber Optic Trainer
- b. Connectorisation And Splicing Kit
- c. Basic Simplex Analog Fibre Optic Trainer
- d. Basic Simplex Digital Fiber Optic Trainer
- e. Basic Duplex Fiber Optic Analog Trainer
- f. Basic Duplex Fiber Optic Digital Trainer
- g. Design Of Fiber Optic Advanced Analog Transmission Trainer
- h. Design Of Fiber Optic Advanced Digital Transmission Trainer (Micro Controller Based)
- i. Laser Diode Intensity Modulation Trainer
- j. Basic Fiber Optic Trainer For Numerical Aperture And Fibre Loss Measurements
- k. Optical Communication Trainer With Analog Link
- l. Optical Communication Trainer With Digital Link
- m. Optical Communication Trainer With Analog /Digital Link
- n. FM Modulation & Demodulation Using Fiber Optics

- o. AM Modulation & Demodulation Using Fiber Optics
- p. PAM Modulation & Demodulation Using Fiber Optics
- q. PWM Modulation & Demodulation Using Fiber Optics
- r. PPM Modulation & Demodulation Using Fiber Optics
- s. PSK Modulation & Demodulation Using Fiber Optics
- t. FSK Modulation & Demodulation Using Fiber Optics
- u. ASK Modulation & Demodulation Using Fiber Optics
- v. PCM Modulation & Demodulation Using Fiber Optics
- w. Fiber Optics Trainer Of Numerical Aperture & Fiber Cable Loss
- x. AM/FM Modulation & Demodulation Using Fiber Optics
- y. PAM/PWM/PPM Modulation & Demodulation using Fiber Optics



8. Microwave Lab

- a. Gunn Diode Based Compact Microwave Training Kit
- b. Klystron Based Compact Microwave Training Kit
- c. Dielectric Constant & Phase Shift Measurement Microwave Trainer
- d. Faraday's Rotation apparatus
- e. Radiation Pattern Microwave Bench
- f. Klystron Based Microwave Bench
- g. Gunn Diode Based Microwave Bench



9. Digital Signal Processing Lab

PCI-DSP01

Digital Signal Processing Board

- PCI 32Bit/33MHz 5V/3.3V Compatible
- DSP Chip : TI TMS320C6205
- 16MByte SDRAM(Max. 64MB)
- Extension I/O Bus
- Boot Mode Option Selectable
- Clock, VID, PID Changeable
- Debug Through RS232C(McBSP)
- DSP Program load through PCI Development Program
- Low Cost DSP Board Development
- Provides an API for user application



10. Other solutions for Embedded System, Image Processing, VLSI Lab also available