

MI/PL/2017-18/263
Date: 13.09.17



To,
The Vice-Chancellor,
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Sub.: -Vendor registration for Lab Equipment of ET/ECE, EE, EI
and CS Departments under TEQIP-III.

Dear Sir/Madam,

We are leading manufacturer & distributor of Educational
Trainer kits and Test & measurement instrument for various
Department like Electrical, Electronics, Physics, Mechanical,
Biomedical, Chemistry & civil Lab etc.

Our customers are Industries, Research Lab, IIT's, NIT's,
Universities, Engineering, and Polytechnic & PG/UG Science
Colleges.

We are registered with NSIC. Registration
Registration No. NSIC/GP/IND/2016/10022407 dated 13.07.16 and
valid upto 09.06.2018.

Please register our company in your institute for purchase of
laboratory equipments /instruments under TEQIP and send us
enquiry/tender.

However, in case, you require any further clarifications,
please feel free to contact us.

Thanking you and we are assuring of our best attention always.

Yours faithfully,
For Mine Instruments Pvt. Ltd.

U.S. Sharma
Asha M
Marketing Executive



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3-1
18/9/17

Prof. U.S. Sharma
Vice-Chancellor
MPUAT, Udaipur

Reg IP Cell
16/20.9.2017

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AN ISO 9001:2008 Certified Company

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Mine Instruments Pvt Ltd is a leading manufacturer and distributor in the fields of -

- ▶ Educational Trainer Kit
- ▶ Test & Measuring Instruments
- ▶ Analytical Equipments
- ▶ RF and Microwave
- ▶ Research Equipments
- ▶ Customized Solutions

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www.mineindia.biz

Educational Trainer Kit

TV Trainers



LCD Monitor Trainer

- LED TV Trainer
- LCD TV Trainer
- Color LCD Monitor Trainer
- Color CRT TV Trainer

Electrical Bridges



Kelvin's Double Bridge Trainer

- Anderson's Bridge Trainer
- Schering's Bridge Trainer
- Hay's Bridge Trainer
- Kelvin's Bridge Trainer
- Kelvin's Double Bridge Trainer
- De-Sauty Bridge Trainer
- Maxwell's Bridge Trainer



MOSFET Characteristics Trainer

Power Electronics

- MOSFET Characteristics Trainer
- SCR Trainer
- DIAC Characteristics Trainer
- IGBT Characteristics Trainer
- BJT Characteristics Trainer
- Single Phase Half Controlled Converter
- Single Phase Full Controlled Converter
- TRIAC Characteristics Trainer
- SMPS Trainer
- Force Commutator SCR Circuit Trainer
- Single Phase Cycloconverter With R and RL Load.
- Relay Control Trainer
- DC Chopper using SCR
- Power Electronics Trainer
- Forced Commutation Study unit (Class A, B, C, D & E)



Anderson's Bridge Trainer

Electrical and Electronics

- Digital IC Trainer
- Linear IC Trainer
- Discrete Component Trainer
- Basic Electronics Trainer
- MI-EMT1 Embedded System Trainer
- 8051 Programmer
- AVR Programmer
- Angular Displacement Trainer.
- Temperature Transducer Trainer.
- Temperature Control with RTD.
- LVDT Trainer
- Integrating, Differentiating, Clipping & Clamping Circuits Using Diodes
- Hysteresis (B-H) Curve Demonstrator
- Series & Parallel Resonance
- Study of Analog Multimeter
- Study of h-Parameters of a Transistor
- Transistor Differential Amplifier



Maximum Power Transfer Theorem



Digital IC Trainer



Power Electronics Trainer

Digital Trainers

- 8-Bit ADC (Successive Approximation Method & Counter Comparator Method)
- 8-Bit ADC (Successive Approximation Method)
- 8-Bit ADC (Counter Comparator Method)
- 4-Bit DAC (R-2R Network Method)
- 8-Bit DAC (R-2R Network Method & Binary Weighted Network Method)
- 4-Bit Synchronous Binary Counter
- 4-Bit Binary Ripple Counter
- 4-Bit Up/Down Counter (Single Clock)
- 8-Bit Up/Down Counter (Ripple Clock)
- 4-Bit Ring Counter
- 3 Digit Decade Counter (3 X 1C 7490)
- Decade Frequency Scalar
- 4-Bit Decade Counter
- Modulo-N-Counter
- R-S & J-K Flip-Flop (Using IC 7476)
- R-S, D, T, J-K & J-K Master / Slave Flip-Flop (Using Gates)
- Multiplexer & Demultiplexer Using Gates
- 16 : 1 Multiplexer (Using IC)
- 1 : 16 Demultiplexer (Using IC)
- 8 : 1 Multiplexer & Demultiplexer (Using IC)



Embedded System



Voltage Regulator Trainer

Communication System

- GPS Trainer
- GSM Trainer
- DTMF Telephone Trainer
- DVD Player Trainer
- Hard Disc Drive Trainer
- Keyboard Trainer
- Computer Trainer



GSM Trainer



Single Phase Cycloconverter

Test & Measuring Instruments

Power Supplies



5V,1A || 12V,1A || 24V,1A
30V2A || 30V,3A
Single/Dual Output
CV/CC mode

DDS Function Generator



DDS Technique and FPGA Chip Design
Frequency Range : 0.1Hz~4/10MHz
High Frequency Accuracy : ± 20 ppm
Frequency Resolution : 100mHz
Low Distortion Sine Wave : -55dBc,0.1Hz~200kHz

Spectrum Analyser



Frequency Range: 9kHz ~ 3GHz
150kHz ~ 3GHz
150kHz ~ 1GHz

Large number of detectors
Optional 6GHz Power Sensor,
with/without Tracking Generator
Battery Back

LCR Meter



Handheld LCR Meter
Frequency Range:
100Hz / 120Hz / 1kHz / 10kHz / 100kHz
Basic Accuracy: 0.2% Basic Accuracy
Interface: USB

Digital Storage Oscilloscope



500MHz, 350MHz, 250MHz, 150MHz
300MHz, 200MHz, 100MHz, 70MHz
R/T Sampling Rate: 2GSa/s ~ 5GSa/s
Memory Depth: 25k points ~ 2M Points
Channel: 2, 4



150/100/70MHz
R/T Sampling Rate: 1GSa/s
Memory Depth: 1M points
Channel: 2



LCR Meter
Frequency Range: 10 / 5 / 1 MHz
Basic Accuracy: 0.1% Basic Accuracy
Interface: RS232 / GPIB



LCR Meter
Frequency Range:
10 Hz ~ 300k/200k/100k/20k/2kHz
Basic Accuracy: 0.05%
Interface: RS-232C, Handler
and USB storage

Generators

Arbitrary Function Generator



Analog Channel: 1
Frequency Range: 80MHz , 50MHz
Sample Rate: 200MSa/s
Vertical Resolution: 16 bits
Memory Length: 1M points



Name: Arbitrary Function Generator
Analog Channel: 2
Frequency Range: 1 μ Hz ~ 25MHz
Sample Rate: 120MSa/s
Vertical Resolution: 10-bit
Memory Length: 4k points

Multimeter

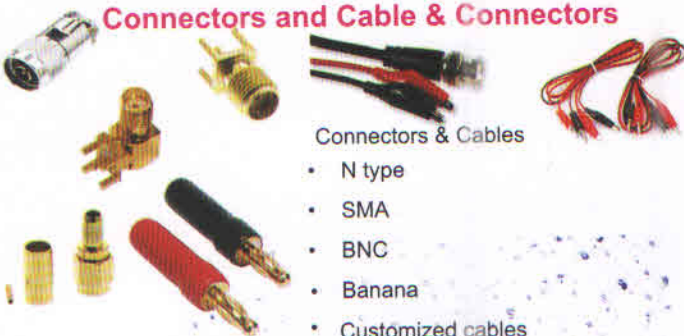


Digital Handheld Multimeter
3 1/2 digit Handheld
AC/DC voltage, AC/DC current
Resistance Test, Capacitance Test
Temperature , Diode , transistor,
continuity testing etc.



Digital Multi meter (Bench Type)
4 1/2 digit bench type
AC/DC voltage
AC/DC current
Resistance Test,
Capacitance Test
Continuity testing etc.

Connectors and Cable & Connectors



Connectors & Cables

- N type
- SMA
- BNC
- Banana
- Customized cables

Customized Solution

- Electrical
- Embedded Systems
- Automation
- Robotics



Research Equipments

- Research Equipments for Material Testing at Low Temperature and High Temperature

Analytical Equipments

UV Spectrophotometer



Spectral Range: 190 to 2500 nm
 Photometric Range: ± 2.5 Abs
 Bandwidth: 2, 5, 10 & 20 nm (selectable)
 Readability: 0.1nm
 Accuracy: ± 0.5 nm

Weighing Balance



High-capacity standard microbalance that comes with a weighing range of 5 to 220 g and a readability of 0.002 to 1 g. Its integrated features make daily lab routines convenient and reliable.

HPLC Binary System



Spectral Range: 190 to 800 nm
 Photometric Range: 0 to 3.0 AU
 Sensitivity Range 0.001 AU to 3.000 AU
 Readability 0.1 nm
 Accuracy ± 0.5 nm
 Spectral Repeatability ± 0.2 nm
 Photometric Readability 0.0001 Abs

BOD Incubator



Temperature Range: 5°C to 60°C
 Temperature Accuracy: ± 0.5 °C
 Uniformity: ± 2.0 °C

Micro controller based temperature indicator cum Controller with digital display and PT 100 sensor

Audio Visual Alarm if the temperature deviates from the preset temperature

Refrigeration System: Hermetically Sealed CFC Free Emerson Compressor with R 134a refrigerant.

Water Purification System



Water Quality
 Conductivity for Type 1: 0.055 μ S/cm (≈ 18.2 MO + cm)
 Typical conductivity for Type 3: < 20 μ S/cm (≈ 0.05 MO + cm)
 TOC content for Type 1: < 2 ppb
 Microorganisms: < 1 CFU/1,000 ml
 Particles: < 1/ml

pH Meter



pH Range: 0 to 14
 Temperature Range: 0 to 100°C
 Readability: 0.01
 Accuracy: ± 0.01 *
 Repeatability: ± 0.01
 Stability: ± 0.05 in 8 hrs

Laminar Air Flow



Filter: Type HEPA filter
 Efficiency: 99.99%
 Particle Retention: 0.3 Micron
 Cleanliness Class: 100
 Air flow velocity: 0.33 – 0.5 m/s

Ultrasonic Bath



Timer operation 1-99 min and continuous operation. Remaining cleaning time is optically displayed.
 Ultrasonic frequency 30 kHz.
 Tank contents 1.5 - 28 ltr.
 Digital Control of time and temperature.
 Longer tank life.

Lab Lyophilizer



20-30 Liter ice condenser,
 Shelf temperature -60°C to -70°C
 condenser temperature -60°C to -65°C
 Temperature and pressure indicator
 CFC free refrigeration system
 Lowest power consumption
 Computer attachment availability

Horizontal Autoclave



Smooth operations
 Excellent performance
 Low maintenance

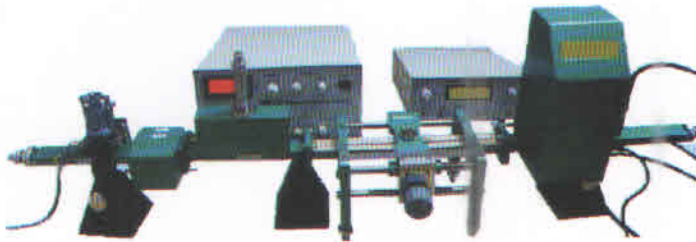
Electronic Pipettes



Channels: 1/8/12 channels
 Weight: 0.36-0.62 lbs
 Volume: 0.1-120 μ l

RF & Microwave Equipments

Microwave Test Bench



MI-MW01 Microwave Test Bench Klystron Based
 MI-MW02 Microwave Test Bench Gunn Based
 MI-MW07 Microwave Test Bench (Gunn + Klystron Based)

VSWR Meter



Sensitivity : 0.1 μ V for 200 Ω input impedance
Range : 0 – 60dB in 10dB steps
Input : Un-biased low and high
Input Frequency : 1000Hz \pm 10%

Klystron Power Supply



Beam Supply : 200 - 450 VDC, Variable
Current : 50 mA
Modulation : AM (Square) FM (Saw-tooth)
Frequency Range 500-2000 HZ 50-150 HZ
Amplitude 0-110 Vpp 0-60 Vpp
Modulation Selector: CW/AM/FM/EXT

Gunn Power Supply



Voltage Range : 0 to 10V
Current : 750 mA maximum
Ripple : 1.0 mV typical
Mode Select : Continuous wave
Internal Modulation : Square wave output
Int. Modulating Voltage : 0 – 10 Vpp variable
Output Connector : BNC for Gunn Bias

Microwave Generator



Frequency Range : 2.2 - 3 GHz Continuously Variable
Display Accuracy : 40 MHz
Impedance : 50 Ω
Min RF level : 5 mW
Output Level Variation : 10 - 20 dB
Operating Modes : Sweep, CW, Int. AM, Int. FM, Ext. AM, PC Comm.

RADAR Trainer



Sensitivity: -50 to -70 dBm
Transmitter Frequency: 10GHz
Output: 10mV(approximate.)
Antenna: Horn type(16dB gain)
 On board Alarm System
IF Output: Audio Range

DC Pass Bi-Directional Coupler



High Directivity, Bi-Directional
 High Directivity, Directional
 6 to 30 dB Directional / Bi-Directional
 High Power, Bi-directional
 High Power, Directional

Microwave Components



WaveGuides
 Horn Antennas
 X Band Components (8.2 to 12.4 GHz)
 C Band Components (4 to 8 GHz)
 S Band Components (2 to 4 GHz)
 L Band Components(0.5 to 1.5 GHz)
 Ku Band Components(12-toGHz)

Attenuator



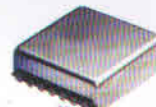
Adaptuators
 Fixed
 Fixed Precision
 Fixed, DC Passing
 Digital Step

Coaxial Adapter



50 Ω DC to 34 Ghz
 flat response
 excellent VSWR, 1.05 typ. up to 18 GHz
 and 1.08 typ. up to 34 GHz
 low cost adapters, available from stock
 rugged stainless steel body, passivated
 3.5 mm connector mates with SMA,
 K, 2.92 mm connectors

Narrow Band Phase Shifter



50 Ω 180 $^\circ$ Voltage Variable 1.8 to 2.5 MHz
 low insertion loss, 0.9 dB typ.
 good VSWR, 1.2:1 typ.
 solder-plated J-leads for excellent solderability
 and strain relief
 aqueous washable

Coaxial Power Splitter/ Combiner



High Power, 2,3,4,5,6&8 Way
 2 Way, 0 Degree
 2 Way, 90 Degree hybrid
 3 Way, 0 Degree
 4 Way, 0 Degree, Resistive

Frequency Multiplier X2



Frequency X2
 Frequency X3
 Frequency X4
 Frequency X5

Coaxial Low Noise Amplifier



50 Ω Freq. Range: 40 to 3600 MHz
 Gain: 13dB to 28dB
 DC Power: 4-15V
 Max. Power Output: 3-26dBm

Coaxial Phase Detector



50 Ω High Output 1 to 100 MHz
 wideband, 1 to 100 MHz
 low DC offset, 0.2 mV typ.
 high DC output, 1000 mV typ.

Communication Lab



- Amplitude Modulation & Demodulation
- Frequency Modulation & Demodulation
- Pulse Amplitude Modulation & Demodulation
- PAM, PWM & PPM Modulations Demodulation
- Pulse Width Modulation & Demodulation
- Pulse Position Modulation & Demodulation
- Sampling Theorem & Reconstruction
- Time Division Multiplexing & De-multiplexing (Analog)
- Frequency Shift Keying Modulation & Demodulation
- Phase Shift Keying Modulation & Demodulation
- Differential Phase Shift Keying Modulation & Demodulation
- Delta Modulation & Demodulation
- Pulse Code Modulation & Demodulation
- Differential Pulse Code Modulation & Demodulation
- Balanced Modulator and Synchronous Detector
- Squelch Trainer for FM Demodulator
- Pre-Emphasis & De-Emphasis
- Diode Detector Characteristics
- Digital Phase Detector
- Amplitude Shift Keying Modulation & Demodulation
- BPSK/DPSK/DEPSK Modulation/Demodulation Trainer
- QPSK and DQPSK Modulation Kit
- QPSK and DQPSK Demodulation Kit
- Base Band Digital Transmitter Kit
- DPCM and ADPCM Modulation/Demodulation Kit

Network Lab



- Thevenin's Theorem with Digital Meters
- Superposition Theorem with Digital Meters
- Norton's Theorem with Digital Meters
- Reciprocity Theorem with Digital Meters
- Maximum Power Transfer Theorem with Digital Meters
- Network Theorems with Digital Meters
- Millmann's Theorem with Digital Meters
- Kirchhoff's Laws with Digital Meters
- Ohm's Law with Digital Meters
- Two Port Network Parameters
- Lead Lag Network
- Study of Millers Theorem
- Study of Phase Splitter
- Linear wave shaping (RL & RC) circuit
- Non Linear Wave Shaping Circuit (Clipper & Clampers)
- Twin-T Network Characteristics
- Loop & Nodal Analysis
- Star-Delta (Y-A) Transformation
- T & p (PAI) ATTENUATORS
- Measurement of Image Impedance and Characteristics
- Impedance of Network
- Phase Difference in L.C.R. Circuit
- Study of Phase Difference between Voltage across & Current through C & L
- Transient Response of an RLC Circuit
- LC Transmission Line

Registered With -



Distributors -



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