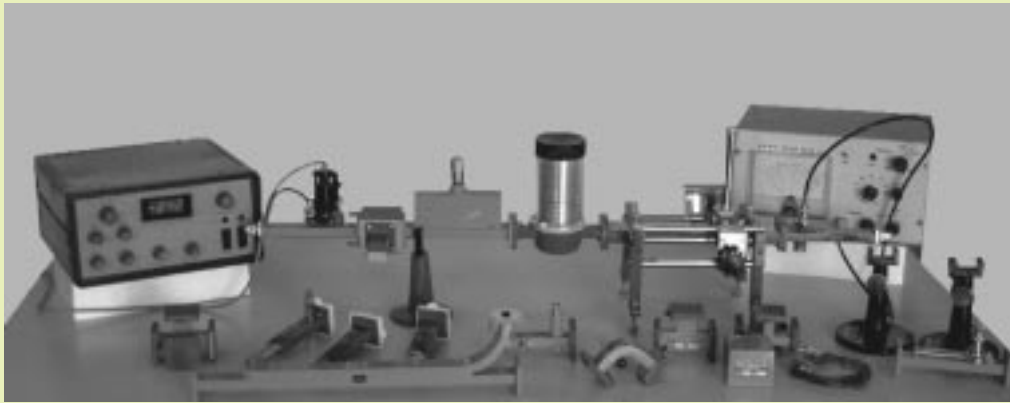


Microwave Test Benches



High Quality & Reliability
 Unmatched Support
 High Finish
 All bands including X-band
 (8.2-12.4GHz)

The MT9000 series of Microwave Training Benches are precision made microwave systems, which use standard type wave-guide components to illustrate the essential elements of this field of study.

The equipment consists of:

- a selection of wave-guide components
- the power supply for the microwave source
- a detector
- a meter, which monitors the detector output.

These Training Benches are completely self-contained and provide the means to allow students to carry out practical work at extremely low cost.

A comprehensive manual containing extensive microwave theory and a progressive series of assignments is supplied with the Trainer.

Experimental Topics :

- Study of Reflex Klystron, Gunn Oscillator
- SWR, Reflection Coefficient Measurement
- Radiation Pattern of Antennas
- Dielectric Measurement of Solids/Liquids
- Study of E-Plane, H-Plane, Magic Tees, Bend
- Study of Fixed/Variable Attenuator
- Frequency, Guide Wavelength Measurement
- Impedence Measurement
- Measurement of Gain of Antennas
- Phase Shift Measurement
- Study of Directional Couplers
- Study of Isolator's Circulators

Technical Specifications

Microwave Test Bench MT9000

Solid State Klystron	:	1
Power Supply	:	
Klystron Mount with	:	1
Klystron tube 2K25	:	
Isolator	:	1
Frequency Meter	:	1
(Direct Readout)	:	
Variable Attenuator	:	1
Slotted Section	:	1
Tunable Probe	:	1
Detector Mount	:	1
Movable Short	:	1
Matched Termination	:	1
VSWR Meter	:	1
Wave Guide Stand	:	5
S. S. Tuner	:	1
Accessories :		
Cooling Fan	:	1
BNC Cable	:	2

Microwave Test Bench MT9001

Solid State Gunn Power Supply:	1
Gunn Oscillator	: 1
PIN Modulator	: 1
Isolator	: 1
Frequency Meter	: 1
(Direct Readout)	
Variable Attenuator	: 1
Slotted Section	: 1
Tunable Probe	: 1
Detector Mount	: 1
Movable Short	: 1
Matched Termination	: 1
VSWR Meter	: 1
Wave Guide Stand	: 5
S. S. Tuner	: 1
Accessories :	
Cooling Fan	: 1
BNC Cable	: 2
TNC Cable	: 1

Microwave Test Bench MT9002

Solid State Gunn Power Supply:	1
Gunn Oscillator	: 1
PIN Modulator	: 1
Isolator	: 1
Frequency Meter	
(Direct Readout)	: 1
Variable Attenuator	: 1
Detector Mount	: 1
VSWR Meter	: 1
Mechanical Turn Table	: 1set
Standard Gain Horn	: 1
E-Plane Bend	: 2
H Plane Bend	: 1
Wave Guide Stand	: 5
Accessories :	
Cooling Fan	: 1
BNC Cable	: 2
TNC Cable	: 1
Antennas :	
Pick up horn,	: 1
Slotted Antenna-Broad Wall	: 1
Dielectric Antenna	: 1
E Sectorial Horn	: 1
Parabolic Disc (with feed) 8" dia.:	1
Pyramidal Horn	: 1
(Also available with Klystron)	

Gunn Power Supply

Gunn Power Supply comprises of an electronically regulated DC power supply and a square wave generator, designed to operate Gunn-Oscillator and PIN-Modulator simultaneously. The DC voltage is variable from 0 to 10 Volts. The front-panel meter monitors the Gunn voltage and the current drawn by the Gunn-diode. The frequency of square wave can be continuously varied from 900 to 1100HZ.

The power supply has been so designed to protect Gunn diode from reverse voltage application, over voltage and transient low frequency oscillations.

Specifications :

Voltage Range	:	0 to 10 V
Current	:	0 to 750 mA (Max.)
Regulation	:	0.2% for \pm 10% mains Variation .
Ripple	:	2mV (rms)
Modulation. Frequency	:	900 - 1100 Hz, Square wave
Modulation Amplitude	:	0 - 10.0 V (peak to peak) .
Output connector	:	BNC (F) for Gunn-bias UHF (F) for Pin-mod.
Mains	:	230 V, 50 Hz, 25 watts approx.
Standard Accessories	:	Main Cable, Coax Cable, BNC to BNC, Coax Cable BNC to UHF, Spare Fuse & Manual

Klystron Power Supply

Klystron Power Supply, is a state-of-the-art solid state, regulated power supply for operating low power Klystrons.

It has following features :

- Regulated Beam Supply and Repeller Supply voltages.
- Overload TRIP protection for Beam Supply output.
- LED Digital metering for Beam Voltage, Current & Repeller voltage.
- Stand-by mode.
- Ultra compact and Reliable.
- Modular construction for easy maintenance.

In addition to AM and FM modulation of Beam current, a provision for externally modulating the Klystron supply with desired signal waveform has been provided.

It utilizes quality components, rugged construction and ergonomic designed front panel. A careful handling of the instrument will provide years of trouble free service.

Specifications:

Input Voltage	:	230 VAC; \pm 10%, 50 Hz
Beam Supply	:	Voltage : 240 - 420 VDC, Variable Current : 50 mA Regulation: 0.5% for 10% I/P variation Ripple : < 5mv RMS
Repeller Supply	:	10-270 VDC, Variable Regulation 0.25% for 10% I/P variation
Filament Supply	:	6.3 VDC
Over-load Trip Current	:	65 mA
Modulation	:	A M (Square) FM (Saw-tooth)
Frequency Range	:	500 - 2500 Hz 150 - 300 Hz
Amplitude	:	0 - 110 V 0 - 65 V
External	:	Through external Modulating Signal
Display	:	Digital display for (a) Beam voltage, (b) Beam current, (c) Repeller voltage
Standby Mode	:	Only Heater Supply ON
Connectors	:	(a) 8-Pin Octal Socket, (b) BNC for External Modulation
Mechanical Dimensions	:	26.5 (L) X 13 (H) X 26.5 (D) Cm

Microwave Test Bench MT9003

Solid State Klystron Power Supply	:	1
Klystron Mount with Klystron Tube 2k25	:	1
Isolator	:	1
Frequency Meter (Direct Readout)	:	1
Variable Attenuator Slotted Section with Probe carriage	:	1
Tunable Probe	:	1
Detector Mount	:	1
VSWR Meter	:	1
Wave Guide Stand	:	5
Precision Short	:	1
Component under Test:		
Solid Dielectric Cell	:	1
Liquid Dielectric Cell	:	1
Phase Shifter	:	1
Samples of solid Dielectric	:	5
Accessories :		
Cooling Fan	:	1
BNC Cable	:	2

(Also available with Gunn Oscillator)

Microwave Test Bench MT9004

Solid State Gunn Power Supply	:	1
Gunn Oscillator	:	1
PIN Modulator	:	1
Isolator	:	1
Frequency Meter (Direct Readout)	:	1
Variable Attenuator Slotted Section	:	1
Tunable Probe	:	1
Detector Mount	:	1
Movable Short	:	1
Matched Termination	:	2
Wave Guide Stand	:	5
VSWR Meter	:	1
Fixed Attenuator: 3dB	:	1
Fixed Attenuator: 6dB	:	1
Fixed Attenuator: 10dB	:	1
Variable Attenuator : 20dB	:	1
E-Plane Tee	:	1
H-Plane Tee	:	1
Magic Tee	:	1
Directional Coupler : 3dB	:	1
Directional Coupler : 10 dB	:	1
Cross Directional Coupler : 20 dB	:	1
T- Circulator	:	1
Y- Circulator	:	1
Accessories :		
Cooling Fan	:	1
BNC Cable	:	2
TNC cable	:	1

(Also available with Klystron)



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