

## Features

- The Microwave trainer is a basic trainer which enables students to investigate the principles of microwave transmission systems such as those used in radar and communication links.
- The trainer is a bench top standard microwave system which is completely self-contained and use standard WR90/WG16 waveguide components to illustrate the essential elements of this field of study.
- The equipment comprises a set of waveguide components and a microwave console. The console contains the power supply for a modulated solid state X-band microwave source, a bridge type power measuring bolometer (thermistor type), and a meter which may be switched to monitor either as a detector output or as the supply current to the bridge.
- The experiment in microwave system provides a realistic practical work for student to carry out experiment, and it is suitable for courses ranging from technician studies to degree level.
- The whole system components are stored in the protective suite case.
- Complete with comprehensive Experiment manual book to guide student step by step in conducting experiments.

# Microwave Trainer

## PT 94124



## Specification

- **Microwave Console [ PTE-010-01 ]**
  - Supply voltage : AC 220V / 50Hz
  - Input/Output terminal type : BNC connector
  - Meter reads monitor for :
    - Detector Output
    - Bridge Current
  - Power Supply for a Modulated Solid state X-band Oscillator
  - Power measuring bolometer bridge
  - External Modulated Terminal (4mm) for X-band Oscillator
  - Amplifier Sensitivity for detector
- **Microwave Oscillator Components**
  - Band frequency : X-band
  - Frequency oscillation : 10.687GHz
  - Power output : 10mW (approx.)
- **Microwave System Components**
  - Standard type of waveguide : WR90 (USA) / WG16 (Europe)
  - Dimension of waveguide : 9.8 x 22.5 mm
  - Dimension of slotted line : Scaled in mm
  - Materials : Nickel plated brass
- **Microwave Trainer Suite Case [ PTE-010-02 ]**
  - When not in use, the system components can be stored in the protective suite case
  - Dimension (W x L x H) : 18 x 64 x 45 cm

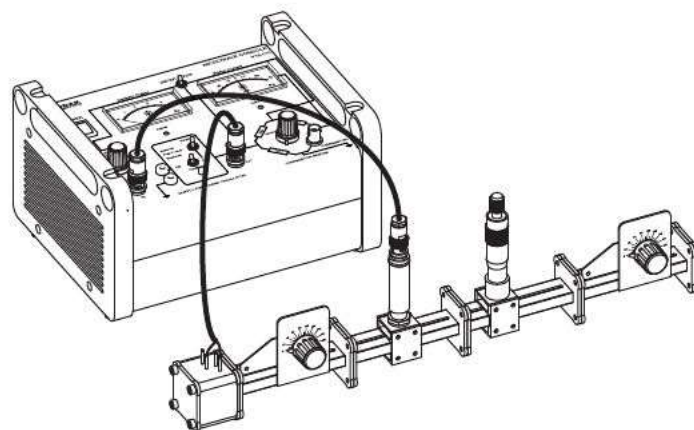
## Covered Topics

- TE04001E Fundamental of Frequency and Wavelength
- TE04002E Measurement of Voltage Standing Wave Ratio (VSWR)
- TE04003E Measurement of Microwave Power
- TE04004E Detector Characteristics
- TE04005E Measurement of Impedance
- TE04006E Microwave Tuner
- TE04007E Directional Coupler
- TE04008E Series and Shunt Tee Coupler
- TE04009E Horn Antenna
- TE04010E Doppler Radar
- TE04011E Use of Coaxial cable

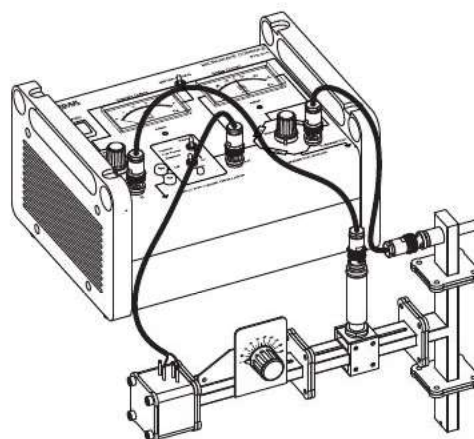
## Training Panel System

### PT 94124 Microwave Trainer consists of

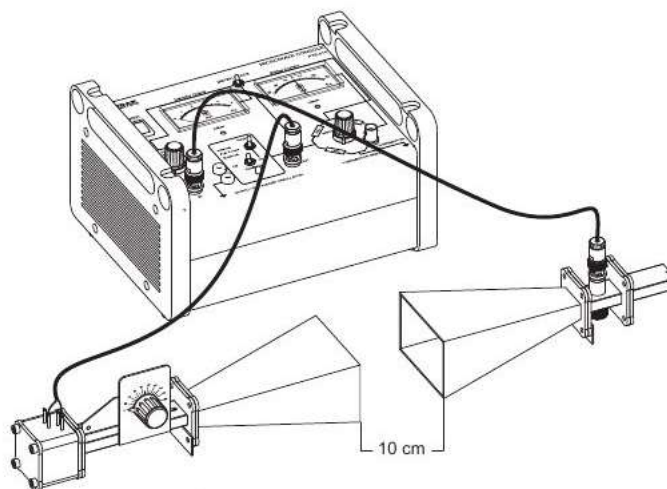
Cat. No.	Description	Qty.
PTE-010-01	Microwave Console	1 unit
PTE-010-02	Microwave Trainer Suite Case	1 unit
PTE-010-A	Variable Attenuator	2 pcs
PTE-010-B	Slotted Line for use with Probe Detector	1 pc
PTE-010-C	Slotted Line Tuner	1 pc
PTE-010-D	Cavity Resonator	1 pc
PTE-010-E	Shunt Tee	1 pc
PTE-010-F	Directional Couple	1 pc
PTE-010-G	Series Tee	1 pc
PTE-010-H	Hybrid Tee	1 pc
PTE-010-J	Waveguide / Coaxial Adapter	2 pcs
PTE-010-K	Resistive Terminator	1 pc
PTE-010-L	Bolometer (Thermistor-type)	1 pc
PTE-010-M	Diode Detector (in Waveguide Section)	1 pc
PTE-010-N	Horn Antenna	2 pcs
PTE-010-P	X-Band Oscillator and Cable Assembly	1 pc
PTE-010-R	Short Circuit Terminator	2 pcs
PTE-010-S	Probe Detector	2 pcs
PTE-010-T	Coupling Plates	24 pcs
PTE-010-U	Support Plates	4 pcs
PTE-010-V	Thumb Nuts	48 pcs
GSC 230 06	N to N Connecting Lead	1 pc
GSC 230 04	BNC to BNC Connecting Lead	2 pcs
T04S-01E	Experiment Manual Book	1 pc



TE04006E | The Microwave Tuner



TE04008E | Series And Shunt Tee Coupling



TE04010E | The Doppler Radar

Specifications and illustrations are subject to change without prior notice