

MICROWAVE TRAINER**56-200****Description**

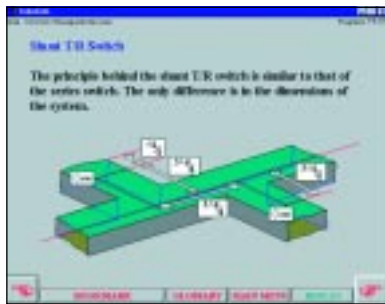
The Feedback Microwave Trainer 56-200 is a basic trainer that enables students to investigate the principles of microwave transmission systems such as those used in radar and communication links. It is a precision made, bench-top microwave system which uses standard type WG16 (WR90) waveguide components to illustrate the essential elements of this field of study. The equipment has a selection of waveguide components and an electronic supply console containing the power supply for a modulated solid-state Dielectric Resonance Oscillator (DRO) X-band microwave source, a demodulation circuit and a meter which monitors the detector output. The trainer is supplied in a dedicated, protective, carrying case, is completely self-contained and provides the means to allow students to carry out realistic practical work at extremely low cost per workstation. It is suitable for use in courses ranging from technician studies to degree level. A comprehensive manual containing extensive microwave theory and a progressive series of assignments is supplied with the Trainer.

Features

- **Low cost.**
- **No ancillary equipment needed.**
- **Simple, robust stands for antenna studies.**
- **Modulated 10.425GHz solid state DRO source.**
- **Conveniently packed for inventory control.**
- **Each component is identified with an inscribed reference number.**

Specification

Manual Contents



An optional CAL package is available.

An outline of simple transmission line theory as an introduction to waveguide principles, which are illustrated by nine assignments
Introduction to a microwave waveguide bench and measurement of:

(a) source frequency (b) guide wavelength
Measurement of voltage standing wave ratio (VSWR).
Measurement of diode detector law.
Measurement of impedance and impedance matching.
Measurement of radiation diagram of a horn antenna.
Use of directional couplers in power transmission and reflection measurement.
Series, shunt and hybrid Tee waveguide junctions.
Waveguide-to-coaxial transformers.
Microwave radio link investigations.

In addition, there are appendices covering: general, RF and microwave data and tables; a review of transmission line theory and the Smith Chart and its applications.

Control Console

Power Supply: 200-250V, 50Hz
Fuse rating 315mA
Modulator bandwidth: 10kHz min
Oscillator power supply: +18V nom

Waveguide Components

Nickel plated and painted brass, type WG16 (WR90) waveguide and flanges.

Component identifying letter on flange:

Variable Attenuator (2 off) - rotating Vane type

Slotted line - sliding detector probe carriage

Slotted Line - sliding screw tuner

Frequency Meter (uncalibrated) - absorption cavity type

Shunt Tee

Directional Coupler

Series Tee

Hybrid Tee

Probe Detector Assembly

Waveguide to Coaxial Adapter (2 off)

Resistive Terminator

Diode Detector - Fixed in waveguide section

Horn Antennas (2 off)

Solid-state X-band Oscillator - Frequency: 10.425 GHz nom
- Output Power: 10mW min

Blank Ends (2 off)



Dimensions and Weight (in protective case)

Height: 370mm (14.6in), **Width:** 518mm (20.4 in),
Depth: 121mm (4.75), **Weight:** 9.1kg (20lb)

Tender Specification

Microwave Trainer operating in the X-band, comprising standard WG16 waveguides components, a solid state DRO source and a supply console providing all necessary power supplies, modulating facilities and metering, plus a tutorial text containing at least nine assignments.

Ordering Information

Order: 'Microwave Trainer' 56-200'
Order: 'Waveguides CAL package (not supplied with 56-200)' 95-119'

For further information on these and other equipment in the Feedback range please contact



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