

Dinesh Micro Waves & Electronics

MICROWAVE COMMUNICATION TRAINING SYSTEM

Dinesh Microwaves And Electronics Microwave Communications training systems provides a complete hands-on course of study in the principles of microwaves communications. Supplied with a laboratory manual containing both theory and practical exercises contains all the necessary hardware to allow students to explore the real-life applications and limitations of microwaves. The practical exercises and assessments contained in the laboratory manual help students to understand how physical phenomena such as Interference, Propagation and Absorption of microwaves can have serious effects upon the performance of communications systems.



TRAINER KIT

1. Klystron power supply.
2. Klystron tube with mount.
3. Variable attenuator.
4. Direct reading frequency meter.
5. Slotter station with tunable probe and ect.

Dinesh Micro Waves & Electronics

No. 347, (C4 & C5) SLI Complex, 7th Street, Gandhipuram

Coimbatore - 641 012, Tamil Nadu, India

Phone: +(91)-(422)-4371112 / 2694313

Fax: +(91)-(422)-2694313

Mobile: +(91)-9952444222

Email: dinesh.microwaves@hotmail.com , dinesh.microwaves@airtelmail.in ,
sathish.varadarajan@airtelmail.in

RADAR TRAINING SYSTEMS

Dinesh Microwaves and Electronics Radar Training kit is a comprehensive trainer comes with all necessary microwave components, In this trainer kit all importance has been given to understand the basic principles of radar operation. System consists of a microwaves and modulator followed by a variable attenuator and transmit antenna in form of horn. Target is metallic reflector and the receiver consists of horn antenna and detector pulse from modulator is applied to CRO. The returned reflected signal is also applied to CRO to measure time delay of returned signal.



TRAINING KITS

1. Klystron power supply
2. Klystron tube non tunable detector mount
3. Variable attenuator 30db
4. Horn antenna
5. Detector
6. CRO
7. Target plate
8. Cables

LIST OF EXPERIMENTS

1. Measurement of distance of an object (Reflector)
2. Observe effect of pulse width and PRF in Radar
3. Observe effect of object in motion
4. Study of target signatures with radar absorbing objects

Dinesh Micro Waves & Electronics

No. 347, (C4 & C5) SLI Complex, 7th Street, Gandhipuram

Coimbatore - 641 012, Tamil Nadu, India

Phone: +(91)-(422)-4371112 / 2694313

Fax: +(91)-(422)-2694313

Mobile: +(91)-9952444222

Email: dinesh.microwaves@hotmail.com , dinesh.microwaves@airtelmail.in ,
sathish.varadarajan@airtelmail.in

Antenna Gain measurement using professional microwave instruments. Microwave test bench using modern microwave equipments at C band. Most of microwave measurement are done at X band with outdated cheap technology using slotted line measurement, which are prone to error. Therefore it is suggested to use C band microwave measurement up to 6 GHz. As microwave instrumentation available in market is now affordable and it gives knowledge to students to handle state of art technology. Some cost effective instruments are Network Analyzer cum spectrum analyzer.

1. Antenna measurement system consist of

Mechanical equipment DUT positioner & TX positioner. Control equipment which is positioner controller, control unit & cables. Computer, analysis & acquisition software & printer.

2. RF Equipment Consists of:

250 KHz to 6 GHz RF Synthesizer 10 MHz to 6 GHz Vector Network Analyzer RF Accessories i.e. RF Coupler, RF Switch, GPIB Extender & set of RF Cables Standard gain Horn Antennas covering from 0.5 GHz to 12 GHz 1 set E. XY Plotter

3. Modular Anechoic Chamber:

size 15' (W) X 12' (H) X 25' (L) Chamber will consist of GI coated sheet fixed on wooden frame. The chamber can be easily installed & commissioned at site in RF lab. Chamber consist of shielded door

4. List of Antenna:

Antennas ar C band:, Horn, Spiral, Log periodic, Micro Stip, Wimax, BTS (Cellular base station), Probe.

Dinesh Micro Waves & Electronics

No. 347, (C4 & C5) SLI Complex, 7th Street, Gandhipuram
Coimbatore - 641 012, Tamil Nadu, India
Phone: +(91)-(422)-4371112 / 2694313

Fax: +(91)-(422)-2694313

Mobile: +(91)-9952444222

Email: dinesh.microwaves@hotmail.com , dinesh.microwaves@airtelmail.in ,
sathish.varadarajan@airtelmail.in

List of Equipments

Vector network analyzer 6GHz plus signal generator upto 6GHz anritsu model with calibration & test cables.

List of Components

Wave guide loads- 2nos, Directional coupler 10 db, Waveguide twist, Cross coupler, SS turner, Detector, W/G to coaxial adopter – 2 nos, Magic Tee, Tee E/H Plane, Isolator, Dialectic cell solid / liquid

List of Experiments

Measurement of VSWR, Measurement of impedance, Measurement on directional coupler, Measurement of magic tee, Isolator / circulator, Measurement of relative power, Measurement of dielectric constant of solid, Measurement of dielectrics constant of solid, Measurement of dielectrics constant of liquid. Measurement of phase

ADVANCED MICROSTRIP TRAINER KIT WITH ANRITSU VNA

Study of Low pass filter, Study of Band Pass filter, Study of Band stop filter. Study of Ring Resonator, Study of Branch line Coupler , Study of hybrid ring Coupler Study of parallel of Parallel-coupled line coupler, Study of Power divider-I, Study of Power divider-II , Study of Amplifier, Patch Antenna-I, Patch Antenna-II.

The details of Kit are as follows in SMA Connectors

Low pass filter, Band pass filter, Band stop filter, Rat Race, Branch Line coupler, Hybrid. Ring Coupler, Parallel Coupled line Coupler, Power divider 1:2, Patch Antenna – 2 nos, Isolator, Modulator Coaxial , Coaxial Adopter Kit, Coaxial Cables