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SYSTEMS

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Modern Communication

Fiber Optic Communication

Antennas

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Telecommunication Networks

# MDC-3241

## Antenna Training System

Degem's MDC-3241 Antenna Training System is an ideal training equipment to teach the important fundamentals of antennas as applied to modern communication systems.

The MDC-3241 Antenna Training System has been specially designed for engineering colleges and technical training centers. It is very useful for practical verification of antenna operating characteristics by students. All of the necessary measuring equipment and accessories are provided in the training system.

The workbook provides theoretical concepts and detailed experiment procedures for each type of antenna.

The training system includes set of modular mechanical elements forming various antennas, a transmitter unit and a detector unit. All the accessories are packed in a convenient carrying case.

- RF and tone generators included
- Directional coupler, matching stub, forward/ reverse meter and goniometer are also provided
- Several experiments with different types of antennas
- Antenna fabrication kit
- Measure forward & reverse power
- SWR measurements
- Fully documented student workbook and operating manual

# Specifications

## TECHNICAL CHARACTERISTICS

- RF generator (750MHz approx., adjustable output)
- Tone generator (1KHz approx., adjustable output)
- Directional coupler (forward & reverse selectable)
- Matching stub (slider type)
- Antenna rotation (0-360°, resolution 1°)
- Receiving antenna (folded dipole with reflector)
- Detector display (adjustable level meter)
- Power supply (220V ±10%, 50Hz, 3VA (approx.))
- Interconnections (4mm banana sockets)
- Dimensions - W 520 × H 120 × D 300 (main unit)
- Weight - 2.8Kg (main unit)

## EXPERIMENTS

- Polar plots & polarization
- Wave modulation & demodulation
- Antenna gain, Antenna beam width study
- Element current, front-back ratio study
- Antenna matching
- Antenna radiation with distance

## SUPPLIED ACCESSORIES

### Transmitting Antennas

- Dipole l/2
- Folded dipole l/2
- Dipole l/4
- Yagi UDA folded dipole (3 E)
- Yagi UDA folded dipole (5 E)
- Yagi UDA dipole (7 E)
- Yagi UDA dipole (5 E)
- Horizontal end fed hertz antenna
- Horizontal end fed zeppelin antenna
- Ground plane antenna
- Ground plane with reflector & director
- Slot antenna l/2
- Loop antenna
- Helix antenna
- l/2 phase array
- l/4 phase array

- Combined collinear array
- Log Periodic antenna
- Rhombus antenna
- Cut parabolic reflector antenna
- 3l/2 dipole antenna
- Broadside array
- Current probe
- Mounting stands
- BNC-tee
- BNC-BNC adapter M
- BNC-BNC adapter F
- BNC-BNC cable
- Screwdriver
- Operating manual
- Student workbook
- Radiation pattern plotting software
- Antenna reference text by J. Kraus
- Polar graph
- Antenna fabrication kit
- Power cord
- Accessories case

## REQUIRED ACCESSORIES

Personal computer with MS-Windows

## INSTRUCTIONAL MATERIALS

The experiment manual was written by pedagogical experts in modern antenna technology. The essential theory to understand and perform the experiments is provided. The procedure for each experiment is clearly written to allow the students to easily complete each experiment.