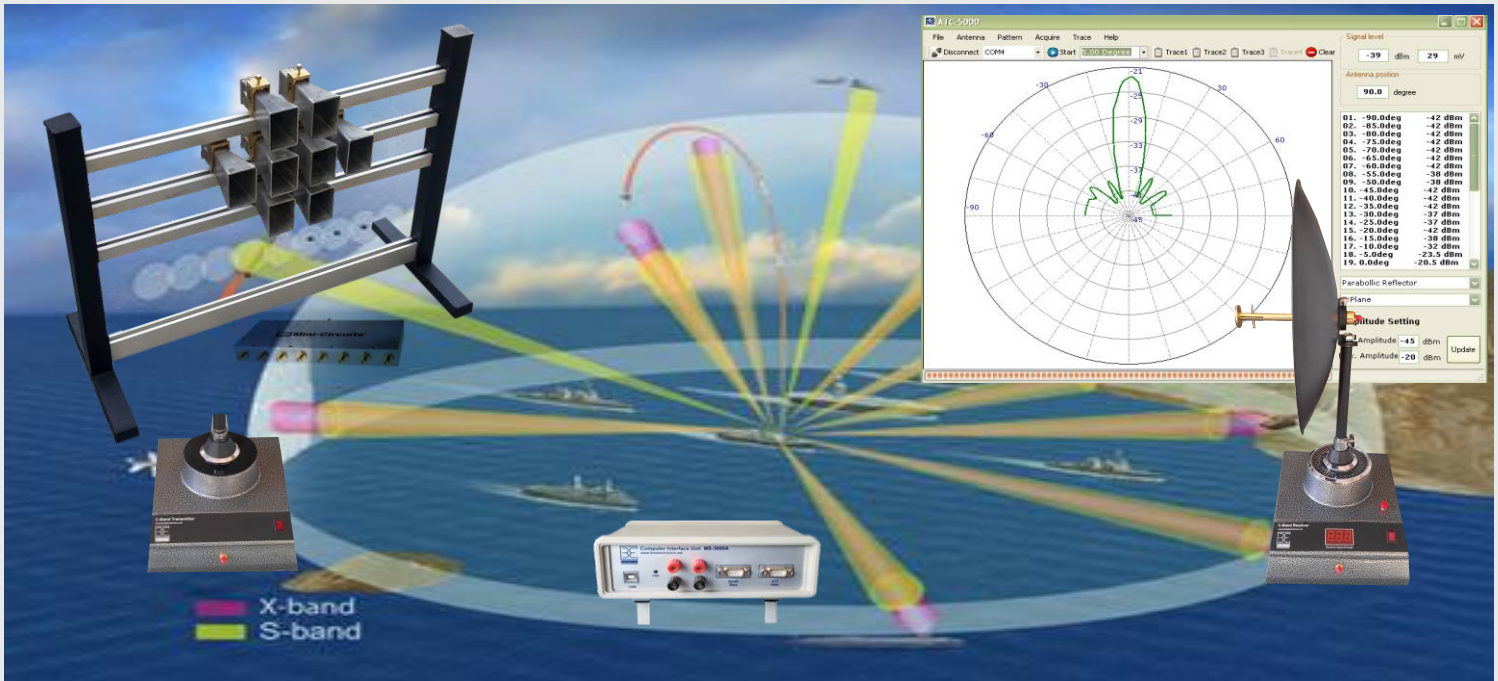


# Phased Array Antenna Trainer PAT-5000

**TECHNICAL  
Bulletin**



PAT-5000 is completely computerized antenna array training system that performs PC based automated rotation of receiving antennas at predefined angles and GUI-based polar plots of radiation patterns of each antenna. PAT-5000 comprises of C-Band microwave transmitter receiver and set of eight element Horn antennas. It is a low cost high performance antenna arrays training system that is also used as a design tool for those engaged in research and development of projects in the field of antennas.

## Experiments

- Familiarization with phased array antenna trainer
- Study of phased array antenna components
- Study of Horn antenna and its radiation pattern
- Measurements of Horn antenna gain
- Pattern characterizations of linear and planner array
- Pattern Synthesis of linear Arrays
- Pattern Synthesis of planner Arrays
- Effect of isolation and spacing between elements
- Study of fixed amplitude and phased errors in periodic arrays
- Study of non-planner arrays
- Study of broad-side array and grating lobes with nulls placement

## Features

- Stand alone, Low cost system
- C-Band Frequency of operation
- GUI based PC Interface
- Safe low power output
- Digital Phase shift control
- Linear and Planner Array configuration
- Azimuth Antenna Positioner
- Antenna pattern measurement USB Interface



## Specifications

- Frequency: 5.5GHz  $\pm$  200MHz synthesized
- Output Power: 10-20 mW
- Antenna: Pyramidal Horn
- Antenna Gain: 18dB
- No. of Elements: 8
- 6 Bit Digital phase shifter 6° to 360°

