

**Product Name :**  
Radar Trainer

**Product Code :**  
NLAB-ELECTRONICSAB200015



**Description :**

Radar Trainer

**Technical Specification :**

The Radar Trainer is a very useful and realistic classroom training equipment. provided with different types of accessories for experimentation and a based software for observation and calculation of different parameters. On-board Test points are provided which enable students to observe the signals on an Oscilloscope or a PC. The trainer is capable to measure the Speed of object, Frequency of vibrations and RPM of any fan. Students can also study the properties of different types of material like Metal, Acrylic, ptfе, Bakelite, etc.

**Technical Specifications**

Transmitter Frequency : 10 GHz

Output Power : 10 mW (approximate)

Operating Voltage : 8.6 V

Antenna : Horn

Antenna Gain : 16dB

Sensitivity : -50 to -70dBm

IF Output : Audio range

Power Supply : 230 V $\tilde{A}$ ,  $\pm 10\%$ , 50 Hz

Alarm : Onboard

About Software

Oscilloscope : Real time/Storage mode with FFT analysis

Display : Voltage : Vpp

Speed : Km/hr, Miles/hr, m/s, rpm

Frequency: Hz & kHz

Time domain window : Display the Doppler Frequency in Time domain

Frequency domain window : Display the Doppler Frequency in Frequency domain

Control Panel window :

User interface for :

Measurement of Doppler

Frequency, Amplitude

Measurement of Velocity, RPM

Features :

Complete hardware and software setup to demonstrate Radar concepts

Signals study on Software / Oscilloscope with the help of test points given on trainer

Object counter provided on trainer

Real time fan RPM measurements and vibrations measurements with the help of tuning forks

Tripod stand provided for height and level matching

LED Indication for Doppler Echo Signal

On board alarm for detected signals

#### Utilities :

Start / Stop of Display

Setting of Time base and Amplitude range on display window

Printing of Doppler Frequency signal

Cursors for Time & Voltage measurements Save, Load

#### Scope of Learning

Study of the working of a Doppler Radar

Study of determine the Velocity of the object moving in the Radar range

Study of understand the principle of Doppler Radar of Time and Frequency measurement with the help of moving pendulum

Study of an Alarm System by using Radar

Study the Object Counting with the help of Radar Study of the detection of vibration of different Tuning forks

Determine the rotation per minute (RPM) of a moving object (Fan) Study of the effect of different types of materials on Radar reception or detection

#### Included Accessories

01 Trainer Board -----1

02 Audio Cable for PC Line In input -----1

03 Din connector cable (5 Pin) -----1

04 Mains Cord -----1

05 Tripod Stand -----1

06 Fan Stand -----1

07 Fan -----1

08 Sliding Platform -----1

09 Different objects -----3

10 Horn Antenna -----1

11 Trans-receiver Unit -----1

12 Software CD -----	1
13 Pendulum -----	1
14 Stand for moving the pendulum -----	1
15 Tuning forks -----	3
16 Operation manual -----	1

## Naugralabequipments

**Website:** www.naugralabequipments.com, **Email:** sales@naugralabequipments.com

**Address:** 6148/6, Guru Nanak Marg, Ambala Cantt, Haryana, India. **Phone:** +91-9896600003