Nvis 2001 RADAR Trainer is a useful classroom training equipment provided with different types of accessories for experimentation, and a Windows® 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 of measuring the Speed of Object, Frequency of Vibrations and RPM of any fan. Students can also study the properties of different types of materials like Metal, Acrylic, Teflon, Bakelite, etc.

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**

Technical Specifications

Transmitter Frequency	:	10 GHz
Output Power	:	10mW (approximate)
Operating Voltage	:	8.6V
Antenna	:	Horn
Antenna Gain	:	16dB
Sensitivity	:	-50 to -70dBm
IF Output	:	Audio range
Power Supply	:	230V ±10%, 50 Hz
Alarm	:	Onboard detected signal indication

About Software

Oscilloscope analysis	:	Real time/Storage mode with FFT
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

Utilities :
- Start / Stop of Display
- Setting of Time base and Amplitude range on display window
- Printing of Doppler Frequency signal
- Cursors for Time and 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 a moving pendulum

- Study of an Alarm System by using a Radar

- Study of 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

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Trainer Board	1
Audio Cable for PC Line In input	1
Din connector cable (5 Pin)	1
Mains Cord	1
Tripod Stand	1
Fan Stand	1
Fan	1
Sliding Platform	1
Different objects	3
Horn Antenna	1
Trans-receiver Unit	1
Software CD	1
Pendulum	1
Stand for moving the pendulum	1
Tuning forks	2
Operation manual	1

Application software window
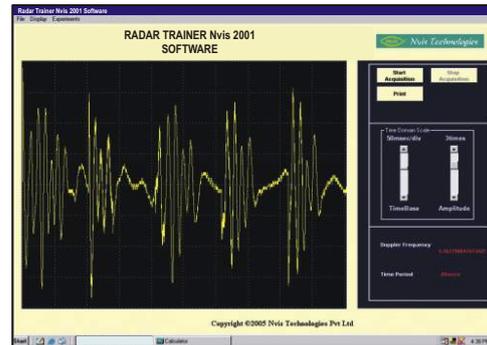
Object is moving in Front of Radar and detected signal (doppler frequency) is captured on PC.

Sliding Object

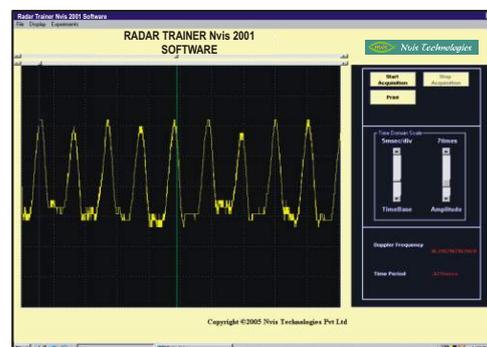Application software window
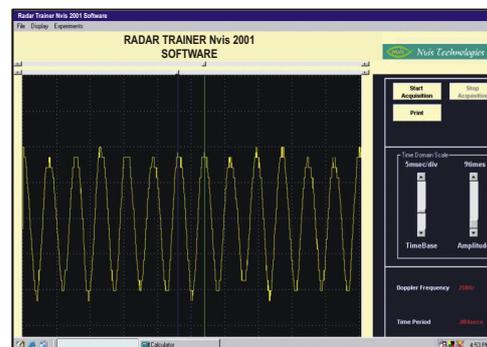
Measurement of Tuning Fork Frequency
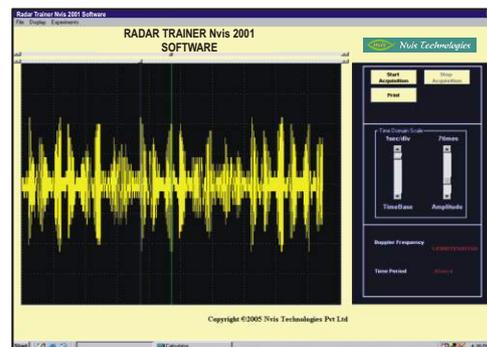
Tuning Fork

Application software window

RPM measurement of a Fan

Fan

Application software window

Detection of Oscillations of moving pendulum

Moving Pendulum

Subject to Change