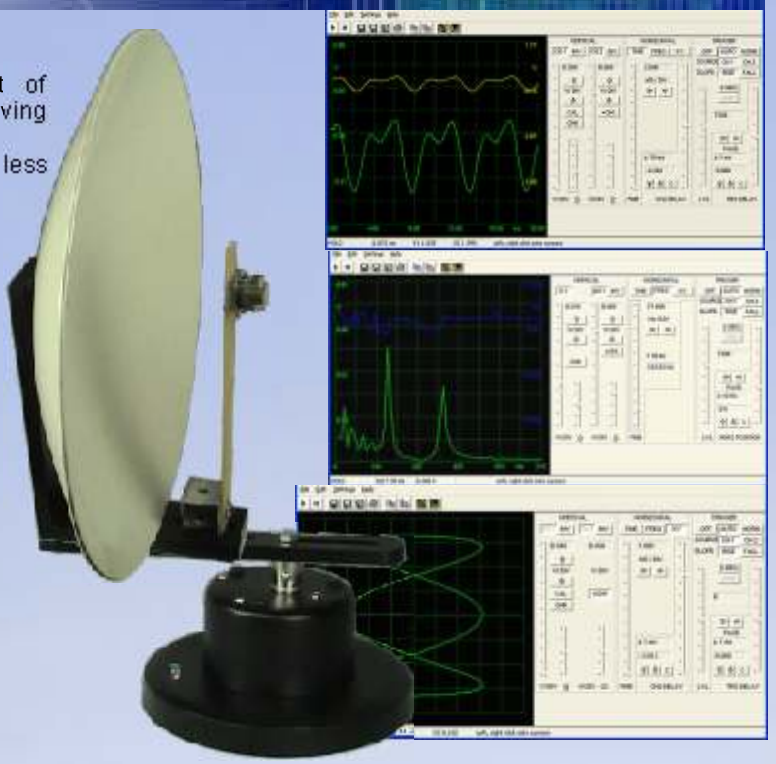
amitec DOPPLER RADAR TRAINING SYSTEM DXR10



Features:

* Demonstrates the principle of Doppler shift of reflected electro magnetic wave from a moving object
* Speed, rotation, event counting, level control, contact less vibration measurement
* Observation and measurements with software
* Microwave X band operation
* High gain Parabolic antenna provided for narrow beamwidth and clutter reduction.
* PC based oscilloscope provided
* FFT with cursor measurement

Amitec DXR10 Technical Specifications

Microwave Transceiver:

Type	:	MMIC tranciever with parabolic dish antenna.
Antenna Size	:	25cm dia with f/d 0.25
Frequency	:	10.3 GHz DRO stabilized
Output Level	:	0 dBm typical
Sensitivity	:	-70dBm typical
Output	:	PC Compatible
Power Supply	:	100-240V, 47-63 Hz

Software:

Display	:	Responsive real-time up to 50 fps refresh
Mode	:	Single trace, dual trace, and XY (Lissajous)
Bandwidth	:	10 Hz - 20 kHz, AC coupling
Timebase	:	10 us - 5 s
ADC	:	8-bit and 16-bit acquisition
Sampling	:	11 kHz to 44 kHz rate
FFT	:	amplitude and/or phase System
PC required	:	300 MHz or faster PC, 64MB RAM, 1MB of disk space, Windows® XP, sound card,(Not supplied)
Data export	:	Raw data export as WAV file
Screenshot	:	Saved in BMP and EMF formats
Visible trace	:	can be saved as text file
Function	:	Copy-paste for screenshots or data files - Printing,
Triggering	:	Adjustable trigger level, slope, and delay
Pretrigger	:	View - Single shot triggering mode
Measure	:	On screen - Two cursors set by left and right click - Voltage and time difference readout - Direct frequency readout
Accessories	:	Tuning Fork, Buzzer, Turbine Fan, Pendulum

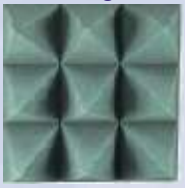
Moving Target Emulator - 2 Nos.

Range : 0 to 1000km/hr

Radar jammer

Random Noise Jammer

E-Manual: Installation Video for ease of Learning



Dimensions: 56X41X18 cms.
Weight: 8 kg.

List of experiments:

* To investigate the fundamental concepts of Doppler radar.
* To setup radar and tune it for best performance.
* To measure speed of a fan.
* To detect the presence of a hidden Time Bomb with the help of a Doppler radar.
* To find out the Time period and frequency of a moving Pendulum for different lengths.
* To actuate the opening of a door, Traffic signal, Intrusion alarm etc. with the help of a radar.
* To measure the units of items being produced in an assembly line production unit.
* To determine the presence of moving plasma from one electrode to other in a Tube light.
* To detect the presence of transformer hum and find its frequency.
* To measure the variable speeds of moving objects using Velocity simulator.
* Calibration of Doppler radar using tuning fork.
* To study the reflective, absorptive and transmissive properties of materials using radar and velocity simulator.
* To find the speed of a moving object with Doppler radar from different angles.
* To find the speed of a moving object approaching or receding away from radar from different-different angles
* To estimate the size of a moving objects using Radar
* To measure the distance traveled using Radar.
* To find out the presence of a Pedestrian and manage Traffic till he walks away.
* To find out the presence of an aero plane with the rotation of the turbine of its engine as used by Air Force.
* To study the use of radar in detecting respiration and heart beating.
* Study of climatic conditions of atmosphere cyclones, Clouds, tornado using a Doppler radar.

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