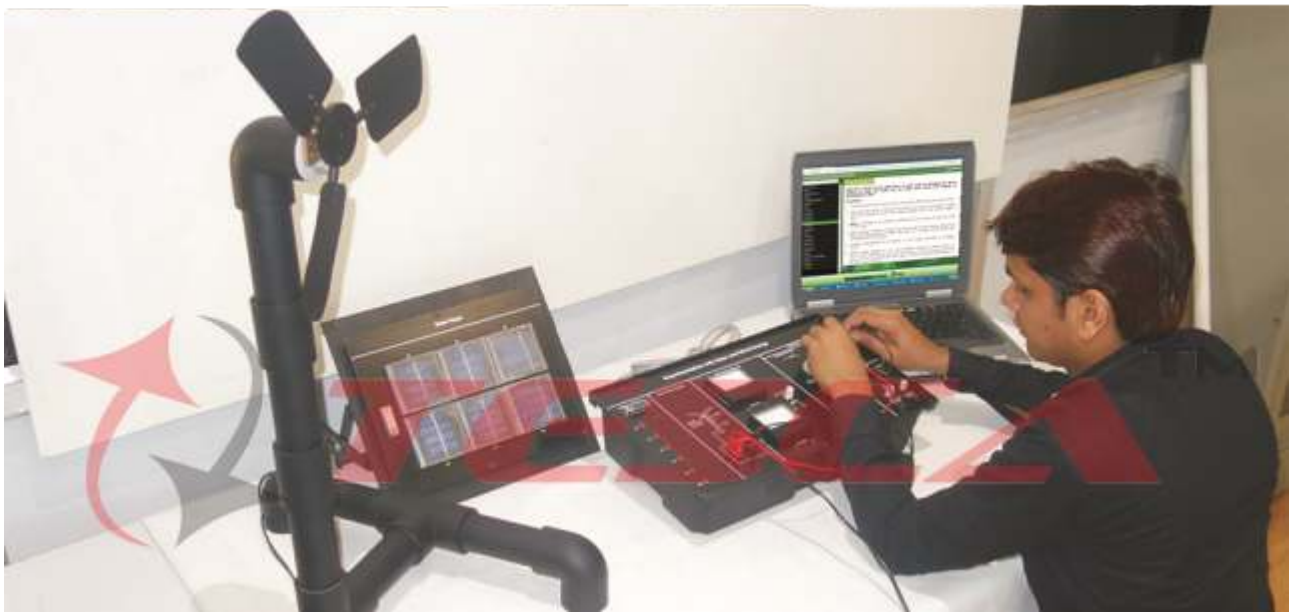

55922 Experimentation with Solar and Wind Energy is a versatile training system for students to understand the concept of both Solar and Wind energy based DC Power Generation.

This product explains how solar cells are put together for desired voltage generation and how Solar energy is utilized to drive different loads. The Wind Turbine Section works as a live demonstration unit of a wind turbine (generator). It introduces the concept of converting kinetic energy of wind into mechanical energy and then further into electrical energy. It is provided with a good quality solar panel and Wind Turbine setup.

Features

1. Complete Training System
2. On-board Voltmeter and Ammeter
3. Batterycharging using both Solar and Wind energy
1. Weather-proofsolarcells

Technical Specifications

Solar Panel	:	Consists of6 solar cells
Solar Cell		
DC Voltage	:	2V Max.
DC Current	:	Up to 150mA
Wind Turbine Setup	:	Contains 3 blades
Open Circuit DC Voltage	:	2.5Vto 3.5V
Short Circuit DC Current	:	Up to 220mA
DCVoltmeter	:	0-10V
DCAmmeter	:	0-500mA
Potentiometer	:	5KCl
Rechargeable Ni-Cd Battery	:	1.2V
Lamp	:	3V
Fan	:	3V
FM Receiver	:	12V

Object

01. Study of the voltage and current of the solar cells in series and parallel combinations
02. Study of current-voltage characteristic and the power curve to find the maximum power point(MPP)
03. To calculate the efficiency(h) of the solar cell
04. To study the application of solar cells in charging of Ni-Cd battery
05. To study of the application of solar cells of providing electrical Energy to the domestic appliances such as lamp, fan and radio
06. Installation of Wind Turbine Setup and measurement of wind Energy based DC Voltage and Current
07. Measurement of voltage and current of wind Energy based DC Supply with change in angle of blades
08. Measurement of voltage and current of wind Energy based DC Supply with change in direction of wind
09. Measurement of voltage and current of wind Energy based DC Supply with change in speed of wind imposed on the blades
10. Study of the application of wind Energy based DC Supply in charging of Ni-Cd battery
11. Study of the application of wind Energy based DC Supply of providing electrical Energy to the domestic appliances such as lamp, fan and FM receiver

Note: Specifications are subject to change.

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