

**OMEGA TYPE ETB-252** Wind Energy Trainer is a versatile training setup used in the laboratories to understand the conversion of wind energy into electrical supply. It introduces the basic concept of wind turbine, of converting kinetic energy of wind into mechanical energy and then this mechanical energy into electrical energy. The setup works as a live demonstration unit of wind turbine and generator in terms of its concepts and applications. It is provided with a Wind Turbine Setup and Wind energy trainer.



### OBJECTS

- 01 Calculation of voltage and current of wind energy based DC supply with change in shape of blades.
- 02 Calculation of voltage and current of wind energy based DC supply with change in angle of blades
- 03 Calculation of voltage and current of wind energy based DC supply with change in direction of wind.
- 04 Calculation of voltage and current of wind energy based DC supply with change in wind pressure.
- 05 Application of wind energy based DC supply in domestic Purposes :
  - 5.1 Charging of batteries both on load and no load conditions.
  - 5.2 Operating LED, fan and radio.

### FEATURES

- 01 Complete setup to study the fundamentals of wind based DC power generator.
- 02 Measurement and Application Modes.
- 03 On board voltmeter and ammeter are provided.
- 04 Charging the batteries using wind energy as the generator of DC supply.
- 05 Portable and light weight.
- 06 Strongly supported by systematic operating instructions with theoretical and practical details.

### TECHNICAL SPECIFICATION

- 01 Wind Turbine Setup : Contain 3 blades
- 02 Maximum Open Circuit Voltage : 4V - 7V
- 03 Maximum Short Circuit Current : Upto 200mA
- 04 Voltmeter : 0-5V
- 05 Ammeter : 0-220 mA
- 06 Potentiometer : 1K
- 07 Rechargeable NiCd Battery2AA : 1.2V
- 08 LED : 10mm
- 09 Fan : 3V, 200 mA
- 10 FM Band Radio : 3V with head phone
- 11 Load with Amplifier section : Using Six LED's
- 12 Dimension of Board : W340XH125XD210
- 13 Weight : 2.5Kg Approx

### LIST OF ACCESSORIES:

- 01 Fan stand with cable, blade and Generator....01
- 02 Patch cords 2/4mm length 50cm .....05
- 03 Ear phone.....01

### OTHER APPARATUS REQUIRED (RECOMMENDED)

- 01 Table fan

We are committed to the continuous development of our products, and therefore reserve the right to amend specifications without prior notice.

## OMEGA ELECTRONICS