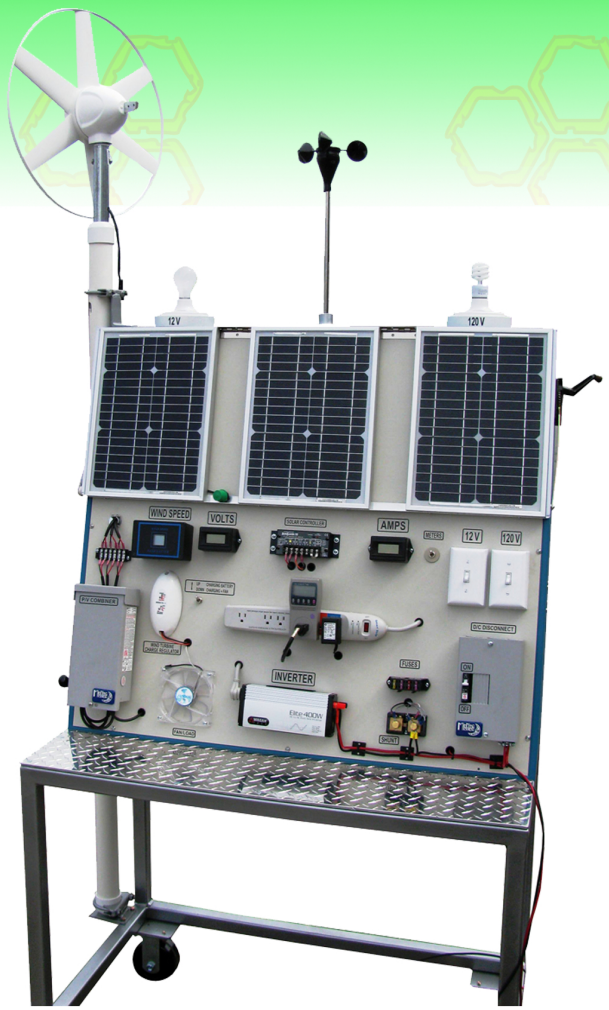
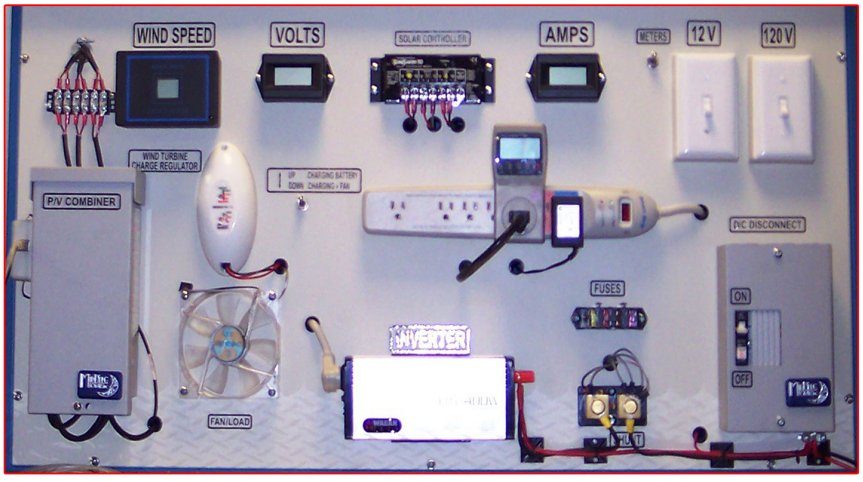


Solar-Wind Hybrid Trainer

Model: MEG-PVW

Megatech has combined two of the most viable "green" electrical generation systems from carbon-free energy sources in the U.S.A. Using standard solar PV panels and circuit controls to safely charge the batteries, both the wind and solar photovoltaic concepts are presented so students learn how these systems work. The instrument panel interface allows students to measure the outputs and determine efficiency. The system is mounted on a sturdy mobile 2x2 welded powder coated steel frame and has a student workbench. The instrument module provides accurate power output readings. The energy can be stored in a battery protected by a charge controller. Also, an inverter is included for the power to be converted back to AC use in appliances.



Trainer Includes:

- PV Combiner
- DC Disconnect
- Wind Speed Monitor
- Volt/Amp Meter
- Wind Turbine Charge Regulator
- Shunt
- Fan/Load
- Solar Controller
- Inverter
- Fuses
- Solar Panels
- Anemometer
- Wind Turbine

Solar-Wind Hybrid Trainer (cont.)

Model: MEG-PVW

SPECIFICATIONS:

Discover practical energy conversions from abundant carbon-free energy sources: the sun and wind. Learn the theory and application of photovoltaic cells and wind generation of DC power to AC conversion for operating common electrical and electronic devices.

Equipment and Parts List:

- 6 Amp Wind Turbine with Charge Controller
- 50 Watt Solar Panel
- Two 26 Amp/Hr. 12 Volt DC Batteries
- 1500 Watt Inverter
- One 120 Volt Load
- Four 12 Volt Loads
- Mobile Stand
- PC Data Acquisition
- Voltmeter, Ammeter (0-100 amp), Lightmeter, and Anometer
- Temperature Gauge
- 2 Charge Controllers/LVD
- Low Voltage Disconnect
- Photovoltaic Panel (17.5 Volt Output)

Wind Turbine:

- 20 inch Turbine diameter
- 80 Watt power max
- 12 Volt Max, DC
- 10 Amp Max, DC
- Deep Cycle Battery

Topics Include:

- Basic Electrical Circuitry
- How batteries work
- The Photovoltaic Cell
- Meter Fundamentals
- The Charge Controller
- The Inverter Principle
- Calculating Wattage
- Irradiated Sunlight (Pyranometer)
- Energy Conversion
- Wind Turbine/DC Electrical Power

Size: 7'6" H x 4' L x 4' W
Total Weight: 240 lbs.

Ordering Information: MEG-PVW