

**FCJJ-56**



**+ ADD-ON**



**FCJJ-24**

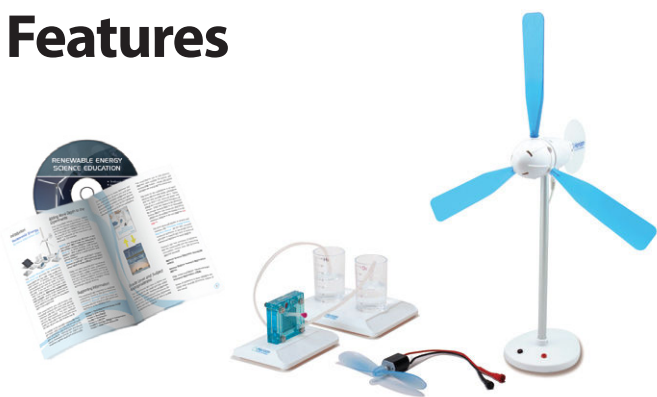
**HORIZON ENERGY MONITOR**

This ideal accessory to FCJJ-56 feeds live experiment data to your PC to be displayed as graphical data.

## Product Description

The Wind to Hydrogen Science Education Kit enables students to invent their own clean energy applications using a small electric motor powered by a fuel cell. Hydrogen is produced through water electrolysis by a reversible PEM fuel cell that is itself powered by a wind turbine with profiled blades based on NASA aeronautics. This hydrogen is then converted to electrical energy by the fuel cell and can be used to power a small fan.

## Features

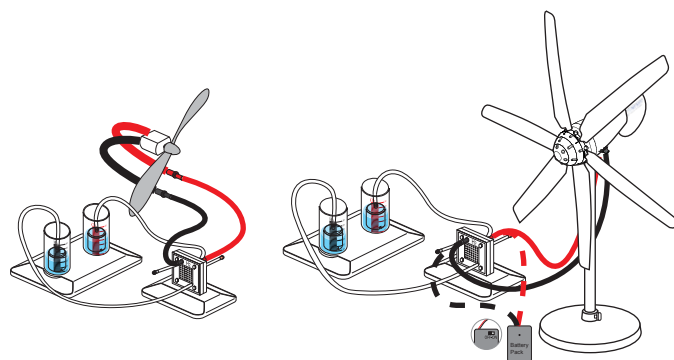


- ✓ Turn wind power into hydrogen energy
- ✓ Build your own hydrogen fuel cell powered inventions
- ✓ Features revolutionary new Horizon wind turbine
- ✓ Includes Horizon's complete curriculum on renewable energy on CD
- ✓ Demonstrate the principles of wind energy, hydrogen fuel cells, electrolysis and basic electronics

## Language Pack

- ✓ CD Experiment Manual:
- ✓ Assembly Guide:
- ✓ Technical Support Guide:

## Experiments & Activities



**✓ Energy from Hydrogen Experiments**

1. Electrolysis Mode Generating H<sub>2</sub> and O<sub>2</sub>
2. Fuel Cell Mode Generating Electricity from H<sub>2</sub> and O<sub>2</sub>
3. Determining the Minimum Water Decomposition Voltage
4. Polarization States for Hydrogen Fuel Cells

**✓ Wind Energy Experiments**

1. How Many Blades Are Best - 1, 2, 3 ... More?
2. Using Three Different Curved Blade Shapes
3. Using Blades You Make Yourself
4. Turbine Efficiencies
5. Measuring RPM
6. Tuning For Maximum Power
7. How Blade Angle or Pitch Affects Output Power
8. To Generate Hydrogen



## Kit Content

- ✓ Wind Energy Science Kit (FCJJ-39)
- ✓ LED Module
- ✓ Reversible PEM fuel cell module
- ✓ Water/gas storage tanks module
- ✓ Tubing, connecting leads, and accessories
- ✓ Motor with fan propeller blade
- ✓ 9 profiled blades for turbine (3 sets of 3 types)
- ✓ Assembly guide
- ✓ Renewable Energy Curriculum CD

## Certification

ROHS, EN71:PART1;PART2;PART3, EN62115,  
 PHTH-EU, ASTM F963, CPSIA-LEAD,  
 CPSIA-PHTHALATES, REACH, CA.

\*All the information in this datasheet is subject to change without notice.  
 In case of doubt please contact the Horizon sales team.

## Packing Information

<b>Case Pack Quantity</b> (units):	1
<b>Master Pack Quantity</b> (units):	8
<b>Packaging Type:</b>	cardboard
<b>20' Container</b> (units):	2180
<b>40' Container</b> (units):	4450
<b>Unit Box Length</b> (cm/in):	31 / 12.20
<b>Unit Box Width</b> (cm/in):	31.9 / 12.56
<b>Unit Box Height</b> (cm/in):	9.7 / 3.82
<b>Unit Volume</b> (Litres/Cubic Meters):	9.6 / 0.010
<b>Unit Box Weight</b> (kg/lbs):	1.28 / 2.82
<b>Case Pack Length</b> (cm/in):	63 / 24.80
<b>Case Pack Width</b> (cm/in):	44 / 17.32
<b>Case Pack Height</b> (cm/in):	35 / 13.78
<b>Case Pack Volume</b> (Litres/Cubic Meters):	97.0 / 0.097
<b>Case Pack Weight</b> (kg/lbs):	13 / 28.66

\*The cartons' size may vary between ±1-2 cm.

## Logistics Information

<b>Item UPC-Code:</b>	6942503405279
<b>Item HS-Code:</b>	-
<b>Manufactured in:</b>	Shanghai, China
<b>Local Warehouse</b>	Prague, Czech Republic
<b>FOB Harbor:</b>	Los Angeles, USA
<b>First Ship Date:</b>	available now
<b>Minimum Order:</b>	8