Go Charging Electric Bicycle
Team 8

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Reference Image Source: https://x-tremescooters.com/products/electric-bicycles/24-volt-electric-bicycles/trail-maker#/?/14
Go Charging Electric Bicycle

Description

• **Purpose of Product**
  An electric bicycle uses a hybrid type battery system to go further and more efficiently.

• **Feature 1**
  Hybrid battery system: using a combination of super capacitors and chemical batteries

• **Feature 2**
  Three modes: Automatic, Manual, Charge

• **Feature 3**
  Active breaking similar to the Prius system; using the motor to slow you down and charge the battery.

• **Market (Country List or Description)**
  North America (120V, 60Hz)
Go Charging Electric Bicycle

Key Requirements

**Cost**
Sales Price: $250, Component Cost: $75, Assembly & Test Costs: $35

**Environment**
Primary Outdoor(Charging Indoor)
Operating Temp Range: (-15 to 55 )
Operating Humidity Range: (0% to 100%)

**Power Input(s)**
Residential AC Power:  102 – 132 VAC (For Charging)
Battery Power:  Valve Regulated Lead Acid Battery (VRLA) 24V (Nominal)

**Major Functions, Quantities Measured, Displayed**
Function: Automatic, Manual, Charge
Quantity Measured:
   - Slope and Tip over : Range: -90 to +90 degree, Accuracy: +/-1 degree,  Resolution: 0.1degree
   - Speed Range:  0 to 15 m/s, Accuracy: +/- 0.1m/s, Resolution: 1 m/s
   - Obstacle Range:  2 to 15 m, Accuracy: +/- 0.02m, Resolution: 1 m/s
Displayed: Selected Speed, Driving Mode, Battery Energy Storage
Go Charging Electric Bicycle
Block Diagram

Block A: Musab
Block B: Zhen Zhang
Block C: Trevor
Block D: Fuyao Ni
Block E: Yongkuo Zhou
Block F: Cien Xiao