Oscilloscope-Waveform Generator
Team 4

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Description

• Purpose of Product – A simple digital oscilloscope that allows observation of constantly varying cycle signal voltages and draw the waveform of the signal. Product can change the frequency and the amplitude and display on LCD screen.

• Feature 1
  Data collection and processing

• Feature 2
  Waveform Generator

• Feature 3
  Inexpensive

• Market- United States
Key Requirements

• Cost
  • Sales Price: $100, Component Cost: $40, Assembly & Test Costs: $15

• Environment
  • Indoor, Stationary
  • Operating Temp Range: (5°C to 35°C)
  • Operating Humidity Range: (30% to 75%)

• Power Input(s)
  • Residential AC Power: 120 VAC @ 12 mA Nom

• Major Functions, Quantities Measured, Displayed
  • Function: On, Off, Measure,
  • Quantity: Frequency, Amplitude
    Range: 0 to 50kHz, Accuracy: +/-1%
    Range: Waveform Generator--0 to 5 Volt,
          Oscilloscope--0 to 3.3 Volt, Accuracy: +/- 1%
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Block Diagram

A. Power Supply: Samuel
B. Waveform Generator: Jin Ying
C. Display Control: Derick
D. Microcontroller
   Data Processing: Yanyu Luo, Chang Zhao
E. LCD Display: Kao Zhou