



Production Test System for Zeo Personal Sleep Coach

Background

Zeo (formerly Axon Labs) produces a unique sleep aid that monitors brain waves to help users get a better night's sleep. Zeo was finalizing their design and was in the process of moving production to China. They had started work on creating a flexible production test system and had written a test specification, but did not have the available design resources to complete the work. Zeo turned to Bolton Engineering to design the Production Test System.

Additional information about the Zeo may be found at the company's website:

http://www.myzeo.com/pages/1_home_page.cfm

System Overview

The Test System consists of:

- Interface to PC-based PCI data acquisition and control Card
- Power supply current monitors
- Charging current monitor
- Communication interface
- Simulated ECG generator interface and CMRR (Common Mode Rejection Ratio) test circuitry.
- Various bit I/O and status LEDs

Project Scope

Bolton Engineering worked with Zeo to take the objective test specification and turn it into a hardware specification and software test sequence description. Bolton Engineering designed the schematics and circuit board, fabricated and debugged the hardware, and worked with a software engineer to implement the test program in LabView.