



### Scanning Devices Develops and Manufactures Unique Plethysmograph Simulator for Morgan Scientific

Morgan Scientific is a leading provider of pulmonary products and services with a 30 year reputation for excellence. One of our products is a Pulmonary Function Testing System called a Body Plethysmograph or “body box” for short. It is used by Physicians to diagnose problems with lung capacity and function. As a leader in the field we wanted to offer our customers the most accurate calibration system available for our Body Plethysmograph but nothing was available off-the-shelf that met our standards. We had some ideas for how to accomplish better calibration but we needed technical design, prototyping, and manufacturing experience if we were going to bring a new product to market.

At our first meeting with the engineers at Scanning Devices we showed them a crude concept model of a Plethysmograph Simulator we thought would work. This model used an Erlenmeyer flask filled with copper wool attached to a 100ml sinusoidal pump and used an external power supply. Using this model we had shown that we could obtain reliable “contained volume” data but we needed special expertise to turn our initial idea into a commercial product. We challenged Scanning Devices with the problem.

To our astonishment, they convened a meeting 6 weeks later and brought a working prototype for our evaluation. Their design utilized Bluetooth technology for manual control via a Palm device, or automatic control from within our software application using a commercially available Bluetooth USB attachment. They had designed a new pump with variable speed control and cleverly engineered two sizes of iso-thermal vessel that could be easily interchanged. Power supply was achieved with a rechargeable circuit and sufficient battery reserve for several days of testing by our customers. Their design was visually appealing and the quality of the workmanship far exceeded our expectations. The Scanning Devices prototype worked from the first evaluation and within a further 6 weeks we received the first production instrument.

From start to finish our experience with Scanning Devices was exceptional. We were pleased with their innovative approach to problem solving, the speed of implementation, and the cost effectiveness of their work. We appreciated the fact that one firm could not only design and prototype the final product, but could produce it to our high quality standards. We highly recommend Scanning Devices to companies that need innovative design, prototyping and custom manufactured solutions at competitive rates.

Patrick F. Morgan  
President  
Morgan Scientific, Inc.  
December 2011