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No Rest for the Innovative

Heading into its 77th year in business, Grass Technologies continues to update and innovate.

Long before the widespread awareness of sleep disordered breathing among patients and physicians alike, engineers at Grass Technologies were quietly plying their trade. The result is a rich tradition that keeps company officials looking forward, while never losing sight of their roots.

Marc R. Paliotta, BSEE, clinical product manager at Grass Technologies (an Astro-Med Inc Subsidiary), joined the venerable company in 1997 during the transition from analog to digital. In those 15 years, manufacturers have seen nothing less than a revolution in sleep diagnostics.

Revolution can be a good thing, but it frequently brings uncertainty. Paliotta acknowledges the ever-changing nature of the business, using a dose of cautious optimism that has served him well. That realistic outlook can be seen in the company's product offerings, with in-lab diagnostics and out-of-center technologies equally embraced. "We cultivate traditional in-lab diagnostics and home sleep testing Type I, II, and III technologies," says Paliotta.

A tradition of cutting-edge technology has done nothing to dim Paliotta's commitment to old-school customer interaction. The philosophy can be seen in Grass Technologies' enthusiasm for industry trade shows such as the Associated Professional Sleep Societies (APSS) Conference. "You get the much valued face-to-face time with your customers," explains Paliotta. "Whether it's a little local show, a mid-size regional show, or a large national or international trade show such as APSS. The APSS is typically our biggest trade show of the year."

Paliotta views every APSS show as a chance to show the company's complete line from a hardware standpoint, in addition to the software that runs the entire product line. "This year, we'll be showing the Comet-PLUS, which is our in-lab sleep diagnostic device," enthuses Paliotta. "The AURA PSG is our type I/II out-of-lab device. The SleepTrek3 is our type III HST device. Those are the three complete product offerings we're showing. The common software is called TWin and runs the entire Grass line."

Looking Back, Surging Forward

Since going digital in the mid 1990s, Grass has been known for its amplifier systems. Maintaining a consistently high level of performance and supportability is at the heart of that reputation.

"We take it very seriously," says Paliotta. "We've been able to incorporate the latest technology in industry to help meet the needs of our customers in the field. From the hardware and software perspective, we feel as a company we're able to incorporate the needs of our customers into our products in a relatively short cycle working with our customers directly. Home sleep testing, for example, is an area everyone is interested in and where we are dedicating a good amount of time and effort."

Grass is dedicating additional efforts toward IT Solutions in response to sleep labs' increasing dependence on IT departments for functions such as remote review, SQL databasing, and EMR integration. Grass acts as the liaison between the sleep labs and the IT departments, which leads to smoother integration and better IT Solutions.

The commitment to direct customer interaction comes from the same innovative tradition established long ago by company founder Albert Grass. Grass developed the first commercially successful electroencephalograph (EEG), a key component of neurophysiology and ultimately polysomnography (PSG).

The following is a chronology of the beginnings of EEG/PSG technology, and consequently, of Grass Instrument Company.

1934: A small grant is awarded to Dr. Frederic Gibbs for instrumentation to process electroencephalographic data. His goal is to apply the knowledge gained by Hans Berger and confirmed by Lord Adrian to clinical applications.

1935: Dr. Gibbs approaches Albert Grass, a recent graduate of MIT, to design three devices to amplify human EEG potentials. Grass does so, defining the foundation of Grass Instrument Company, and of EEG technology.

1936: While working at Harvard Medical School, Grass designs moving coil galvanometers, which enables the embryonic EEG instrumentation to accurately and reliably record the EEG frequencies on chart paper. The addition of these new galvanometers to his early amplifiers becomes the Grass Model I, used by Gibbs, Lennox, Davis and others. This same amplifier design was used by Cannon, Rosenbluth and Renshaw in early neuromuscular studies.

APSS Offerings for Grass Technologies Inc, an Astro-Med Subsidiary

Comet-PLUS® XL Lab-based PSG - Recording & Review System

Comet-PLUS XL is a complete PSG system designed to satisfy the needs of the physician's office, hospital, or medical center. Ready to use, Comet-PLUS XL is supplied with the latest high performance PC.

These diagnostic systems consist of the high response 57-channel AS40-PLUS Amplifier System, a quick-disconnect headbox with electrode inputs designed especially for PSG, TWin PSG Record and Review Software, and powerful Panorama digital video. These flexible systems upgrade easily to also record EEG-type studies.

SleepTrek3, a 6-channel Portable Monitor

This small, lightweight physiological data recorder is specifically designed to assist the clinician in the diagnosis of sleep-disordered breathing. The out of center sleep testing device uses sensors to record oxygen saturation, pulse rate, airflow, snoring, respiratory effort and body position. The screener is designed to be used in a supervised (hospital/institutional) or unsupervised (home) environment.

TWin®, a Windows-based Sleep Software Platform

Used in most systems including the review stations, Grass offers a search and query database manager as part of its standard offering. Other software options include an EMR/HL7 interface, a patient scheduling application, and frequency analysis trending software. Intralab scoring comparison and on-the-fly interpretation report building help complete the TWin software offering.