Espion E² Electroretinography System

The Espion E² is a full featured, modular, electrophysiology system capable of generating visual stimuli for any stimulator. Together with Diagnosys’ industry-leading stimulators, it is capable of driving not only all ISCEV standard ERG tests, but any visual electrophysiology tests, even those previously possible only with custom lab-built equipment.

Design Features

• Sleek, modern design
• Hardened, machined Aluminum case
• Multiple PC configurations including: Panel PC, Laptop, Rugged Laptop, Tablet and Desktop PC

Features

• Advanced real-time DSP based acquisition system with integrated power isolation
• 5 integral computer controlled fully isolated differential amplifiers with all digital low, high and band pass filters, DC input, (not AC coupled) and impedance measurement system
• 2 TTL compatible isolated trigger input and output BNCs
• Power on and status indicator LEDs
• USB communication
• Direct pattern generator connection
• Isolated auxiliary line outlets

Espion Software

• Includes ISCEV standard test protocols and the ability to create new protocols for custom testing
• Specialized animal testing protocols available
• Industry standard SQL database using an advanced interface for comprehensive data storage and retrieval
• SQL based Patient Management System
• Microsoft Office™ integration for intuitive, drag and drop report generation

Is your ERG system as bright as you are?
Espion E² Electroretinography Console

Power Isolation

The Espion E² incorporates transformers required to isolate ancillary equipment such as a monitor or printer so they will meet medical leakage current standards.

Data Acquisition

The data acquisition system is based around a fast DSP microprocessor that controls all the acquisition, amplifiers, stimulators and timing independently from the PC. The system is comprised of 5 differential DC coupled amplifiers (prevent AC amplifier lockup) with the following specification:

- Fully isolated
- Input range +1 - 0.5V
- Automated internal calibration
- Integral anti-alias filter
- Effective 24 bit resolution (100nV)
- Differential channel input balance better than 1%
- Ultra low noise < 1µV RMS
- Input impedance greater than 100kΩ at 50/60Hz
- CMRR greater than 100dB at 50/60Hz
- 10kHz internal sample frequency decimated down to 5, 2, or 1kHz sample rate
- Automatic impedance measurement per input, not just channel
- Filtering is performed digitally

Panel PC Option

- Pentium P4 2.4GHz CPU running Windows XP with 512MB RAM, 80GB HD, DVD w/CD-RW
- Integrated bright 15” TFT LCD screen with resistive touch screen running at 1024x768
- 2 10/100 BaseT Ethernet ports
- 4 USB Ports
- USB optical mouse and keyboard included

Rugged Laptop Option

- Panasonic Rugged Toughbook 29 w/Centrino Processor at 1.3GHz
- 60GB HDD, 512MB RAM
- Combo Drive DVD-ROM/CD-RW
- 13.3” 1024x768 Anti-Reflective TFT Resistive Touchscreen
- Integrated 10/100 BaseT Ethernet and 802.11b
- 2x USB 2.0 slots