

*Patient Freedom at Last!*

# Wireless PSG



AURA® PSG

- 25-channel Recorder
- Built-in Oximeter
- Built-in Electrode/Sensor Connections
- Automatic Scoring Software

*Developing Products for Life...*



## polysomnography and electroneurodiagnostics

A comprehensive listing of manufacturers, distributors and suppliers of polysomnography and electroneurodiagnostics equipment, with at-a-glance charts detailing the various systems available.

### Bio-logic Systems Corp.

One Bio-logic Plaza  
Mundelein, IL 60060  
(847) 949-5200; (800) 323-8326  
Fax: (847) 949-8615

E-mail: [sales@bio-logic.com](mailto:sales@bio-logic.com)

Web site: [www.bio-logic.com](http://www.bio-logic.com)

**Product line:** Sleepscan, Ceegraph and Traveler

**Company description:** Bio-logic Systems Corp. designs, develops and markets computerized electrodiagnostic products for PSG/EEG, epilepsy monitoring, neurological monitoring in the ICU, and ambulatory studies.

### BRAEBON

800 Proctor Ave  
Ogdensburg, NY 13669  
(613) 831-6690;  
(888) 462-4841

Fax: (613) 831-6699

E-mail: [sales@braebon.com](mailto:sales@braebon.com)

Web site: [www.braebon.com](http://www.braebon.com)

**Product line:** PSG sensors, diagnostic systems and data management software

**Company description:** BRAEBON is a single source provider of PSG sensors, diagnostic systems and data management outcomes software. All products are competitively priced with warranties.

### Cadwell Laboratories Inc.

909 N. Kellogg St.  
Kennewick, WA 99336  
(509) 735-6481; (800) 245-3001  
Fax: (509) 783-6503

E-mail: [info@cadwell.com](mailto:info@cadwell.com)

Web site: [www.cadwell.com](http://www.cadwell.com)

**Product line:** Easy II PSG/EEG, Easy III PSG/EEG, and Ambulatory 2 PSG/EEG

**Company description:** Cadwell manufactures and markets PSG,

EEG and other neurodiagnostic instruments. Founded in 1979 by brothers John and Carl, the company is known for competitively priced, user-friendly products.

### Compumedics USA

7850 Paseo del Norte, Ste. 101  
El Paso, TX 79912  
(915) 845-5600; (877) 717-3975  
Fax: (915) 845-2965

E-mail: [info@compumedicsusa.com](mailto:info@compumedicsusa.com)

Web site: [www.compumedics.com](http://www.compumedics.com)

**Product line:** Sleep diagnostics

**Company description:** Compumedics develops sleep and neurodiagnostic technologies, and is a resource for research, clinical sleep, EEG and consumable requirements.

### Grass-Telefactor, an Astro-Med Inc. Product Group

600 E. Greenwich Ave.  
West Warwick, RI 02893  
(401) 828-4000; (877) 472-7779  
Fax: (401) 822-2430

E-mail:

[grass-telefactor@astromed.com](mailto:grass-telefactor@astromed.com)

Web site: [www.grass-telefactor.com](http://www.grass-telefactor.com)

**Product line:** PSG instrumentation and accessories

**Company description:** Grass-Telefactor offers a wide range of instruments for PSG, EEG and long-term monitoring.

### Medcare Systems Inc.

55 Pineview Dr., Ste. 100  
Buffalo, NY 14228  
(716) 691-0718; (888) 662-7632  
Fax: (716) 691-1004

E-mail: [sales@medcare.com](mailto:sales@medcare.com)

Web site: [www.medcare.com](http://www.medcare.com)

**Product line:** PSG recording systems and software

**Company description:** Medcare develops, manufactures and sells

sleep diagnostic systems. Medcare's portfolio spans the full spectrum of sleep diagnostics, from preliminary detection studies to full PSG with extended EEG protocols.

### Nellcor Puritan

#### Bennett (Melville) Ltd.

303 Terry Fox Dr., Ste. 400  
Kanata, Ontario, Canada K2K 3J1  
(613) 238-1840; (800) 663-3336  
Fax: (613) 238-1291

E-mail:

[sandman@tycohealthcare.com](mailto:sandman@tycohealthcare.com)

Web site: [www.sandmansleep.com](http://www.sandmansleep.com)

**Product line:** Sandman Elite, Sandman EXpress, Sandman Spyder and Suzanne

**Company description:** Puritan Bennett's product line includes the Sandman Elite®, a digital system for collection and scoring, and the new Sandman EXpress™, an easy-to-use, turnkey sleep diagnostic system.

### Nihon Kohden America Inc.

90 Icon St.  
Foothill Ranch, CA 92610  
(949) 580-1555; (800) 325-0283  
Fax: (949) 580-1550

E-mail: [info@nkusa.com](mailto:info@nkusa.com)

Web site: [www.nkusa.com](http://www.nkusa.com)

### Respironics Inc.

1010 Murry Ridge Ln.  
Murrysville, PA 15668  
(724) 387-4000; (800) 345-6443  
Fax: (724) 387-5012

E-mail:

[customer.service@respironics.com](mailto:customer.service@respironics.com)

Web site: [www.respironics.com](http://www.respironics.com)

**Company description:** Respironics develops, manufactures and distributes products and programs that serve the global sleep and respiratory markets.

### SleepMed Inc.

700 Gervais St., Ste. 200  
Columbia, SC 29201  
(803) 779-5454; (800) 373-7326  
Fax: (803) 779-4405

E-mail: [sleepservices@sleepmed.md](mailto:sleepservices@sleepmed.md)

Web site: [www.sleepmed.md](http://www.sleepmed.md) and

[www.sleepmedonline.com](http://www.sleepmedonline.com)

**Product line:** Diagnostic and therapeutic sleep services

**Company description:** SleepMed offers sleep lab services to hospitals/physicians who prefer to outsource the equipment and labor aspects, with the added convenience of DME set up in their sleep lab.

### Stellate

376 Victoria Ave., Ste. 200  
Montreal, Quebec, Canada H3Z 1C3  
(514) 486-1306; (888) 742-1306  
Fax: (514) 486-0694

E-mail: [info@stellate.com](mailto:info@stellate.com)

Web site: [www.stellate.com](http://www.stellate.com)

**Product line:** Sleep, EEG and LTM diagnostics equipment

**Company description:** Stellate furnishes clients with easy-to-use economical systems for sleep, routine EEG, long-term monitoring and quantitative analysis.

### XLTEK

2568 Bristol Cir.  
Oakville, Ontario, Canada L6H 5S1  
(905) 829-5300; (800) 387-7516  
Fax: (905) 829-5304

E-mail: [sleep@xltek.com](mailto:sleep@xltek.com)

Web site: [www.xltek.com](http://www.xltek.com)

**Product line:** PSG/Sleep, EEG, LTM, electromyography, intra-operative monitoring and evoked potentials  
**Company description:** XLTEK develops PSG and other diagnostic systems using a customer-driven approach to create easy, accurate and reliable products that meet clinical workflow needs.

This buyers guide has been brought to you by:



Company name	Bio-logic Systems Corp.		BRAEBON
Product name	Sleepscan Traveler	Sleepscan VISION	PURSUIT SLEEP 2
Analog, digital or both	Digital	Digital	Digital
Dimensions (H x L x W) in inches	3.9 x 2.9 x 5.8 (amplifier)	7 x 2.5 x 10 (plus computer)	4.8 x 2.6 x 1
Weight	14 oz.	3 lbs. (plus computer)	7 oz.
Cost	\$14,000 to \$25,000	\$18,000 to \$25,000	\$14,495 per bed
Warranty	One year	One year	3 years
<b>Power:</b>			
External supply	Yes	Yes	Isolated wall mount power supply
Battery	Yes	No	2 AA batteries
Recharger	Yes	No	Not required
<b>Recording:</b>			
Number of channels	44	44	22
Sampling rates	256 to 512 Hz	256 to 1,024 Hz	Up to 480 Hz
Amplifiers	Ethernet connectivity or ambulatory	Ethernet connectivity	Digital 24 bit resolution
Variable montage capabilities	Yes	Yes	Unlimited
Monitor display resolution	1600 x 1200 or others as required	1600 x 1200 or others as required	1600 x 1200
Modes (adult, pediatric, etc.)	Adult, pediatric	Adult, pediatric	All modes
Interfaces	Ethernet connectivity or ambulatory	Ethernet	External DC inputs
Types of sensors/electrodes	All common options	All common options	Accepts all types; sensor kit included with each bed
Software	Windows® XP Professional	Windows® XP Professional	Windows® XP
Full referential EEG	X	X	X
Esophageal pH availability	X	X	X
Integrated oximeters	X	X	X
Integrated pressure transducer	X	X	X
NPT-capable	X	X	X
Real-time respiratory detection	X	X	
Real-time cardiac event detection	X	X	
Periodic limb movement detection	X	X	X
<b>Scoring:</b>			
Manual	X	X	X
Computer-assisted	X	X	X
Automatic	X	X	X
Ability to trend multiple channels	X	X	X
Built-in patient database	X	X	X
Customizeable reports	X	X	X
Printing module	X	X	X
<b>Monitoring:</b>			
Stationary recording	X	X	X
Ambulatory recording	X	X	X
Control room capabilities	X	X	X
Video/surveillance option	X	X	X
Local via computer	X	X	X
Remote via network/internet	X	X	X
Look-back features	Full look-back and analysis online	Full look-back and analysis online	Yes
Data storage options	DVD, CD, automatic archival to server	DVD, CD, automatic archival to server	User defined
Customer support services	24-hour, seven-day telephone support, regional field support, remote online VPN support, factory and regional Sleepscan courses, training CD, extended service agreements, automatic software and hardware upgrades	24-hour, seven-day telephone support, regional field support, remote online VPN support, factory and regional Sleepscan courses, training CD, extended service agreements, automatic software and hardware upgrades	Provides 24-hour support 365 days, including a rapid response program that ships replacement parts same day
Other features	Patient scheduler, integrated database, customizable reports, SQL queries for management reports, "autosync" digital video, adaptive sampling, rapid analysis, multiple time base scoring, online scoring	Patient scheduler, integrated database, customizable reports, SQL queries for management reports, "autosync" digital video, adaptive sampling, rapid analysis, multiple time base scoring, online scoring	PURSUIT SLEEP 2 is a second generation diagnostic system that can record, analyze and report stationary, portable, ambulatory and at-home studies.

Cadwell Laboratories Inc.		Easy Ambulatory 2		Compumedics USA
Easy II	Easy III	Easy Ambulatory 2	E-series	
Digital	Digital	Digital	Digital	
		4 x 6 (pouch)	Headbox: 4 x 6.3 x 2; Control box: 5.25 x 7.36 x 1.75	
		< 1 lb.	Headbox: 1 lb.; Control box: 1.2 lbs.	
Yes	Yes		Yes	
		Standard C or D cell	No	
			No	
32	32, 64, 128	32	Up to 58, plus unlimited virtual channels	
6,400 Hz	3,200 Hz		User-selectable up to 512 Hz	
32 channels			42 x AC, 13 x DC	
Yes	Yes	Yes	Unlimited	
			1280 x 1024 or greater	
Adult, pediatric, neonate	Adult, pediatric, neonate	Adult, pediatric, neonate	Adult, pediatric	
Yes	Yes	Yes	Any device with an analog output	
Standard	Standard	Standard	Universal, full set provided	
Windows® XP	Windows® XP	Windows® XP	Windows® XP, 2000, 2003 Server or NT 4.0	
X	X	X	X	
X	X	X		
X	X	X	X	
X	X	X	X	
X	X	X	X	
X	X	X	X	
X	X	X		
X	X	X	X	
X	X	X	X	
X	X	X	X	
X	X	X	X	
X	X	X	X	
X	X	X	X	
X	X	X	X	
X	X	X	X	
X	X	X	X	
X	X	X	X	
X	X	X	X	
Up to 3 hours		Up to 3 hours	Real-time and remote look-back of entire study with scoring and editing during collection; also add user notes	
DVD, CD-R, DVD-R, etc.	DVD, CD-R, DVD-R, etc.	DVD, CD-R, DVD-R, etc.	CD-R, DVD-R	
24-hour, seven-day free telephone support for PSG systems	24-hour, seven-day free telephone support for PSG systems	24-hour, seven-day free telephone support for PSG systems	24-hour, seven-day telephone support, field support, software upgrades	
Scorer-to-Scorer™, Q-Video with Q-Movement animation features		Can collect data up to 72 hours with battery change, uses standard flash memory cards	Flexible, powerful computer-assisted scoring with time-saving reporting and split-night tools, options for research tools, cardiac analysis, and neXus lab management system	

Company name		Compumedics USA		
Product name	Safiro	Siesta	Somté	
Analog, digital or both	Digital	Digital	Digital	
Dimensions (H x L x W) in inches	5.5 x 3 x 1.5	5.5 x 3 x 1.5	Headbox: 3.1 x 1.8 x 0.9; Main unit: 4.5 x 2.5 x 1.2	
Weight	9.6 oz.	9.6 oz.	8.8 oz.	
Cost				
Warranty				
<b>Power:</b>				
External supply	Yes	Yes	No	
Battery	Four AA batteries or NiMH battery pack	Four AA batteries or NiMH battery pack	Four AA batteries or NiMH battery pack	
Recharger	Yes	Yes	No	
<b>Recording:</b>				
Number of channels	Up to 52, plus unlimited virtual channels	Up to 52, plus unlimited virtual channels	8	
Sampling rates	User-selectable up to 1,024 Hz	User-selectable up to 1,024 Hz	1 to 256 Hz	
Amplifiers	28 x AC, 20 x DC, 4 x DC/AC	28 x AC, 20 x DC, 4 x DC/AC	2 x DC, 6 x AC	
Variable montage capabilities	Unlimited	Unlimited	Yes	
Monitor display resolution	1280 x 1024 or greater	1280 x 1024 or greater	1280 x 1024 or greater	
Modes (adult, pediatric, etc.)	Adult, pediatric	Adult, pediatric	Adult	
Interfaces	Any device with an analog output	Any device with an analog output	No	
Types of sensors/electrodes	Universal, full set provided	Universal, full set provided	Full set provided	
Software	Windows® XP, 2000, 2003 Server or NT 4.0	Windows® XP, 2000, 2003 Server or NT 4.0	Windows® XP, 2000, 2003 Server or NT 4.0	
Full referential EEG	X	X		
Esophageal pH availability				
Integrated oximeters	X	X	X	
Integrated pressure transducer	X	X	X	
NPT-capable	X	X		
Real-time respiratory detection		X		
Real-time cardiac event detection				
Periodic limb movement detection	X	X	X	
<b>Scoring:</b>				
Manual	X	X	X	
Computer-assisted	X	X	X	
Automatic	X	X	X	
Ability to trend multiple channels	X	X	X	
Built-in patient database	X	X		
Customizeable reports	X	X	X	
Printing module	X	X	X	
<b>Monitoring:</b>				
Stationary recording	X	X		
Ambulatory recording	X	X	X	
Control room capabilities	X	X		
Video/surveillance option	X	X		
Local monitoring via desktop/notebook computer	X	X		
Remote monitoring via network/internet	X	X		
Look-back features	Data stored to flash card, monitoring possible via IR link, but no look-back	Real-time and remote look-back of entire study with scoring and editing during collection, also adds user notes	Data is recorded on compact flash card, no look-back available	
Data storage options	CD-R, DVD-R	CD-R, DVD-R	CD-R, DVD-R	
Customer support services	24-hour, seven-day telephone support, field support, software upgrades	24-hour, seven-day telephone support, field support, software upgrades	24-hour, seven-day telephone support, field support, software upgrades	
Other features	Flexible, computer-assisted scoring with time-saving reporting and split-night tools, options for research tools, cardiac analysis, neXus lab management system	Wi-Fi technology, flexible, computer-assisted scoring with time-saving reporting and split-night tools, options for research tools, cardiac analysis, neXus lab management	Somté Cardiac Analysis includes detection and classification of VE and SVE events; ST segment analysis, Heart Rate Variability Analysis, full editing capabilities	

Grass-Telefactor, an Astro-Med Inc. Product Group		Medcare Systems Inc.
AURA PSG Wireless/Ambulatory System	Comet PSG	Compass F10 and M10
Digital	Digital	Digital
2 x 6 x 7	2 x 6 x 7	0.8 x 4.9 x 2.5
2.3 lbs.	2.3 lbs.	3.3 oz.
Configuration and option dependent	Configuration and option dependent	Competitive pricing available
Limited lifetime warranty on Grass-Telefactor manufactured parts	Limited lifetime warranty on Grass-Telefactor manufactured parts	One year standard, optional extension
Regulated medical grade	Regulated medical grade	No
Rechargeable 3.6 V lithium battery		Yes
External		No
24 built-in, 8 external	Up to 50	M10: 5 plus derived channels; F10: 4 plus derived channels
200 Hz	200 or 400 samples/second	3 to 75 Hz
AC, DC analog	AC, DC analog	SDB screening device
Programmable	Programmable	No
Many options available	Many options available	1600 x 1200 or higher
Adult, pediatric	Adult, pediatric	Adult
1/8-inch phono, ±10 V analog input	1/8-inch phono, ±10 V analog input	USB, serial
Standard	Standard	Complete array of sensors
Windows® 2000, XP	Windows® 2000, XP	Windows® 2000, XP
X	X	
X	X	
X		X
		X
X	X	
X	X	
X	X	
X	X	
X		X
X	X	X
X	X	X
X	X	X
X	X	X
X	X	X
X		X
X	X	X
X	X	X
X	X	X
X	X	X
X	X	X
X	X	X
X	X	X
X	X	X
Complete look-back capabilities	Complete look-back capabilities	Data can be recorded online and ambulatory; in online mode, previously recorded data are viewed by pausing display and moving back in the recording
Hard disk, CD-R/RW, DVD +/-RW	Hard disk, CD-R/RW, DVD +/-RW	Hard disk, CD-R/RW, DVD-RW
24-hour, seven-day customer support provided by Grass-Telefactor specialists	24-hour, seven-day customer support provided by Grass-Telefactor specialists	24-hour technical and customer service provided 365 days at no charge
EDF import/export, ASCII export available, MPEG4 video capture, compatible with other Grass-Telefactor PSG systems including the SleepTrek portable sleep screener	EDF import/export, ASCII export available, MPEG4 video capture, compatible with other Grass-Telefactor PSG systems including the SleepTrek portable sleep screener	Easy-to-use screeners for the detection of sleep-disordered breathing

Company name		Medcare Systems Inc.		
Product name	Embletta	Rembrandt with Embla N7000	Rembrandt with Embla S4000	
Analog, digital or both	Digital	Digital	Digital	
Dimensions (H x L x W) in inches	0.8 x 4.9 x 2.5	1.06 x 7.48 x 5.12	1.06 x 7.48 x 5.12	
Weight	3.5 oz.	1.37 lbs.	1.37 lbs.	
Cost	Competitive pricing available	Competitive pricing available	Competitive pricing available	
Warranty	One year standard, optional extension	One year standard, optional extension	One year standard, optional extension	
<b>Power:</b>				
External supply		110 to 220 V, patient isolated	110 to 220 V, patient isolated	
Battery	Yes			
Recharger	Yes			
<b>Recording:</b>				
Number of channels	9, with 14 derived signals	Up to 60	24 AC, 8 DC	
Sampling rates	3 to 75 Hz	Software-selectable 2 to 2,048 Hz	Software-selectable from 2 to 200 Hz	
Amplifiers	AC/DC	AC/DC	AC/DC	
Variable montage capabilities	Dependent on proxy	Yes	Yes	
Monitor display resolution	1600 x 1200 or higher	1600 x 1200 or higher	1600 x 1200 or higher	
Modes (adult, pediatric, etc.)	Adult, pediatric	Adult, pediatric	Adult, pediatric	
Interfaces	Standard, AutoSet, CPAP, pneumoflow, Palm™	Ethernet	Ethernet	
Types of sensors/electrodes	Two pole 1 mm connectors	Standard and complete array of sensors available	Two pin connectors and complete array of sensors available	
Software	Windows® 2000, XP	Windows® 2000, XP	Windows® 2000, XP	
Full referential EEG		X		
Esophageal pH availability		X	X	
Integrated oximeters	X	X	X	
Integrated pressure transducer	X	X	X	
NPT-capable		X	X	
Real-time respiratory detection		X	X	
Real-time cardiac event detection		X	X	
Periodic limb movement detection	X	X	X	
<b>Scoring:</b>				
Manual	X	X	X	
Computer-assisted	X	X	X	
Automatic	X	X	X	
Ability to trend multiple channels	X	X	X	
Built-in patient database	X	X	X	
Customizeable reports		X	X	
Printing module	X	X	X	
<b>Monitoring:</b>				
Stationary recording	X	X	X	
Ambulatory recording	X			
Control room capabilities		X	X	
Video/surveillance option		X	X	
Local monitoring via desktop/notebook computer	X	X	X	
Remote monitoring via network/internet		X	X	
Look-back features	Adjustable look-back windows allow scoring/editing during collection	Adjustable look-back windows allow scoring/editing during collection	Adjustable look-back windows allow scoring/editing during collection	
Data storage options	Hard disk, CD-R/RW, DVD-RW	Hard disk, CD-R/RW, DVD-RW, Enterprise Data Management	Hard disk, CD-R/RW, DVD-RW, Enterprise Data Management	
Customer support services	24-hour technical and customer support provided 365 days at no charge	24-hour technical and customer support provided 365 days at no charge	24-hour technical and customer support provided 365 days at no charge	
Other features	Ambulatory, nine-channel pocket-sized recorder collects data for up to 12 hours; includes sensors and analysis software; EKG and EEG modules available	Comprehensive and flexible diagnostic packages with Advanced Respiratory Modules, NiteAssistant and Enterprise Data Management packages	Comprehensive and flexible diagnostic packages with Advanced Respiratory Modules, NiteAssistant and Enterprise Data Management packages	

	Rembrandt with Monet SLP+	Somnologica with Embla A10	Somnologica with Embla N7000	Somnologica with Embla S4000
	Digital	Analog	Digital	Digital
	5.51 x 4.57 x 1.97	1.8 x 5.3 x 3.3	1.06 x 7.48 x 5.12	1.06 x 7.48 x 5.12
	0.8 lb.	1.04 lbs.	1.37 lbs.	1.37 lbs.
	Competitive pricing available	Competitive pricing available	Competitive pricing available	Competitive pricing available
	One year standard, optional extension	One year standard, optional extension	One year standard, optional extension	One year standard, optional extension
	External AC or six AA batteries	110 to 220 V, patient isolated	110 to 220 V, patient isolated	110 to 220 V, patient isolated
	Yes	Yes		
	No	Yes		
	24	Up to 20	Up to 60	24 AC, 8 DC
	Up to 1,600 Hz	Software-selectable from 1 to 200 Hz	Software-selectable 2 to 2,048 Hz	Software-selectable 2 to 200 Hz
	AC/DC	AC/DC	AC/DC	AC/DC
	Yes	Yes	Yes	Yes
	1600 x 1200 or higher	1600 x 1200 or higher	1600 x 1200 or higher	1600 x 1200 or higher
	Adult, pediatric	Adult, pediatric	Adult, pediatric	Adult, pediatric
	PCMCIA	PCMCIA	Ethernet	Ethernet
	Standard and complete array of sensors available	Standard and complete array of sensors available	Standard and complete array of sensors available	Two pin connectors and complete array of sensors available
	Windows® 2000, XP	Windows® 2000, XP	Windows® 2000, XP	Windows® 2000, XP
			X	
	X	X	X	X
	X		X	X
	X	X	X	X
	X			X
	X			
	X	X	X	X
	X	X	X	X
	X	X	X	X
	X	X	X	X
	X	X	X	X
	X	X	X	X
	X	X	X	X
	X	X	X	X
	X	X	X	X
	X	X		
	X	X	X	X
	X	X	X	X
	X	X	X	X
	X	X	X	X
	X	X	X	X
	Adjustable look-back windows allow scoring/editing during collection	Adjustable look-back windows allow scoring/editing during collection	Adjustable look-back windows allow scoring/editing during collection	Adjustable look-back windows allow scoring/editing during collection
	Hard disk, CD-R/RW, DVD-RW, Enterprise Data Management	Hard disk, CD-R/RW, DVD-RW, Enterprise Data Management	Hard disk, CD-R/RW, DVD-RW, Enterprise Data Management	Hard disk, CD-R/RW, DVD-RW, Enterprise Data Management
	24-hour technical and customer support provided 365 days at no charge	24-hour technical and customer support provided 365 days at no charge	24-hour technical and customer support provided 365 days at no charge	24-hour technical and customer support provided 365 days at no charge
	Comprehensive and flexible diagnostic packages with Advanced Respiratory Modules, NiteAssistant and Enterprise Data Management packages	Studio and research focused Science Series available; flexible packages combined with an intuitive user interface and comprehensive patient data management	Studio and research focused Science Series available; flexible packages combined with an intuitive user interface and comprehensive patient data management	Studio and research focused Science Series available; flexible packages combined with an intuitive user interface and comprehensive patient data management



Company name	Nellcor Puritan Bennett (Melville) Ltd.		
Product name	Sandman Elite	Sandman EXpress™	Sandman Spyder/Sandman Digital 32+ Amplifier
Analog, digital or both	Digital	Digital	Digital
Dimensions (H x L x W) in inches	Amplifier: 2.2 x 10.2 x 6.8; Headbox: 2.5 x 5.2 x 3.8	Amplifier: 5.1 x 3.9 x 1.4; Headbox: 5 x 3.8 x 1	Amplifier: 2.2 x 10.2 x 6.8; Headbox: 2.5 x 5.2 x 3.8
Weight	1.5 kg	< 0.03 kg	1.5 kg
Cost	Competitive pricing available	Competitive pricing available	Competitive pricing available
Warranty	One year, extended support available	One year, extended support available	One year, extended support available
<b>Power:</b>			
External supply	Included	Included	Included
Battery	N/A	N/A	N/A
Recharger	N/A	N/A	N/A
<b>Recording:</b>			
Number of channels	64 inputs, unlimited virtual channels	21 inputs	Up to 72
Sampling rates	8,192 Hz	4,256 Hz	8,192 Hz
Amplifiers	AC, DC	AC	AC, DC
Variable montage capabilities	User-defined montages	Pre-loaded montages	User-defined montages
Monitor display resolution	Based on monitor selected	1280 x 1024, determined by monitor provided	Based on monitor selected
Modes (adult, pediatric, etc.)	Adult, pediatric	Adult	Adult, pediatric, neonate
Interfaces	32 monopolar AC, 8 bipolar AC, 8 to 16 DC inputs, integrated Nellcor® oximeter	6 monopolar AC, 8 bipolar AC, integrated Nellcor® oximeter (SaO <sub>2</sub> , Pulse), body position, PTAF, three CPAP channels (flow, pressure and leak)	32 monopolar AC, 8 bipolar AC, oximeter, LED photic stimulator, auditory stimulator, somatosensory
Types of sensors/electrodes	Standard AC, DC inputs	Standard AC inputs	Standard AC, DC inputs
Software	Windows® 2000, XP, NT	Windows® XP	Windows® 2000, XP, NT
Full referential EEG	X		X
Esophageal pH availability	X		
Integrated oximeters		X	X
Integrated pressure transducer		X	
NPT-capable	X		
Real-time respiratory detection	X	X	
Real-time cardiac event detection			
Periodic limb movement detection	X	X	
<b>Scoring:</b>			
Manual	X	X	X
Computer-assisted	X	X	
Automatic	X	X	
Ability to trend multiple channels	X	X	
Built-in patient database	X		X
Customizable reports	X		X
Printing module	X	X	X
<b>Monitoring:</b>			
Stationary recording	X	X	X
Ambulatory recording	X	X	X
Control room capabilities	X	X	X
Video/surveillance option	X	X	X
Local monitoring via desktop/notebook computer	X	X	X
Remote monitoring via network/internet	X		X
Look-back features	Real-time and remote look-back of entire study with on-the-fly scoring	Real-time with unlimited review options	Real-time and remote look-back of entire study with on-the-fly scoring
Data storage options	Optional Microsoft® Access® Database, hard disk, CD-RW, CD-R, DVD-RW	External hard drive (Maxtor®), CD-RW, CD-R	Database, hard disk, CD-RW, CD-R, DVD-R, DVD-RW
Customer support services	24 hours, seven days a week, 365 days a year	24 hours, seven days a week, 365 days a year	24 hours, seven days a week, 365 days
Other features	Customizable system offering computer-assisted scoring of respiratory, EKG, desaturation, FFT, ETCO <sub>2</sub> , ECG, snore, automated event associations, bad data, running RDI in collection; quality assurance module for teaching purposes; integrated digital video; European version available	The Sandman EXpress system combines the hardware, software and sensors needed to conduct comprehensive sleep studies in one system. The components are the Sandman EXpress sleep diagnostic software, Sandman Digital 20™ Amplifier, Dell™ computer system, and Puritan Bennett® Knight Star® 330 Bi-Level® Ventilator.	European/EDF conversion available, long term EEG monitoring, 3D spectral mapping and FFT analysis, cognitive ERPs and sensory EPS

		Nihon Kohden America		
Suzanne Portable Recording System	EEG-1100 Data Acquisition System With PSG Software	EEG-9100 Portable Laptop System	EEG-9200 Data Acquisition System With PSG Software	
Digital	Digital	Digital	Digital	
5.7 x 5.5 x 2.4	Main unit: 13.7 x 18.5 x 8.25; PC unit: 17.55 x 17.3 x 8.1	3 x 7.9 x 4.35	Main unit: 4.5 x 10.5 x 4.25; PC unit: 17.55 x 17.3 x 8.1	
1.85 lbs.	Main unit: 44 lbs.; PC unit: 33 lbs.	6.6 lbs.	Main unit: 15 lbs.; PC unit: 33 lbs.	
Competitive pricing available	Configuration and option dependent	Configuration and option dependent	Configuration and option dependent	
One year, extended support available				
Optional DC input	120 VAC, 50/60 Hz	117 AC, 50/60 Hz, 420 VA max	120 VAC, 50/60 Hz	
Integrated NiMH, 20 hrs.				
Integrated, quick charge				
Custom 10, 18, 26, 36 configurations	40 to 192	27 to 32	27 to 32	
256 Hz	100 to 10,000 Hz	100 to 1,000	100 to 1,000	
AC, DC	40 AC, 32 DC	32 AC referential, four DC with JE-911A; 27 AC referential; 10 DC and SpO <sub>2</sub> with JE-912A	32 AC amplifiers; four DC with JE-911A; 27 AC referential; 10 DC and SpO <sub>2</sub> with JE-912A	
Preset montages	Referential or bipolar (online or off-line)	Referential recording with online and off-line remontaging	Referential or bipolar	
Based on monitor selected	Up to 1600 x 1200	Up to 1600 x 1200	Up to 1600 x 1200	
Adult, pediatric	Adult, pediatric	Adult, pediatric, nenote	Adult, pediatric	
18 monopolar AC (paired), 8 respiratory (including nasal pressure and snore), integrated Nellcor® oximetry, one DC input	Pulse oximeter, CO <sub>2</sub> devices, CPAP	Analog output and DC input boards—RS232	Pulse oximeter, CO <sub>2</sub> devices, CPAP	
Standard EEG, Pro-Tech respiratory belts	Piezo, snore, pressure transducers, body position, respiratory, electrodes	EEG, Piezo, DC devices, nasal pressure	Piezo, snore, pressure transducers, body position, respiratory, electrodes	
Windows® 2000, XP, NT	Windows® 2000 Professional	Windows® 2000, XP Professional	Windows® 2000 Professional	
X	X	X	X	
X		X	X	
X		X	X	
X				
X		X	X	
X	X	Optional with Polysmith software	Optional with Polysmith software	
	X	Optional with Polysmith software	Optional with Polysmith software	
X	X	Optional with Polysmith software	Optional with Polysmith software	
X	X	X	X	
X	X	X	X	
X	X	X	X	
X	X	Optional with Polysmith software	X	
X	X	X	X	
X	X	X	X	
X	X	X	X	
X	X	X	X	
X				
X	X	X	X	
X	X	X	X	
X	X	X	X	
X	X	X	X	
X	X	X	X	
X	X	X	X	
X	X	View any time period, stage and score (Polysmith option); view any time period within recording of waveforms only	X	
In attended mode with Sandman software	Full scoring, remontaging and digital video	Hard drive, CD	Full scoring, remontaging, digital video	
Compact flash, hard disk, CD-RW, CD-R, DVD-R, DVD-RW	CD, DVD		CD, DVD	
24 hours, seven days a week				
For attended or unattended PSG; built-in Nellcor® oximetry, CPAP nasal pressure transducer, fiber optic link; score studies with Sandman software; built-in body position and light sensor; compact unit				

Company name	Nihon Kohden America		Respironics Inc.
Product name	Polysmith™ 1 or 2 Bed Systems	Track It 12, 24 or 36 Ambulatory EEG/PSG System	Alice 3
Analog, digital or both	Digital	Both	Digital
Dimensions (H x L x W) in inches	Main unit: 13.7 x 18.5 x 25; PC unit: 17.55 x 17.3 x 8.1	1.25 x 5.5 x 4	Amp: 3 x 8.75 x 5.75; Headbox: 0.8 x 3.8 x 2.18
Weight	Main unit: 44 lbs.; PC unit: 33 lbs.	1.6 lbs.	Amp: 4 lbs.; Headbox: 0.4 lb.
Cost	Configuration and option dependent	Configuration and option dependent	Configuration and option dependent
Warranty			One year
<b>Power:</b>			
External supply	120 VAC, 50/60 Hz	100 to 200 VAC, 50/60 Hz, medical grade DC	100 to 200 VAC, 50/60 Hz, med. grade AC/DC
Battery		Alkaline or lithium disposable	N/A
Recharger		None	N/A
<b>Recording:</b>			
Number of channels	27	12, 24 or 36	28
Sampling rates	100 to 500 selectable	25, 50, 100, 200 or 256 — individually selectable	Up to 100 Hz
Amplifiers	27 AC, 10 DC	AC, DC, referential bipolar plus high-level analog output	
Variable montage capabilities	Referential or bipolar	Referential or bipolar	Yes
Monitor display resolution	1600 x 1200	Up to 1600 x 1200	Up to 1600 x 1200 and 16 bit
Modes (adult, pediatric, etc.)	Adult, pediatric	Adult, pediatric	Adult, pediatric, neonate
Interfaces	Most devices with analog input	RS232	8 analog DC inputs
Types of sensors/electrodes	Universal	Pressure, DC, Piezo, EEG, snore, light, pulse	Full sensor set provided
Software	Windows® 2000, XP Professional	Any Windows® software for setup and review	Alice® Sleepware™ in Windows® 2000 or XP (Home/Pro)
Full referential EEG	X	X	X
Esophageal pH availability	X	X	X
Integrated oximeters	X	X	
Integrated pressure transducer			
NPT-capable	X	X	X
Real-time respiratory detection	X	X	X
Real-time cardiac event detection	X		X
Periodic limb movement detection	X	X	X
<b>Scoring:</b>			
Manual	X	X	X
Computer-assisted	X	X	X
Automatic	X	X	X
Ability to trend multiple channels	X	With optional Polysmith software	X
Built-in patient database	X	X	
Customizeable reports	X	X	X
Printing module	X	X	X
<b>Monitoring:</b>			
Stationary recording	X	X	X
Ambulatory recording		X	
Control room capabilities	X		X
Video/surveillance option	X		X
Local monitoring via desktop/notebook computer	X	X	X
Remote monitoring via network/internet	X		X
Look-back features	Complete online look-back and scoring	Off-line sleep analysis of recorded data; look-back is non-applicable	Full real-time/post-acquisition scoring
Data storage options	CD, DVD	Online data storage to ATA flash disk; following data analysis stored on CD	Local hard drive, CD, DVD, flash memory, network drives
Customer support services			24 hours, seven days a week
Other features	Two-monitor interface optional; multitasking, scoring, recording and remote access all can be performed from the same application; comprehensive database and scheduler available		EDF/ASCII data export, external oximeters, Pro-Tech sensors and PTAF, multiple Respironics titration options available

	SleepMed Inc.	Stellate	XLTEK
Alice 5	Sleep Lab Services	Harmonie	Inspirex Sleep System with Connex Amplifier
Digital		Digital	Digital
Base station: 12.5 x 14 x 5; Headbox: 2 x 4 x 10			Base unit: 1.7 x 12 x 13; Breakout: 1.1 x 6.1 x 3.8
Base stations: 7.8 lbs.; Headbox: 1.5 lbs.			Base unit: 4 lbs.; Breakout: 0.68 lb.
Configuration and option dependent			Starting from \$16,500
Two years		One year	One year
100 to 240 VAC, 50/60 Hz, med. grade AC/DC		Yes	115/230 VAC, 50/60 Hz
N/A			No
N/A			No
55		44 channel headbox with DC auxiliary inputs	50
Up to 2,000 Hz		Up to 1,000 Hz	512, 256, 200, 50 and 10 Hz
Headbox is amplifier		Digital EEG/Sleep	Referential AC, differential AC/DC
Yes		Yes	Complete montage and reference flexibility
Up to 1600 x 1200 and 16 bit		1218 x 1024	As high as selected monitor allows
Adult, pediatric, neonate		Adult, pediatric	Adult, pediatric
10 analog DC inputs in base, two in headbox		USB	1.5 mm safety touch, 1/8-inch mini phone
Full sensor set provided, Pro-Tech & Grass Alice® Sleepware™ in Windows® 2000 or XP (Home/Pro)		Compatible with most Windows® XP	All Windows® XP
X		X	X
X			X
X		X	X
X		X	
X			X
X		X	X
X		X	X
X		X	X
X		X	X
X	X	X	X
X	X	X	X
X	X		X
X	X	X	X
X	X	X	X
X	X	X	X
X		X	X
X			X
X	X	X	X
X	X	X	X
X		X	X
X		X	X
Full real-time/post-acquisition scoring		Look-back feature available with real-time scoring	Review and analysis capability while recording; shows live and review in a split-screen mode
Local hard drive, CD, DVD, flash memory, network drives		CD/DVD archiving	Hard drive, CD, DVD, any other Windows® compatible media
24 hours, seven days a week	Training and 24-hour, seven-day support services provided to the sleep technologist performing the study and the physician providing medical direction and/or interpretation services	24-hour, seven-day support by a qualified service and support team	Support team available 24 hours, seven days for phone and remote PC support; nationwide network of service engineers dispatched when required
6-Channel ECG, PTT, Masimo oximetry, EDF/ASCII Data export, multiple Respiration titration options, real-time impedance during/after study, integrated intercom, remote data and study access	Sleep diagnostic systems, as well as video and audio monitoring systems, are set up, supported and main- tained over the life of a sleep services contract	Online scoring tools, personal workspaces and data management resources	Fast manual and automated analysis, flexible reporting, easy data management, full EEG capability, integrated Masimo oximeter, self monitoring tools, synchronized MPEG4 video

Company name	<b>XLTEK</b>
Product name	Inspirex Sleep System with Trex Amplifier
Analog, digital or both	Digital
Dimensions (H x L x W) in inches	1.1 x 6.1 x 3.8
Weight	0.66 lb.
Cost	Starting from \$17,250
Warranty	One year
<b>Power:</b>	
External supply	115/230 VAC, 50/60 Hz
Battery	Two AA batteries
Recharger	No
<b>Recording:</b>	
Number of channels	32 to 35
Sampling rates	512, 256, 200, 50 and 10 Hz
Amplifiers	Referential AC, differential AC, differential DC
Variable montage capabilities	Complete montage and reference flexibility
Monitor display resolution	As high as selected monitor allows
Modes (adult, pediatric, etc.)	Adult, pediatric
Interfaces	1.5 mm safety touch
Types of sensors/electrodes	All
Software	Windows® XP
Full referential EEG	X
Esophageal pH availability	X
Integrated oximeters	X
Integrated pressure transducer	
NPT-capable	X
Real-time respiratory detection	X
Real-time cardiac event detection	X
Periodic limb movement detection	X
<b>Scoring:</b>	
Manual	X
Computer-assisted	X
Automatic	X
Ability to trend multiple channels	X
Built-in patient database	X
Customizeable reports	X
Printing module	X
<b>Monitoring:</b>	
Stationary recording	X
Ambulatory recording	X
Control room capabilities	X
Video/surveillance option	X
Local monitoring via desktop/notebook computer	X
Remote monitoring via network/internet	X
Look-back features	Review and analysis capability while recording; shows live and review in a split-screen mode
Data storage options	Hard drive, CD, DVD, any other Windows compatible media
Customer support services	Support team available 24 hours, seven days for phone and remote PC support; nationwide network of service engineers dispatched when required
Other features	96-hour memory, fast manual and automated analysis, flexible reporting, easy data management, full EEG capability, self monitoring tools, synchronized MPEG4 video

Companies listed below offer additional END technology:	Routine EEG	Ambulatory EEG	Surgical/ICU EEG Monitoring	Polysomnography	Multi-modality EEG/PSG	Long-term Epilepsy Monitoring	Digital Video EEG/PSG Monitoring	Telemedicine Applications	Patient Administration Database Software	Amplifier Technology	Transducers and Sensors	Accessories	Maintenance
	Bio-logic Systems Corp.	X	X	X	X	X	X	X	X	X	X	X	X
BRAEBON				X	X	X	X		X	X	X	X	X
Cadwell Laboratories Inc	X	X		X	X	X	X		X				X
Compumedics USA	X	X	X	X	X	X	X	X	X	X	X	X	X
Grass-Telefactor	X	X	X	X	X	X	X		X	X	X	X	X
Medcare Systems Inc.				X					X	X	X	X	X
Nellcor Puritan Bennett (Melville) Ltd.	X	X		X	X	X	X		X	X	X	X	X
Nihon Khoden America	X	X	X	X	X	X	X	X	X	X	X	X	X
Resproincs Inc.				X	X		X	X			X	X	
SleepMed Inc.		X				X	X						
Stellate	X		X	X	X	X	X						
XLTEK	X	X	X	X	X	X	X	X	X	X	X	X	X

## A Word From ADVANCE

We invite comments about the Polysomnography and Electroneurodiagnostics Buyers Guide so that future efforts may better serve *ADVANCE* readers. Please forward comments to Sharlene George, Editor, *ADVANCE for Managers of Respiratory Care*, 2900 Horizon Drive, King of Prussia, PA 19406; e-mail: sgeorge@merion.com; fax: (610) 278-1425; phone: (610) 278-1400, ext. 1324.

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*ADVANCE* reserved the right to edit entries for style, clarity, brevity and fairness. Information in the listings came from the companies. Trademark and registered symbols are listed here as they were returned on surveys.

—Buyers guide compiled by Lauren Constance Everingham

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*ADVANCE for Managers of Respiratory Care* announces the annual Sleep Sensors Buyers Guide, a comprehensive guide to companies providing sleep sensors, appearing in the May 2006 issue. Don't miss this opportunity to have your company receive a FREE listing and FREE product releases in the Sleep Sensors Buyers Guide. To participate, contact Lauren Everingham at [leveringham@merion.com](mailto:leveringham@merion.com).