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DataSim 6100

Patient Simulator

Technical Data

The DataSim 6100 Patient Simulator is a versatile training tool that features six channels for generating ECG arrhythmias, blood pressure, and respiration. Critical-care nurses, clinical specialists, and instructors have the ability to generate an extensive range of simulations, from a simple normal sinus rhythm to a complex Swan-Ganz catheter insertion. Because the hemodynamic waveforms are physiologically synchronized, students learn to identify the blood pressures and arrhythmias healthcare professionals experience every day.

By interfacing the DataSim 6100 to an Arrhythmia Anne™, Resusci-Anne™ or Chris Clean™, instructors can teach the correct way to defibrillate a patient and achieve the desired effect on ECG and blood pressure activity.

A wide range of optional modules is available to expand the DataSim 6100's waveform selections. Each module plugs into the unit's front panel and features a variety of specialty waveforms and waveform sequences. To make training even more effective, a video adapter accessory displays ECG and blood pressure waveforms generated by the DataSim 6100 on any standard TV set.

Designed for convenience, the DataSim 6100 features a handy handheld keypad, which is attached to the unit with a flexible 20-foot, telephone-style cord for exceptional range of motion.

Key features

- Extensive training capability
- Interface with Resusci-Anne, Arrhythmia Anne and Chris Clean defibrillator mannequins
- Synchronization of hemodynamic waveforms
- Manual PAC and PVC insertions
- Swan-Ganz procedure
- Video adapter interface
- 6 channels for generating ECG, arrhythmia, blood pressure, and respiration

Optional features

- Expansion modules

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Specifications

ECG	
Output signals	High-level: 1 V/1 mV
Heart rate	
Range	30 BPM to 300 BPM
Accuracy	± 1 %
Output connectors	
Low-level	12-lead electrode snaps
High-level	Switchcraft 15GM7F
Pacemaker artifact	-8 mV, 1 ms
Sample rate	250 sample/s max
Performance testing	
Linearity	2.5 Hz triangular wave
HR cal check	30 BPM to 300 BPM
Chart speed	2.5 Hz square wave
Amplitude	0.25 mV, 0.5 mV, 1 mV, 1.5 mV, 2 mV, and 2.5 mV
Blood pressure	
Output signals	High-level: 1 V/100 mmHg
Transducer	5 µV/V mmHg and 40 µV/V mmHg
Exciter voltage	10 V ac or dc max
Static range	0 mmHg to 250 mmHg, adjustable in 5 % increments
Accuracy	± 5 % or 1 mmHg, whichever is greater
Waveforms	Static, square wave, and physiological dynamic
Output connector	Switchcraft 15GM7F
Performance testing	
Static	0 to 250 adjustable in 5 % increments
Square wave	0 mmHg to 250 mmHg adjustable in 5 % increments
Respiration output signals	
Delta impedance	0.25 Ω to 2.5 Ω Lead I
Base impedance	250 Ω Lead I, 750 Ω Lead II
Rate range	0 BPM to 80 BPM
Lead	All leads
Performance testing	
Rate	0, 10, 20, 40, and 80 per min
Delta impedance	0.25 Ω, 0.5 Ω, 1 Ω, 1.5 Ω, 2, and 2.5 Ω
Coincidence check	

General information	
Channels (6)	ECG/arrhythmia, respiration, arterial pressure, PA pressure, RA pressure, and auxiliary channel for optional cardiac output, CO_2, and other parameters. Fundamental Rhythms and Sequences: Normal sinus rhythm, sinus tachycardia and bradycardia, ventricular and sinus asystole, atrial tachycardia, atrial flutter and fibrillation, AV blocks (1st degree, 2nd degree Mobitz I and II, and 3rd degree), unifocal and multifocal PVCs, ventricular tachycardia,ventricular fibrillation, PVCs at 1/min to 35/min for any rhythm, couplet, triplet, bigeminy, junctional, accelerated junctional, PACs and PJCs, atrial tachycardia with aberrant conduction, idioventricular, agonal, ST-segment elevation and depression, pacemaker (atrial, ventricular, and AV sequential), failure to capture and sense, bundle-branch block, cardiac-failure sequence, and conversion sequence.
Display	2 in H x 16 in W super twist LCD
Power	AC power provided by (choice of) 115 V or 230 V charger (standard with instrument)
Battery type	12 V, 1.9 AH sealed lead acid rechargeable
Battery capacity	20 hours
Battery charge time	5 % to 95 % of complete charge in 10 hours
Optional personality modules	Intra-Aortic Balloon Assist (9513-0139): Early inflation, early deflation, proper timing, late inflation, late deflation. Five augmented arterial waveforms only. Not interactive with the LABP.
Pedatric ECG (9513-0140)	Sinus arrhythmia, junctional, wandering pacer, enlarged atrium, junctional escape, hyperkalemia, CPR artifact, superventricular tach @ 185 BPM, and supraventricular tach @240 BPM
Dimensions (WxDxH)	25.4 cm x 11.94 cm x 33 cm (10 in x 7.4 in x 13 in)
Weight	3.2 kg (7.05 lb)

Ordering information

DataSim 6100 Patient Simulator Models

DATASIM6100US120V United States, 120 V
DATASIM6100AUS250V Australia, 250 V
DATASIM6100DEN250V Denmark, 250 V
DATASIM6100SHK250V, Shuko, 250 V
DATASIM6100ISR250V Israel, 250 V
DATASIM6100ITAL250V Italy, 250 V
DATASIM6100IND250V India, 250 V
DATASIM6100SWZ250V Switzerland, 250 V
DATASIM6100UK250V United Kingdom, 250 V

Standard accessories

9508-0213 Operator's Manual
5210-0236 LCD Pendant Controller
POWER SUPPLY Universal Battery Charger
Power Cord (country specific)

Optional accessories

Blood pressure cables
3010-0315FG BCI International 4100-09 (6 M)
3010-0315FG Criticare Systems (1100) 4100-09 (6 M)
3010-0315FG Critikon (Dinamap Plus) 4100-09 (6 M)
3010-0314FG Datascope (800 series) 4100-08 (6 F)
3010-0316 Fakuda Denshi (DS 3300) 4100-61 (12 M)
3010-0320 GE Marquette Medical (PPG/E for M DR, IR, IM4, VR series) 4100-11 (6 F)
3010-0314FG GE Marquette Medical (PDS 3100) 4100-08 (6 F)
3010-0327 GE Marquette Medical (7000/Early Tram – AR series only) 4100-23 (8 M)
3010-0343 GE Marquette Medical (Dash, Eagle, Solar, Tram, and MacLab) 4100-60 (rectangular – 11 M)
3010-0311 Hewlett Packard 5 µV (78300, - 500, - 800, and Merlin/Viridia/Omnicare) 4100-04 (12 M)
3010-0315FG Invivo Research (Omni-Trak) 4100-09 (6 M)
3010-0315FG Ivy Biomedical 4100-09 (6 M)
2199495 Kontron (Mini-, Super-, Color-Mon) 4100-20 (6 M)
3010-0315FG MDE (Escort series) 4100-09 (6 M)
3010-0315FG Mennen Medical (All) 4100-09 (6 M)
3010-0315FG North American Drager (Vitalert 2000) 4100-09 (6 M)

3010-0315FG Ohmeda (Modulus CD-CV) 4100-90 (6 M)
3010-0315FG Protocol Systems (Propaq Series 100) 4100-09 (6 M)
3010-0315FG Physio Control (All) 4100-09 (6 M)
3010-0317 Quinton (Q-Cath) 4100-62 (6 M)
3010-0332 Siemens Mingo (Cath System) 4100-42 b (7 F)
3010-0313 SpaceLabs (Alpha 9, Alpha 14, 703R) 4100-06 (5 M)
3010-0315FG SpaceLabs (1050, 1700, PCMS series) (for use with SpaceLabs adapters 700-0028-00 and 0120-0551-00 when testing the multiparameter Ultraview Command Module) 4100-09 (6 M)
3010-0308 Unterminated BP cable 4100-01 (7-pin DIN, one end only)
3010-0320 Witt Biomedical 4100-11 (6 F)

General purpose cables
3010-0338 ECG high-level stereo to 1/4 in phone jack
9513-0139 6070-01B intra-aortic balloon assist (manual IABP waveform selection)
9513-0140 6070-03B pediatric ECG
9513-0141 6070-05B intra-cranial pressures (ICP) (5 µV/V/mm or 40 µV/V/ mmHg transducer sensitivity only)
9513-0142 6070-06B advanced pacer
9513-0146 6070-11B left heart pressures
9513-0147 6070-12B valve disease
9513-0152 6070-17B ST segments
9513-0155 6070-18B cardiac output injectate temp = 32 ˚F (0 ˚C)
9513-0156 6070-19B Marquette CO module
9513-0157 6070-20B cardiac output injectate temp = 77 ˚F (25 ˚C)
9513-0168 6070-37B normal/Diseased Heart
9513-0165 6070-29B Interactive IABP datascope (Series 90)

Note: Interactive IABP modules augment the arterial pressure in response to inflation/deflation signals from the intra-aortic balloon pump. Both the invasive arterial BP and synchronization/ timing cables are included with the above modules. These IABP modules are compatible only with the listed brand and model IABP.

9513-0153 6070-10B MCL1 set (set includes the three following modules listed: 9513-0143FG, 9513-0144FG, and 9513-0145FG)
9513-0143FG 6070-07B MCL1 atrials
9513-0144FG 6070-08B MCL1 blocks
9513-0145FG 6070-09B MCL1 ectopy/aberrancy
9513-0148 6070-13B 12-lead set (set includes the three following modules listed: 9513-0149FG, 9513-0150FG, and 9513-0151FG)
9513-0149FG 6070-14B 12-lead normal ECG
9513-0150FG 6070-15B 12-lead anterior infarct
9513-0151FG 6070-16B 12-lead inferior infarct

About Fluke Biomedical

Fluke Biomedical is the world's leading manufacturer of quality biomedical test and simulation products. In addition, Fluke Biomedical provides the latest medical imaging and oncology quality-assurance solutions for regulatory compliance. Highly credentialed and equipped with a NVLAP Lab Code 200566-0 accredited laboratory, Fluke Biomedical also offers the best in quality and customer service for all your equipment calibration needs.

Today, biomedical personnel must meet the increasing regulatory pressures, higher quality standards, and rapid technological growth, while performing their work faster and more efficiently than ever. Fluke Biomedical provides a diverse range of software and hardware tools to meet today's challenges.

Fluke Biomedical Regulatory Commitment

As a medical test device manufacturer, we recognize and follow certain quality standards and certifications when developing our products. We are ISO 9001 certified and our products are:

- CE Certified, where required
- NIST Traceable and Calibrated
- UL, CSA, ETL Certified, where required
- NRC Compliant, where required

Fluke Biomedical.
Better products. More choices. One company.

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