Technical Specifications for SimCube SC-5

Physical Dimensions	
Size	3"x 3" x 3.5" (7.6cm X 7.6cm X 8.9cm)
Weight	2.5 Lbs
Power	External A/C Adaptor (Output: 6VDC / 1.8amps, 2.1mm,
	center positive connector) or
	4 AA Batteries (with Battery Boost Option)
NIBP Connection	Quick Disconnect, Male
ECG/Resp Connection	10 ECG snaps
IBP Connection	Mini-DIN
Manometer	
Range	-400 to + 400 mmHg
Resolution	Pos pressures ± 0.1 mmHg, Neg pressures ± 1 mmHg
Accuracy	± 1.0 mmHg
User Interface	
Single Button Operation or Mobilize	
App Control	
Single Button Operating Modes	Adult NIBP
	Neo NIBP
	Hypertensive NIBP
	Hypotensive NIBP
	Manometer
	Over Pressure (Peak Detect)
	HR Seq. / Alarm Test
	ECG Pacer ON
	Arrhythmia Sequence
	Invasive BP Zero
	Invasive BP 100, 200
	Invasive BP Sequence
Single Button Modes	
NIBP Adult Simulation	
Simulated Pressure	120/80 (97) mmHg
Simulated Heart Rate	70 bpm
Simulated Pulse Volume	1 ml
NIBP Neonatal Simulation	
Simulated Pressure	70/40 (51) mmHg
Simulated Heart Rate	95 bpm
Simulated Pulse Volume	0.5 ml
NIBP Hypertensive Simulation	100/100 (140)
Simulated Pressure	190/120 (142) mmHg
Simulated Heart Rate	70 bpm
Simulated Pulse Volume	1 ml
NIBP Hypotensive Simulation	00/40 (50)
Simulated Pressure	80/40 (58) mmHg
Simulated Heart Rate	70 bpm
Simulated Pulse Volume	1 ml
ECG Simulation	
Isolated	Yes
Synchronized with NIBP	Yes
R Wave Size	$1 \text{mV} (\text{lead II}) \pm 10\% (\text{Adult Mode})$
R Wave Width	35 ms
Wave Shape	QRS wave

Connection	10 Snaps
Simulation Rates	70bpm, (95 for neo), Asystole, Arrhythmia, Pacer, HR seq.
HR Sequence / Alarm Test	
	30 seconds each of:
	30, 60, 90, 120, 45, 60, 160, and 220 bpm
Pacer Simulation	
Isolated	Yes
Synchronized with NIBP	Yes
Pacer Size	3 mV
Pacer Width	1.2 ms
Respiration Simulation	
Isolated	Yes
Synchronized with NIBP	Yes
Wave Shape	Square Wave
Size	4 Ohm
Simulation rates	20bpm, (40 bpm for neonatal), Apnea, Sequence = 00, 30, 45 60, 22, 30, 80, 110
Arrhythmia Simulation	
	Cardiac failure sequence: approximately 90 seconds of normal beats interspersed with PVCs and Runs, followed by approx. 30 seconds of VTAC, 30 seconds of VFIB, and 30 seconds of asystole.
Peak Detect/Overpressure	
Resolution	1 mmHg
Invasive Blood Pressure Simulation Isolated	Yes
Synchronized with NIBP	Yes
Excitation Voltage	DC range = 3.3 to 5.7 AC range = 6.65 to $11.4p-p$
Pressure range	0-250 mmHg
Static Pressure Accuracy	$\pm 1 \text{ mmHg}$
Dynamic Pressure Accuracy	± 2mmHg
Simulation rates	$\begin{array}{l} \hline Dynamic = 120/80, 70/40, 190/120.\\ Static = 0, 100, 200.\\ Step = 0.25, 50, 100, 150, 200, 250 \end{array}$
Mobilize SIMULATION RANGES AND MINIMUM STEP SIZE:	
HR	0, 30-240 BPM in 5 digit increments
RR	0-100 BPM in 1 digit increments
NIBP Systolic:	60-230 mmHg in 5 digit increments
NIBP Diastolic:	30-190 mmHg in 5 digit increments
IBP Static	0, 50, 100, 150, 200, 250 mmHg
IBP Dynamic:	Tracks with NIBP dynamic values
· · · · · · · · · · · · · · · · · · ·	+ Excit = pin 1, -Excit = pin 4, + Sig = pin 3, -Sig = pin 6
Wiring Environmentel	+ Excit = pin 1, -Excit = pin 4, + $Sig = pin S$, - $Sig = pin S$
Environmental	100-240 VAC, 50-60 Hz
Voltage Range	
Voltage Range Operating	Temperature: 10°C to 35°C (50°F to 95°F), Relative Humidity: 10 to 80% non-condensing, Altitude: 3,000m (9,843ft)

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