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| Pages 1 / 4 | Specifications Product: Simul-G |  |
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Simul-G is a resting ECG machine with facility of Measurement and Interpretation. It connects with PC through USB interface.

Technical Specifications

1. Dimension and Weight

Dimension (in mm) (L x B x H) : 105X65X40 mm

Weight (in Kg) : 150gm

2. Environmental

Operating Temp : -5 °C to +50 °C

Operating & Storage : 0 to 95 % non-condensing

Humidity

3. Power supply

Input : USB powered

Power consumption : < 10 Watt

4. Performance

Display : 1024 x 768 pixels,

Display area : 320 mm x 240 mm

Language : English

Alarm : Audio alarms for HR

QRS Beep : On each QRS

Acquisition

Frequency response : 0.05 Hz to 150 Hz with notch at 50Hz

Filter : DSP

Input impedance : 10 MΩ

Time constant : > 3.2 sec

A/D conversion : 12 bit

Noise : < 20μV_{p-p}

Leakage current : < 10 μA


Patient isolation : Optical isolation.

Gain : 5, 10 & 20 mm/mV selectable.

CMRR : > 120 dB

Sweep speed : 25.0 mm/S.


Accuracy of HR : +/- 2 BPM.

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|-----------------------|---|---|
| Pages 2 / 4 | Specifications Product: Simul-G |  |
|-----------------------|---|---|

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| Sampling Frequency | : 250 samples per second simultaneous |
| Model | : Model available with blue tooth facility |
| Storage | : 12 lead unaveraged ECG, 10 second Rhythm strips of 12 leads, Medians after every 8 sec along with HR, BP and fiducial points, full disclosure of entire test |
| Leads-Off detection | : Yes |
| Printout | : Manual printing with grid On/Off facility, print Colour reports |

5. Minimum Requirement of PC for Simul-G system:

1. Motherboard : Recommended
Make : D-Link, ASUS, INTEL, HIS.
Chipset : Intel, VIA.
Speed : FSB, 400MHz. and onwards.
2. CPU : Recommended
Make : Intel P-4, Speed 2.4 GHz. 400 FSB.
3. RAM : Recommended
Make : Symtronics, Hyundai, Transcend.
Size : 128 MB.
Speed : 266MHz.
4. USB port : working USB port for Simul-G unit connection
5. VGA card : 64 bit, 2 MB memory PCI VGA card.
6. Monitor : **15"** color monitor
7. SMPS : Recommended
Make : Priya, Mercury, and Intex.
Capacity: 300 Watt.
8. Hard disk : Recommended
Make : Seagate.
Size : Barracuda 40GB 7200 RPM.
9. Display Settings : Resolution - 1024 X 768.
: Font - Small font.
: Color - 16 bit hi color.
10. Key board : with 101 keys.
11. Mouse
12. Operating system : Windows 98/Windows 2000/XP and onwards

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| Pages 3 / 4 | Specifications Product: Simul-G |  |
|-----------------------|--|---|

13.1 KVA stabilizer.

14. CD ROM : Recommended
 Make : LG. Samsung Sony, ASUS.
 Type : Speed 52X.

15. Printer : Recommended
 Type : HP Laser Jet 1000, HP Laser Jet 1010,
 HP Laser Jet 6L Gold/ Pro.

16. Independent earthing connection

Detailed features

❖ Acquisition

- Body level acquisition of 12 lead ECG
- Simultaneous acquisition of 12 Leads of ECG @ 250 samples per second per channel with ADC resolution of 12-bit.
- Frequency Response – DSP filter of 0.05 to 150Hz with notch at 50Hz
- Leads-Off detection
- Facility to store 12 lead Unaveraged ECG
- Facility to Rerun test
- Automatic detection of P+ start, P+ end, P – end, Q start, R Start, R end, S end, r' end, s' end, T Start, T End, U start, U end points on the median once.

❖ Acquisition display


- Display of 4 seconds of ECG traces of 12 leads with standardization pulse and corresponding medians next to each lead
- Display HR
- Display long lead, QRS detection Lead, BP and gain
- Leads-Off detection with a message indicating the lead during the test.

❖ Acquisition settings

- Relearn the median template
- Gain: 0.5, 1.0, 2.0 mV/cm
- Facility to change long lead, QRS detection lead and amplify QRS lead

❖ Review display modes

- Review data of selected patient
- 12 medians screen: 12 medians are displayed with ST-level
- Resting ECG display: 2.5 sec all leads with medians and 10 sec of long lead.
- Zoom Median:
 - Display the amplitude in volts of all fiducial points
 - Displays following **ECG interpretation**
 1. Rhythm statements
 - a. Sinus Rhythm / Junctional or NonSinus Rhythm suspected / Sinus Bradycardia / Sinus Tachycardia
 2. PR interval statements
 - a. PR is normal / PR is long / PR is short
 3. QRS interval statements
 - a. Normal QRS Width / Wide QRS
 4. QT interval statements
 - a. Normal QT interval / QT Interval is prolonged / QT Interval - Little clinical significance

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| Pages 4 / 4 | Specifications Product: Simul-G |  |
|-----------------------|--|---|

5. QRS Axis statements
 - a. QRS Axis is normal / Right axis deviation / Left axis deviation / QRS Axis is indeterminate
 6. ST abnormalities statements
 - a. Normal ST level / ST Elevation / ST Depression
 7. T wave inversion
 - a. Lead names of leads showing T wave inversion
 8. ECG
 - a. Normal ECG / ECG not normal / Otherwise normal ECG
 - Facility to edit fiducial points (E, J, Post J) of selected median
 - Display duration of P,Q,R ,S,T in ms
 - ST level and ST slope
 - Display intervals of PQ,PR,QRS,QTC in ms and axes in degree of P,QRS and T
 - Display RR interval and HR
 - Facility to change P+ start, P+ end, P – end, Q start, R Start, R end, S end, r' end, s' end, T Start, T End, U start, U end points.
- ❖ **Review settings**
- Grid/Graph/No grid option on all review screens
 - Facility to edit HR and BP of any stage
 - Facility to edit Patient Details
 - Create the bitmap (GIF) of the selected report/s and save at selected location
 - Facility to backup patient data and review saved data.
 - Facility to Edit interpretation
 - Facility select / deselect printing of interpretation
- ❖ **Reports**
- Resting ECG report
 - 12 leads(All leads) measurement report with interpretation
 - 5 seconds ECG report
- ❖ **Settings**
- Hospital details
 - Referring Doctor list
 - Standard comment
 - Simul-G system configuration
 - Printing details configuration
- ❖ **Display**
- Resolution – 1024 X 768

* Due to our continuous product improvement programme, features can be enhanced