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|-----------------------|-----------------------------------------------|-------------------------------------------------------------------------------------|
| <b>Pages</b><br>1 / 4 | <b>Specifications</b><br><br>Product: Simul-G |  |
|-----------------------|-----------------------------------------------|-------------------------------------------------------------------------------------|

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 : 0 °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,

Language : English

Alarm : Audio alarms for HR

QRS Beep : On each QRS

### Acquisition

Frequency response : 0.05 Hz to 100 Hz with notch at 50Hz

Filter : DSP

Input impedance : 10 MΩ

Time constant : > 3.2 sec

A/D conversion : 12 bit

Noise : < 20μV<sub>p-p</sub>

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.

Sampling Frequency : 250 samples per second simultaneous

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|-----------------------|------------------------------------------------------|-------------------------------------------------------------------------------------|
| <b>Pages</b><br>2 / 4 | <b>Specifications</b><br><br><b>Product: Simul-G</b> |  |
|-----------------------|------------------------------------------------------|-------------------------------------------------------------------------------------|

Storage : 12 lead unaveraged ECG, 10 second Rhythm strips of 12 leads, Medians after every 8 sec along with HR, BP and fiducial points,

Printout : Manual printing with grid On/Off facility, print Colour reports

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

1. Operating system : Windows 10 professional 64bit
2. Motherboard : Intel corei3
3. RAM : 4 GB
4. USB port : working USB port for Simul-G unit connection.
5. Monitor : Color monitor.
6. Hard disk : minimum 500 GB.
7. Display Settings : Resolution - 1024X 768.
8. Keyboard : with 101 keys.
9. Mouse
10. 1 OR 2 KVA UPS
11. 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 100Hz with notch at 50Hz
- 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.

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|-----------------------|------------------------------------------------------|-------------------------------------------------------------------------------------|
| <b>Pages</b><br>3 / 4 | <b>Specifications</b><br><br><b>Product: Simul-G</b> |  |
|-----------------------|------------------------------------------------------|-------------------------------------------------------------------------------------|

❖ **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
    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
  - 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

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|-----------------------|-----------------------------------------------|-------------------------------------------------------------------------------------|
| <b>Pages</b><br>4 / 4 | <b>Specifications</b><br><br>Product: Simul-G |  |
|-----------------------|-----------------------------------------------|-------------------------------------------------------------------------------------|

- 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