

asaan is a resting ECG machine. It acquires ECG and prints it on A4 paper. It has e-mail option to send ECG report. It also has 2" thermal printer to take emergency printouts.

Technical Specifications

1. Performance –

Display	: 7" touch screen
Language	: English
Printout	: on A4 Paper & emergency print on thermal paper (55mm, 20mtrs)
Storage	: Storage of 10000 ECG, freedom of not taking printout if not required
Email	: Yes

2. Power supply

Input	: 100 - 240 VAC, 50 Hz, 1 Ø.
Output	: 17V DC @ 4 A.
Battery	: 11.1V /2.6Ah rechargeable.

3. Dimension and Weight

Dimension (in mm) (L x B x H):	250mmX225mmX85 mm
Weight (in Kg)	: Approx. 1.93kg

4. Environmental

Operating Temp	: -5 °C to +50 °C
Operating & Storage Humidity	: up to 95 % non-condensing

5. ECG

Frequency response	: 0.05 to 100 Hz with notch at 50 Hz
Input impedance	: 10 M ohm
Time constant	: > 3.2 sec
A/D conversion	: 12 bit

Noise	: < 20 $\mu\text{V}_{\text{p-p}}$
Leakage current	: < 10 μA
CMRR	: > 120 dB
Patient isolation	: Optical isolation.
Lead selection	: standard 12 leads
Gain	: 5, 10 & 20 mm/mV
Sweep speed	: 25.0, 50.0 mm/S.

Detailed Feature

➤ Main screen display

- **Patient** –To go to patient search page
 - Search old patients
 - Register new patient
 - Edit medical history
 - Edit patient detail
 - Link emergency
 - Conduct ECG test
 - View log of patient
 - ✓ Facility to Print A4 & thermal print
 - ✓ Facility to send email
- **Review tests** – To view list of all conducted tests.
 - view report or check the status of the patient with date and time of the test
 - Facility to Print A4 & thermal print
 - Facility to send email
 - Preview ECG
- **Emergency** –To take emergency ECG
- **Settings** – Configuration

➤ Details of Configuration

- `Demo` mode selection check box
- Screen configuration(Default screen)
 - ECG screen
 - Median screen
- Thermal print Setting
 - Print gain
 - Print length
 - Print format
 - Report format

- Report Configuration
 - Single page report
 - ECG only
 - ECG with Interpretation
 - Medians with Measurement
 - Medians with measurement & Interpretation
 - Two page report
 - Without Interpretation
 - With Interpretation
- Grid/Graph/No grid option for A4 report
- Color, Borders and Heart rate check box for A4 report
- Long lead selection from dropdown for A4 report
- Display gain selection from dropdown for Acquisition
- Print gain selection
- Facility to enter hospital name
- Facility to enter send to mail ID
- Facility to enter email subject
- Cancel & OK button

➤ **Acquisition display –From emergency & new ECG button**

- 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
- Display of 4 seconds of ECG traces of 12 leads in 6 X 2 with standardization pulse
- Acquisition screen button
 - Gain button
 - speed button
 - QRS lead button
 - Save button
 - Exit button
- **Gain button-** asaan allows you to choose desired recording sensitivity (5, 10, 20mm/mv).
 - asaan allows the choice of changing the gain of the Electrocardiogram from acquisition & from configuration .
 - There are two gain options, one is Display Gain and Print Gain, and we can choose which gain to be used for display and thermal printing.
- **Speed button-** asaan allows you to choose desired recording sensitivity (12.5, 25, 50mm/s).
 - asaan allows the choice of changing the sweep speed of the Electrocardiogram from acquisition
- **QRS lead button-**

- To change QRS lead and change lead displayed in magenta color
- **Save button-**
 - This button will get enable after 10 sec. as per configuration from 'setting' median screen OR ECG screen is displayed.
- **Exit button-**
 - Exit from the acquisition screen

➤ **ECG Screen display**

- **Facility to Retest**
- **Facility to Print A4 & thermal print**
- **Enter comments printed on A4 paper**
- **Zoom In zoom out ECG**
- **View previous & next ECG of selected patient**

➤ **Median Screen display-**

- **Zoom selected median**
 1. 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.
- **Displays following Measurement**
 1. Amplitude (in V)
 2. Duration of P,Q,R ,S,T in ms
 3. Interval of PQ,PR,QRS,QTC in ms
 4. Axis of P,QRS and T measurement in degree
 5. Heart rate
- **Displays following ECG interpretation**
 1. Rhythm statements
 - a. Sinus Rhythm / Junctional or NonSinus Rhythm suspected / Sinus Bradycardia / Sinus Tachycardia
 2. PR interval statements
 - b. PR is normal / PR is long / PR is short
 3. QRS interval statements
 - c. Normal QRS Width / Wide QRS
 4. QT interval statements
 - d. Normal QT interval / QT Interval is prolonged / QT Interval - Little clinical significance
 5. QRS Axis statements
 - e. QRS Axis is normal / Right axis deviation / Left axis deviation / QRS Axis is indeterminate
 6. ST abnormalities statements
 - f. Normal ST level / ST Elevation / ST Depression
 7. T wave inversion
 - g. Lead names of leads showing T wave inversion

- **Edit Measurement & Interpretation facility**
- **Facility to Enter comment**
- **Facility to Retest**
- **Facility to Print A4 & thermal print**

❖ **Reports**

- Resting ECG report
- 12 leads(All leads) measurement report with interpretation

❖ **LED indication**

- Mains on—Green LED.
- Battery on—Yellow LED.
- Battery low—Red LED.

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