cardiofax V

**Electrocardiograph
ECG-1550A**

NIHON KOHDEN

Clear viewing 12.1-inch touch panel TFT LCD with swivel screen

Better patient care with swivel screen

A flexible arm lets you change the screen angle to the best viewing position to help the care giver.

DESIGN FEATURES

Swivel screen

12.1 inch touch panel TFT LCD with swivel screen lets you change the screen angle to the best viewing position.

Same size display image and printout

The screen display and waveforms are the same size as the printout. Also, the display has grid lies just like the recording paper.

Large 5 minute memory

The most recent five minutes of all lead ECG waveforms can be stored in memory. This increases the chance to record important data. To save data, you can select, analyze and print just the necessary region from 5 minute full disclosure.

Serial comparison

Average waveforms in the latest 5 exams can be compared in the same screen. You can know the changes in time-series basis.

Communication capability

Approximately 400 patients x 10 seconds of 12 lead ECG wave and patient information can be stored. Approximately 2,500 patients x 10 seconds of 12 lead ECG wave and patient information can be stored on a QM-040V flash disk card. Stored data can be transferred to PC via QM-040V or LAN/ Wireless LAN interface with optional QB-903E ECG viewer software.

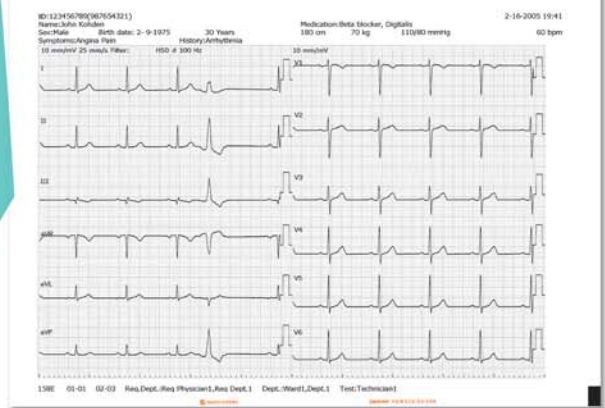### Built-in recorder or Paperless model

ECG-1500K (paperless model)
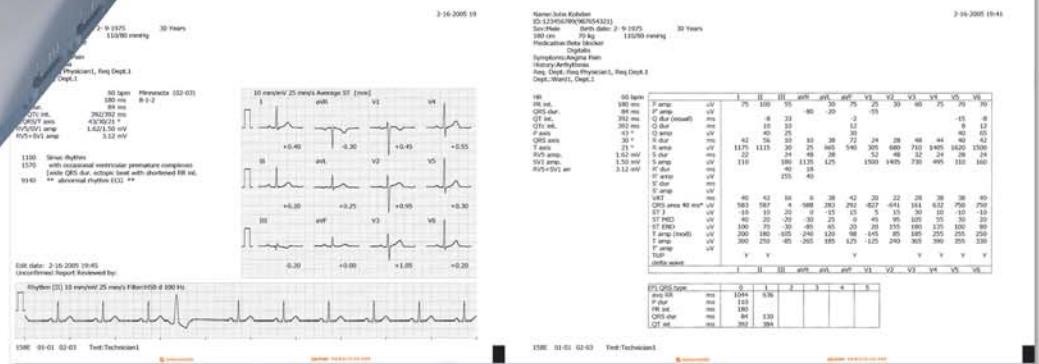ECG-1550K (built-in recorder)

Large 5 minute memory

The most recent five minutes of all lead ECG waveforms can be stored in memory. This increases the chance to record important data. To save paper, you can select, analyze and print just the necessary region from 5 minute full disclosure.
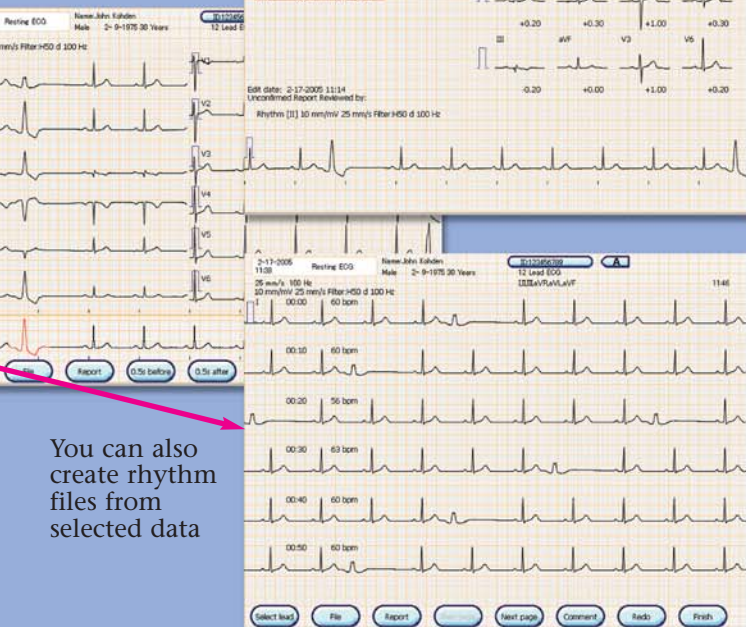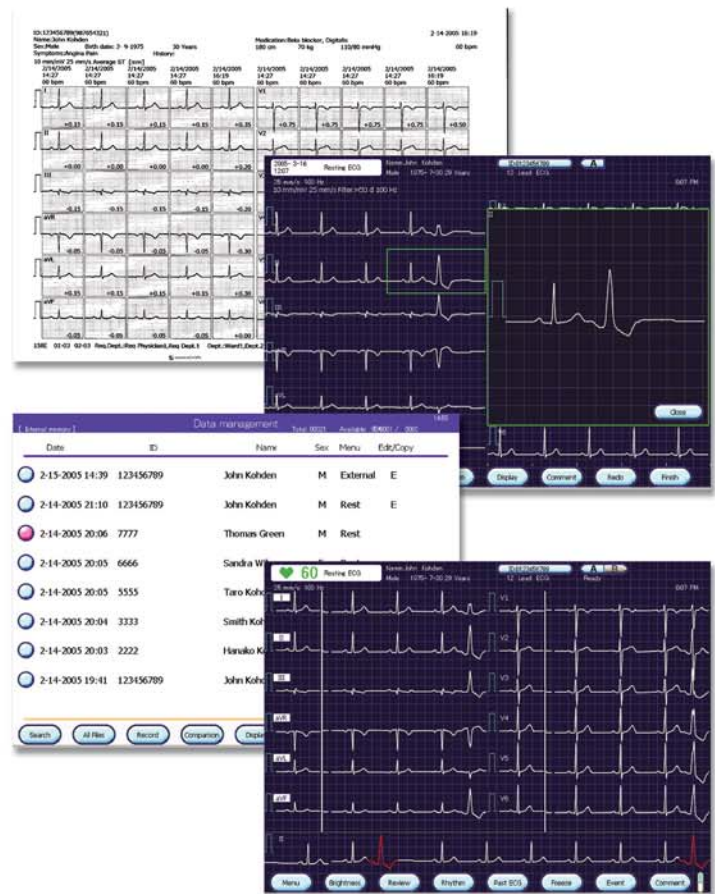
Same size display image and printout

The screen display and waveforms are the same size as the printout. Also, the display has grid lines just like the recording paper.

You can create files of resting 12-lead ECG and analysis from selected data

You can also create rhythm files from selected data

Specifications

ECG Input

Input impedance: ≥ 10 MΩ

Electrode offset tolerance: ≥ ±400mV

Input unit protection: Isolated and defibrillation protected

Standard sensitivity: 10 mm/mV ±5%

Common mode rejection ratio: 110 dB or less

Frequency response: 0.05 Hz to 150 Hz, ≥ -3 dB (drift filter: off, High-cut filter: 150 Hz)

Waveform Data Processor

ECG leads: 12 lead (with JC-901D)

Number of inputs: 2

Sample rate: 500 samples/s

AC line filter: 50/60 Hz

High cut filter: 25, 35, 75, 100, 150 Hz

Time constant: ≥ 3.2 s

External input: 2 channel, 10 mm/0.5 V

Signal output: 1 channel, 0.5 V/1mV

Sensitivity selection: 2.5, 5, 10, 20 mm/mV

Display

Type: Color LCD (with backlight)

Display size: 12.1 inch

Resolution: 800 x 600 dots

Displayed data: Waveform, patient information, recording settings, operation mode

Recorder (ECG-1550K)

Printing process: High resolution thermal print head

Printing density: 200 dpi (8 dots/mm)

Scanning line density: 1 ms

Number of channels: 3, 4, 6, 7, 12

Paper speed: 5, 10, 12.5, 25, 50 mm/s

Recording data: Program type, version, date and time, paper speed, sensitivity, lead name, filter, hospital name, patient information, electrode detachment, noise

Recording paper type: 210 mm width, 30 m long Zfold (100 m or 300 m Z-fold and roll recording paper set outside the main unit)

ECG Analysis

Program name: ECAPS 12C

Analysis patient age: 3 years to adult

Finding items: approx. 200

Judging items: 5

Connectors/ PC Card Slot

USB: USB1.1 ? 2

LAN: IEEE802.3 (10BASE-T, 100 BASE-TX) x 1

PS/2: keyboard connector x 1

PC card slots: TypeI/II PC card standard 1997 (excluding CardBus) x 2

Power Requirements

Line voltage: 100 to 127V, 220 to 240 V ±10%

Line frequency: 50/60Hz

Power input: ECG-1500K: 50 VA, ECG-1550K: 150 VA

Power saving: Standby mode

Battery operation

Voltage: 12 V

ECG-1500K:

Power consumption: 5 A or less

Battery operation*: Approx. 100 minutes

ECG-1550K:

Power consumption: 10 A or less

Battery operation*: Approx. 40 minutes

*Under the conditions of operating temperature 25℃, fully charged new battery, recording speed 25 mm/s (for ECG-1550K), 6 ch continuous recording (for ECG-1550K)

Environment

Main Unit:

Operating temperature: 10 to 40℃

Operating humidity: 25 to 95% RH

Operating atmospheric pressure: 70 to 106 kPa

Storage temperature: -20 to 65℃

Storage humidity: 10 to 95% RH (non condensing)

Battery:

Operating humidity: 45 to 85% RH

Storage temperature:

30 days or less: -20 to 50℃

one year or less: -20 to 30℃

Storage humidity:

60 days or less: 10 to 95% RH

more than 60 days: 45 to 85% RH

Recording paper:

Operating humidity: 25 to 80% RH

Storage temperature: -20 to 50℃

Storage humidity: 10 to 90% RH

Performance

Performance standard: IEC60601-2-51(2003)

Safety

Safety standard: IEC60601-1 (1988), IEC60601-1 Amendment 1 (1991), IEC60601-1 Amendment 2 (1995), IEC60601-2-25 (1993), IEC60601-2-25 Amendment 1 (1999), IEC60601-1-1 (2000)

Type of protection against electric shock:

AC power: Class I

Battery power: Internally powered equipment

Degree of protection against electric shock:
Defibrillator proof type CF applied part when input box JC-901D is used

Dimensions and Weight

Dimensions (excluding protrusions):

ECG-1500K: 330 W ? 370 H ? 340 D mm

ECG-1550K: 330 W ? 420 H ? 340 D mm

Weight (without battery):

ECG-1500K: 9.5 kg

ECG-1550K: 12 kg

Electromagnetic Compatibility

IEC60601-1-2 Second edition 2001

IEC60601-2-25 Amendment 1: 1999

Local Purchase Options

Purchase the following recommended models.

Recommended models

- **Wireless LAN card**
  AIR-PCM352 (CISCO SYSTEMS) www.cisco.com

- **Bar code reader**
  LS2208 (SYMBOL) www.symbol.com
  OPL-6735-USB (OPTICON) www.opticon.com

- **Magnetic card reader**
  KT-993-3R-0101 (NEURON)
  www.neuron.co.jp/indexE.html

- **Keyboard**
  ACK-595 (SOLID YEAR) www.solidyear.com/all.html

Reference specifications*

- **Bar code reader**
  USB1.1, bus powered, HID class type

- **Magnetic card reader**
  USB1.1, bus powered, HID class type

- **Keyboard**
  PS/2 connector type

*If the recommended model is not available, you can try using a unit with these reference specifications although the proper functioning of any unit other than the recommended models cannot be guaranteed.

This device is intended for use only by qualified medical personnel. This brochure may be revised or replaced by Nihon Kohden at any time without notice.