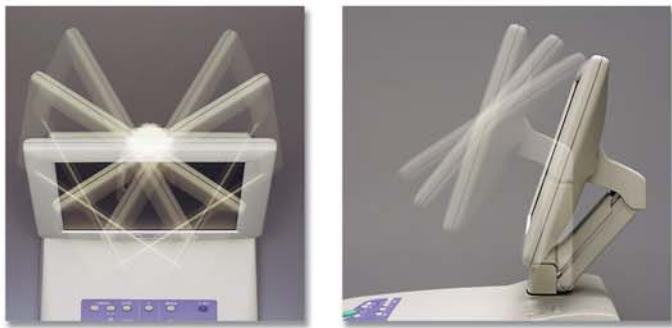


# cardiofax V

Electrocardiograph  
ECG-1550A



# 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 lines 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.

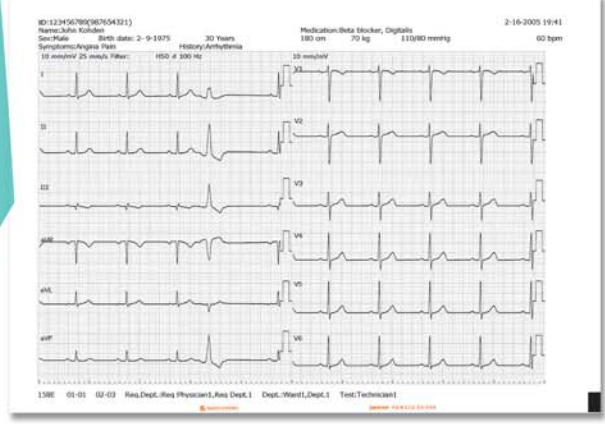
### Built-in recorder or Paperless model

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

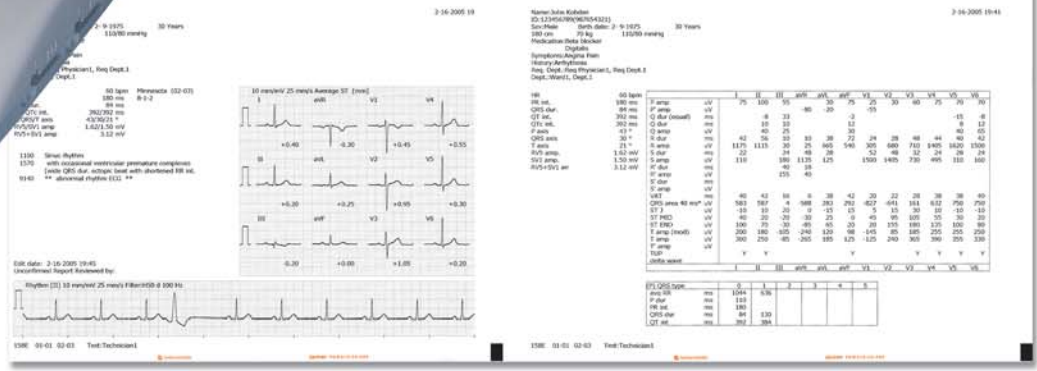
## Large 5 minute memory



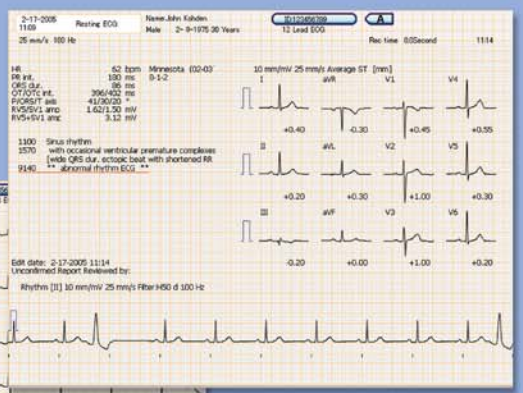
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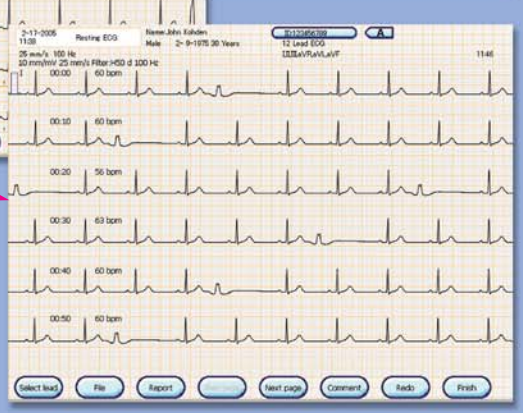
**Same size display image and printout**  
 The screen display and waveforms are the same size as the printout. Also, the display has grid lines just like the recording paper.



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

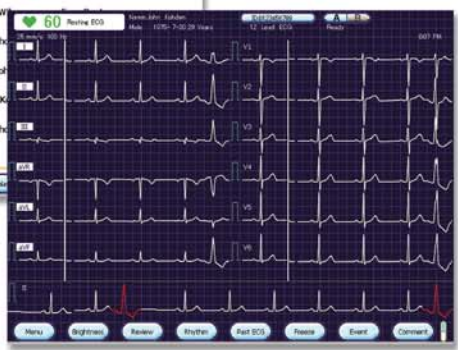


You can also create rhythm files from selected data



Data management

Date	ID	Name	Sex	Menu	File/Type
2-15-2005 14:39	123456789	John Kohden	M	External	E
2-14-2005 21:10	123456789	John Kohden	M	Rest	E
2-14-2005 20:06	7777	Thomas Green	M	Rest	
2-14-2005 20:05	6666	Sandra W			
2-14-2005 20:05	5555	Taro Koh			
2-14-2005 20:04	3333	Smith Koh			
2-14-2005 20:03	2222	Hanako K			
2-14-2005 19:41	123456789	John Koh			



## Specifications

### ECG Input

**Input impedance:**  $\geq 10\text{ M}\Omega$

**Electrode offset tolerance:**  $\geq \pm 400\text{ mV}$

**Input unit protection:** Isolated and defibrillation protected

**Standard sensitivity:** 10 mm/mV  $\pm 5\%$

**Common mode rejection ratio:** 110 dB or less

**Frequency response:** 0.05 Hz to 150 Hz,  $\geq -3\text{ dB}$  (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:**  $\geq 3.2\text{ s}$

**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 Z-fold (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  $\pm 10\%$

**Line frequency:** 50/60Hz

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

**Power saving:** Standby mode

### Battery operation

**Voltage:** 12V

**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°C, 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°C

**Operating humidity:** 25 to 95% RH

**Operating atmospheric pressure:** 70 to 106 kPa

**Storage temperature:** -20 to 65°C

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

**Battery:**

**Operating humidity:** 45 to 85% RH

**Storage temperature:**

30 days or less: -20 to 50°C

one year or less: -20 to 30°C

**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°C

**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](http://www.cisco.com)

• **Bar code reader**

LS2208 (SYMBOL) [www.symbol.com](http://www.symbol.com)

OPL-6735-USB (OPTICON) [www.opticon.com](http://www.opticon.com)

• **Magnetic card reader**

KT-993-3R-0101 (NEURON)

[www.neuron.co.jp/indexE.html](http://www.neuron.co.jp/indexE.html)

• **Keyboard**

ACK-595 (SOLID YEAR) [www.solidyear.com/all.html](http://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.*