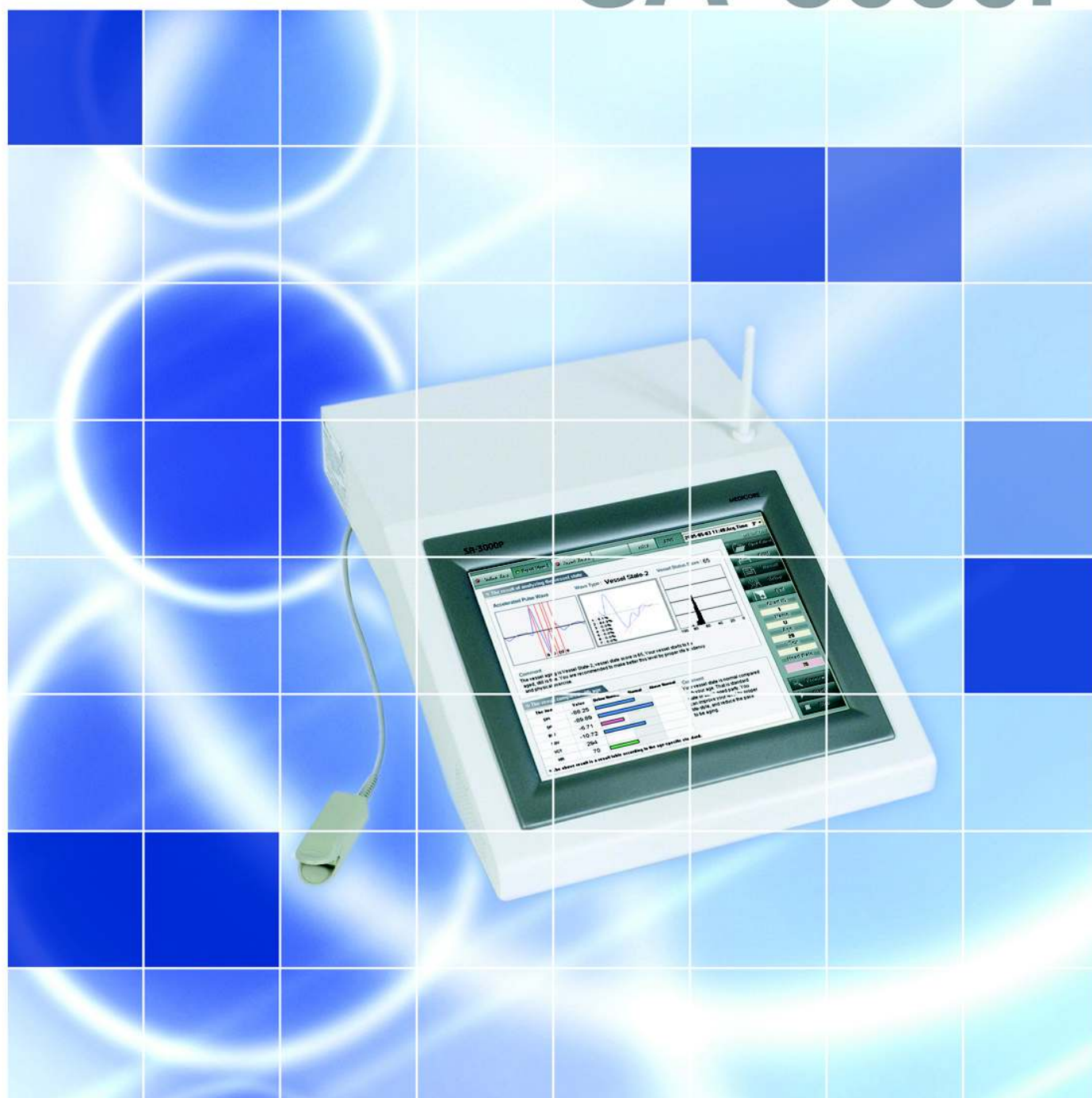




Heart Rate Variability
Accelerated Photoplethysmograph

ANS Function & Blood Circulation Assessment

SA-3000P

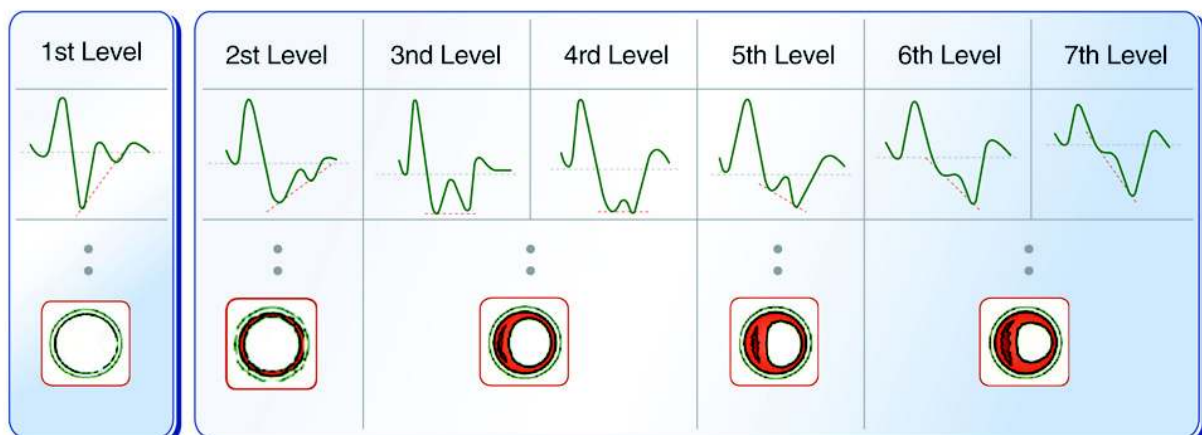


APG (Accelerated Photoplethysmograph)

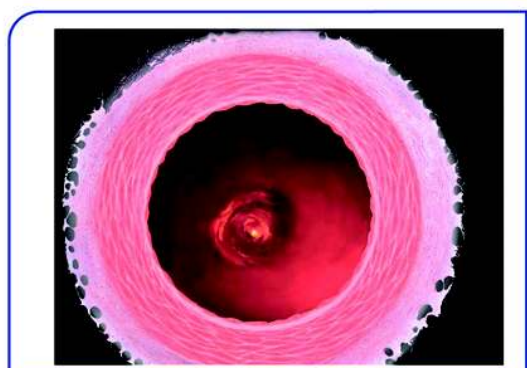
With the pulse wave signal at the finger tip, it can measure the progress of arteriosclerosis, peripheral circulation disorder and other cardiovascular disease with the blood elasticity and cardiac output.



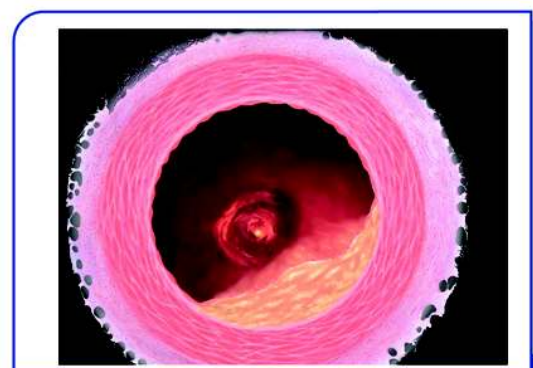
Classification of Wave Pattern by the Vascular Age



Aging Process →



Health Coronary Artery



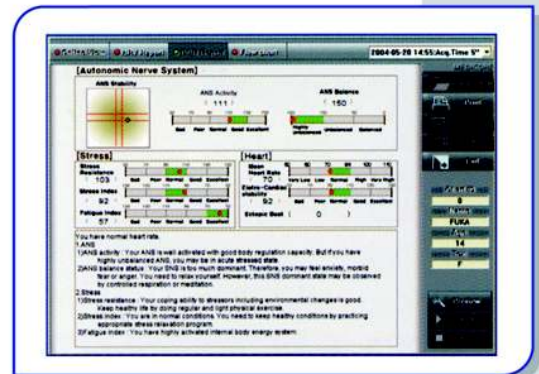
Artery with Atherosclerotic Plaque

The arteries are sites of a very common disease such as atherosclerosis. Here, the atherosclerotic plaque has formed in a coronary artery. It consists of cholesterol, inflammatory cells, and fibrosis, and it reduces the space for blood flow in the artery.

Result Report

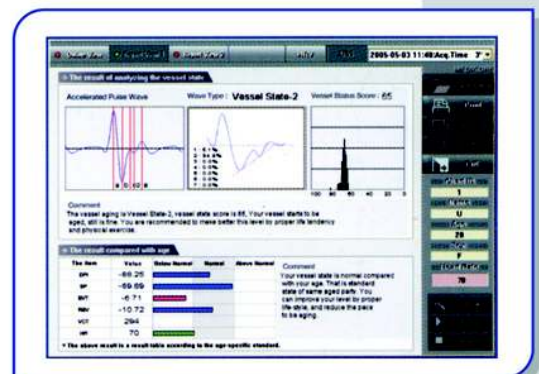
1. HRV Report

- ▶ Stress Automatic Diagnosis
- ▶ Easy to understand by the doctor or anyone
- ▶ Stress Index, Fatigue Index and Electro-cardiac Stability



2. APG Report

- ▶ Represent the blood circulation status with the wave pattern and vessel score
- ▶ Express the result according to the age
- ▶ Give the comment with the easy explanation



HRV + APG Clinical Application

HRV as a predictable indicator for the cardiovascular disease (Autonomic Nerve Balance Test)

- ▶ Predict the cardiovascular disease
- ▶ Evaluate the autonomic nerve balance
- ▶ Predict the high risk factor with the stress

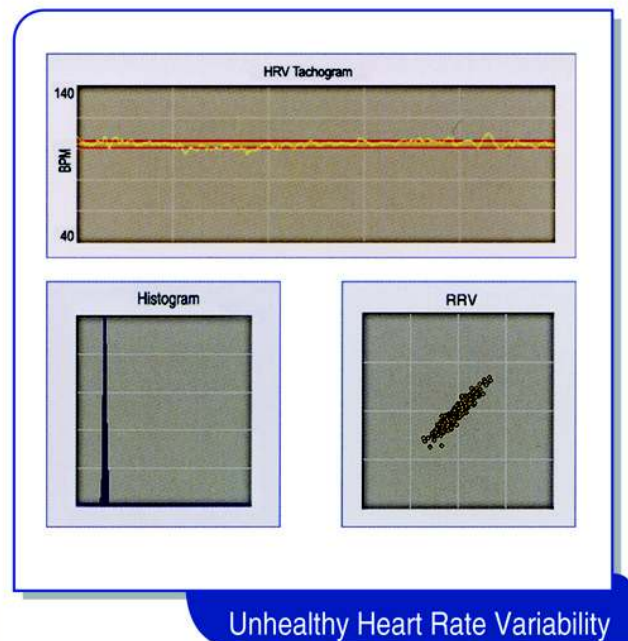
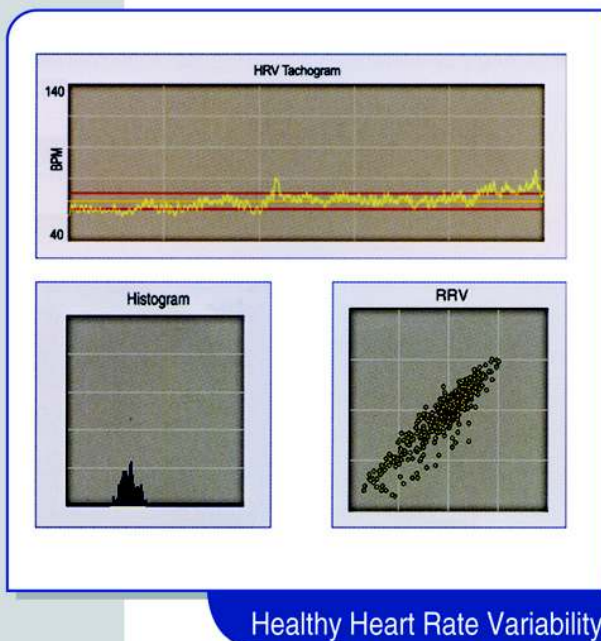


APG as a predictable indicator for the peripheral disease

- ▶ Peripheral nerve disorder
- ▶ Cardiovascular disease such as myocardial infarction
- ▶ Cerebral vascular disease such as cerebral infarction

HRV (Heart Rate Variability)

HRV is usually variable every second and it is used as an indicator for evaluating the balance of homeostasis in autonomic nervous system affected by the internal or external environment. It is well known for professionals and specialists to detect the chronic or acute stress level and the symptom of cardiovascular disease as the objective measurement method. HRV of the normal people shows more complicated than those who have heart problems.



Initially Oriental Reference in the world



We are acknowledged as the first developer of Eastern reference for HRV in the world.

HRV clinical data were collected from 3,600 people with 8 university hospitals in Korea.

HRV oriental reference is patented by Korean Industrial Property Office in 2005.



Main Features

- ▶ Automatic Diagnosis with DDR report
- ▶ Simple operation
- ▶ Non-invasive and painless test
- ▶ Quick result display
- ▶ Manage the patient data systematically
- ▶ Two main references for the westerner and the easterner

SA-3000P approved for FDA in US, SFDA in China and CE in EU.

Cautions before Test

1. Avoid testing immediately following exercise.
When performing tests at a fitness club, do not allow people to test following exercise.
2. To increase accuracy and repeatability results, the test needs to be performed while the person is in a testing state.
3. Do not talk or move during the test.
4. Breathe normally. Changes in breathing rates can cause changes in the HRV results.
5. Avoid alcohol, coffee, and smoking for at least 2 hours before testing.



Specification

Features

1. Finger Probe
2. Built-in S/W platform
3. 10.4 – Color TFT LCD

Specification

1. Power 100 ~ 240 VAC, 50~60Hz, 2.0A
2. Environment Operation Temperature : 10 ~ 40°C (50~104 F)
Storage Temperature : -20 ~ 60°C (-4~140 F)
3. Screen : 10.4 – Color TFT LCD
I/O : K/B (1), Mouse (1), LAN (1), USB (2), Monitor (1), Speaker (1)
4. Dimension : 404(W) X 300(L) X 120(H)mm
5. Weight : 6.6 Kg

Performance Measurement

1. APG/HRV
Range : 30 ~ 240bpm
Accuracy : $\pm 2\%$
Wave-out Time : 2 sec
Averaging (after setting time) 8 beats

Configuration

1. Standard HRV
APG

Display Parameter

Pulse Wave
Accelerated Pulse Wave
Condition of Blood Vessel
HRV



CE



SFDA



FDA



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