# How the most advanced sensor technology can enhance massage.

Human beings can suffer from both physical and mental fatigue. The therapy has been designed based on a “stiffness feeling” as physical fatigue, and now the stress sensor, senses the degree of “stress” i.e. mental fatigue. The massage lounger’s massage promotes relaxation according to the stress level. The HEC-DR8700 massage lounger offers treatment of both the mental and physical aspects through the stiffness sensor and stress sensor working together. SANYO massage loungers are closer to the techniques of a professional masseur than ever before.

## Stress Sensor

Selecting the Full Auto Course and inputting your age will measure your pulse fluctuations (R-R intervals as seen in an electrocardiogram) and determine the degree of stress. Research Center for Sports and Healthcare Technology of Ritsumeikan University and SANYO Electric Co., Ltd. have conducted cooperative research on electrocardiographic measurement and applied technology. (from 2006 to 2008: MEXT Knowledge Cluster Initiative)

Grip the sensor controller with the fingers of both hands.

When stress measurement is completed, the measured degree of stress is displayed.

Sensor Controller

## Stiffness Sensor

This sensor detects the amount of stiffness you’re feeling in your body by sensing physiological response variations. It then automatically adjusts to provide the best massage for your body in the same way a professional senses your stiffness with the fingertips.

Grip the sensor controller with the fingers of one hand.

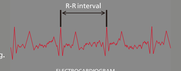
When stiffness measurement is completed, the measured degree of stiffness is displayed.

- ⦿ Areas where a high degree of stiffness has been detected.
- ○ Areas where a low degree of stiffness has been detected.

3 stiffness levels (High/Low/None) are indicated.

### How to measure stress

Grip the stress sensor with both hands to measure your pulse fluctuations of R-R intervals as seen in an electrocardiogram and determine the degree of stress. The fluctuations of R-R intervals are called CVRR (Coefficient of Variation of R-R Intervals). The higher this value is, the more relaxed you are. The lower it is, the more stress you are experiencing. The CVRR index differs according to age, so input your age for greater accuracy.
SANYO bases measurements and verification of CVRR of our massage loungers on testing conducted by the Department of Kansei Design of Hiroshima International University.




### Course selection of Full Auto

If the double-function sensor finds your stress level high, a gentle massage that stimulates the parasympathetic nervous system is provided.
If stiffness is high, you receive a massage that stimulates the sympathetic nervous system.
So each time you enjoy the ideal massage for your condition, refreshing both body and mind.

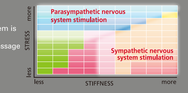



表 4

## Specifications

| | | |
|---|---|---|
| Power consumption | | 200 W - 290 W |
| Power dissipation of electric heating equipment | | 33 W |
| Rated time | | 30 min. |
| Timer | | WHOLE BODY SENSOR AUTOMATIC COURSES<br>FULL AUTO ·····Approx. 17 minutes<br>STIFFNESS, RECOVERY, RELAX ·····Approx. 15 minutes<br>QUICK ·····Approx. 8 minutes<br>(Maximum of approx. 20 minutes due to stiffness detection)<br>AUTOMATIC COURSES ·····Approx. 15 minutes<br>MANUAL COURSES ·····Approx. 15 minutes |
| Dimensions | | 730mm(28 ¾″) [width]×1,370mm(53 ⅞″) [depth]×1,220mm(48″) [height] ※ When upright (with footrest retracted) |
| | | 730mm(28 ¾″) [width]×1,940mm(76 ⅜″) [depth]×760mm(29 ⅞″) [height] ※ When reclined (with footrest horizontal) |
| Weight | | Approx. 90kg(198 lbs) |
| Cord length | | Approx. 2.1m(82 ⅝″) |
| Upholstery | | Synthetic leather |
| Accessories | | Stand, Installation screws(Three) |
| Frequency | Gripping | (5 stages) Approx. 9 - 24 times per minute |
| | Kneading (up/down) | (5 stages) Approx. 10 - 30 times per minute |
| | Tapping | (5 stages) Approx. 300 - 600 times per minute |
| | Shiatsu | (5 stages) Approx. 4 - 14 times per minute |
| Width | Tapping | (5 stages) Approx. 63 - 140mm (2 ⅜″ - 5 ½″) |
| | Spine stretching | (5 stages) Approx. 63 - 140mm (2 ⅜″ - 5 ½″) |
| Vertical movement speed | | One up/down pass in approx. 34 sec. |
| Range of partial stretching | | Partial stretching (Partial) : Repetition with approx. 210mm(8 ¼″)<br>Partial stretching (Focus) : Repetition with approx. 110mm(4 ⅜″) |
| Massage rollers up/down range | | Approx. 780mm(30 ⅝″) |
| Height adjustment for massaging rollers | | No gradation or approx. 1cm(⅜″)/one press of button |
| Reclining angle | | Approx. 120° - 170° |
| Reclining method | | Backrest: Motor-driven type (Linked with footrest)<br>Footrest: Motor-driven type (Footrest only)<br>Seat surface: Motor-driven type (Linked with backrest and footrest) |
| Air pressure | | (3 stages) Approx. 11-28kPa<br>※ There is a slight difference according to the part. |

Note : Product appearance and specifications are subject to change without notice.

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**Remote Control**

Whole Body Sensor Automatic Courses

Automatic Courses

Manual Courses

Sensor Controller

### Whole Body Sensor Automatic Courses

- FULL AUTO **Full Auto Course**
  Fully automatic massage based on the degrees of stress and stiffness
- STIFFNESS **Stiffness Course**
  Uses mainly realistic *Shiatsu*, pressing slowly and deeply to relieve stiff muscles.
- RECOVERY **Recovery Course**
  Uses mainly tapping and kneading to relieve muscle fatigue.
- RELAX **Relax Course**
  Uses mainly kneading and light tapping to gently stimulate body.
- QUICK **Quick Course**
  Short massage to promote blood circulation (Reduced time course)

HEC-DR8700

**SANYO Electric Co.,Ltd.**

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表 1

Think GAIA
For Life and the Earth

Massage Lounger

SANYO

HEC-DR8700

Experience ultimate comfort for the body and mind.