# **Heart Tracker**

#### PROFESSIONAL EDITION





# **Professional Stress Management system**

In the USA for research and non-medical use only

The Heart Tracker is a powerful tool for professionals designed to improve the health and mitigate the impact of stress on the human body. It implements a training system based on using the positive effects of paced breathing that augments Respiratory Sinus Arrhythmia (RSA).

The Heart Tracker Professional training assists the body's ability for self-regulation and stabilization. Paced breathing and RSA biofeedback training is a special physiological functional exercise that positively impacts the autonomic regulatory function.

The exercise helps to achieve:

- Optimal mental performance
- Maximum creativity and innovation
- · Clarity of mind and overall intelligence
- · Patience and emotional balance
- Autonomic stability (homeostatis)

## **Heart Tracker training effects**

- Mitigation of the impact of stress
- Improvement of mental relaxation
- Normalization of blood pressure
- Strengthening the immune system
- Improvement of overall health condition

## **Contact Information**

Phone **1-877-218-3223**Fax 1-360-859-2410
Biocom Technologies, 20270 Front Street NE, Suite 203
Poulsbo, WA 98370, USA
sales@biocomtech.com, www.biocomtech.com

# **Key Features**

- Fully adjustable Breath Cycle pattern
- Configurable RSA training sessions
- Visual and Audio feedback
- Tracking achieved training scores
- Detailed session reports
- Support for ECG and Respiration signals
- Export results in Excel, ASCII and XML
- Import / Export data in software specific format
- Multi-language support
- Unlimited session storage
- Multiple databases and administrators

The Heart Tracker provides all the tools necessary to train body and mind to work more harmoniously. It accurately reflects physical and psychological imbalance and assists in obtaining and maintaining psycho-emotional homeostasis. The program helps to increase efficiency and achieve the highest level of mental and physical performance.

The Heart Tracker software was tested according to the standards and mathematical procedures set forth by:



 Association for the Advancement of Medical Instrumentation

## **Unique technologies**

- Breath rate detection
- Cardiorespiratoric comodulation
- Patented RSA Training algorithm

(U.S. Patent No. 6305943)

## **Hardware Options**

**Electrocardiographs (ECGs)** 



ECG BC-4000 (USB)



ECG BC-5000 (Bluetoothwireless)

#### **Photoplethysmographs (PPGs)**



**PPG BC-1200** (USB)



PPG HRS-(Blue

HRS-08WE (Bluetoothwireless)

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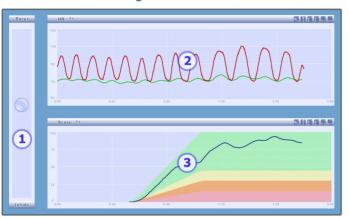


#### **Health Assessment Screens**

Examples of some screens and reports are shown.

The Heart Tracker also creates many other types of reports. Please visit our website for more information.

#### **Training Session Screen**



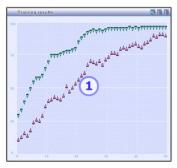
- The Pacer guides user's breathing during a session.
- (2) Heart Rate graph shows dynamics of HR during a training session.
- (3) Training Score graph shows changes in training quality over time.

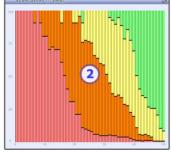
#### **Printable Session Summary Report (part)**

Heart Tracker 3.0 Professional Edition - Session summary report				
Name: michael watson Gender: Male Age: 53		Date/time Difficulty: Duration:	2	8/7/2009 5:18:33 PM Beginner 1:47
Session summary				
Parameter	Unit	Value		Reference
Mean heart rate: Achieved score: Consistency: Regulatory power: Breath pacer rate: Breath rate Comodulation	bpm % % ms^2/hz br/min br/min %	73 64 54 65 6 7.1 86		50 - 90 0 - 100 0 - 100 5 - 9 3 - 25 0 - 100

- User's name, gender and age.
- Session timestamp, difficulty and duration.
- Oetailed data and parameters of the user's training session.

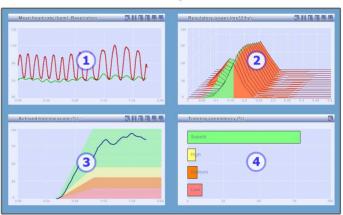
#### **History Reports**





- Training Score and Consistency history graph shows the user's training progress over all sessions.
- The Score bands history diagram shows user's training progress for superb, high, medium and low level of training.

#### **Session Summary Screens**



- Heart Rate and Respiration (breathing). The graph allows to analyze the coherence between the HR and Respiration.
- (2) Heart Rate 3D spectrum. The graph shows changes in HR spectrum over session time.
- 3 Training Score. The graph shows the dynamics of training quality over session time. The Training Score reflects a degree of coherency between the HR and breathing pacer pattern.
- The consistency diagram shows the average time spent within Superb, High, Medium, Low ranges during training.

#### **Users of Heart Tracker**

- Clinical Researchers
- Stress Management Counselors
- Alternative Therapy Specialists
- Biofeedback Therapists
- Physiology Class Teachers
- Physical / Occupational / Recreational Therapists
- Cardiovascular Rehabilitation Specialists

# **System Requirements**

- CPU Pentium 4, 1.6 GHz (or equivalent)
- 1 Gb of RAM
- Video card with at least 1024x768 and High-Color resolution
- 1 Gb of free hard disk space
- CD ROM drive
- One available USB port, version 1.1 or higher
- Windows Me/2000/XP/Vista or 7 Operating system

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