



## A new era in **Cardiac Output** testing From the lab to the field

### **PhysioFlow**® **Enduro**™ Parameters

- Stroke Volume/Index
- Cardiac Output/Index
- Contractility Index
- Early Diastolic Filling Ratio (Preload Index)
- Systemic Vascular Resistance (Afterload)
- Left Cardiac Work Index (surrogate of MVO<sub>2</sub>)
- Ventricular Ejection Time
- Ejection Fraction (est.)/End Diastolic Volume (est.)

### **For Multiple Applications**

- Physiology and Sports Medicine
- Athlete's Training Optimization
- Lab and Field Performance Testing
- Cardiology/Internal Medicine
- Cardiopulmonary Rehabilitation
- Military and Aerospace Medicine



Assessment of performance limiting factors



Paris Marathon field experiments



Routine hemodynamic evaluations

# The first and only system fully validated during exercise

The well established PhysioFlow<sup>®</sup> **Signal Morphology-based Impedance Cardiography (SM-ICG<sup>™</sup>)** technology has been fully validated in the last ten years, resulting in more than 40 international peer-reviewed publications and a market presence in over 35 countries.

Its accuracy is **comparable to invasive techniques** and its clinical reproducibility and sensitivity are unsurpassed. PhysioFlow<sup>®</sup> pushes the limits of noninvasive cardiac output monitoring in general and thoracic electrical bioimpedance in particular by opening more arenas where continuous noninvasive cardiac output measurements are made possible: **exercise at all levels, obesity, thoracic fluid overload, COPD, low cardiac outputs etc.** The PhysioFlow<sup>®</sup> core technology has been approved in many countries, including in Europe, Japan, Canada, and recently by the US Food and Drug Administration.

PhysioFlow<sup>®</sup> has been further developed to include the latest advances in electronic and signal processing technologies. The result is PhysioFlow<sup>®</sup> Enduro<sup>™</sup>, the first **holter-size wireless** cardiac output monitor for real time or memory recordings. A new filter technology for **high performance noise cancellation (HD-Z<sup>™</sup>)** is available as well. The combination of advanced hardware and embedded DSP software enables new applications in the field for trainers and exercise physiologists and more sensitive measurements for cardiac patients tested on treadmills.

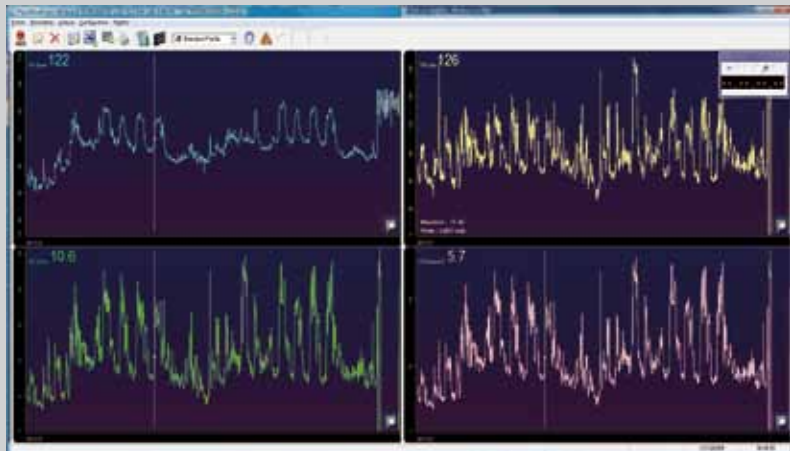
## PhysioFlow<sup>®</sup> Enduro<sup>™</sup> Features

- Small Size: 115 x 85 x 18 mm
- Light Weight: Less than 200g (with batteries)
- 6 thoracic surface electrodes
- Advanced adaptative filter for noise cancellation (HD-Z<sup>™</sup>)
- High performance AA batteries or rechargeable AA batteries, 6 hours autonomy
- 24 hours MMC memory, USB or Bluetooth<sup>®</sup> wireless download
- Real time wireless monitoring using Bluetooth<sup>®</sup>(type I). Range is 40 meters
- Works with PhysioFlow<sup>®</sup> PF107 MS-Windows<sup>™</sup> based software for display, data analysis, and storage

Windows<sup>™</sup> is a trademark of Microsoft Corporation



Rally race field experiments



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