

# WIRELESS PHYSIOLOGICAL MONITORING



## Take your research further, faster

From outdoor exercise research to sleep studies, Equivital's latest LifeMonitor allows you to combine all the benefits of wireless technology with the powerful analysis of LabChart.

The recording system is built for realistic human research with a wide range of physiological data recorded via a compact and unobtrusive sensor belt, leaving your subject free to move naturally while data streams wirelessly straight into LabChart. The long battery life and comfortable design make it ideal for long sampling periods.

The Sensor Belt and Module can record 2 channels of ECG, breathing rate, high resolution tri-axial acceleration, and skin temperature. Wired and wireless add-ons allow recording of additional parameters, such as galvanic skin response and oxygen saturation. The easy setup means you can get started quickly and confidently and data integrity is guaranteed.

## equivital™

Equivital's wearable technology products harness the power and value of data from real people in real environments.

Scientists around the world depend on Equivital's high-quality mobile monitoring devices to deliver precise, real-time human physiological data in the most extreme situations.

### Core System Overview

*Note: Products illustrated are not to scale*



Sensor Belt

Sensor Electronics Module (SEM)

Bluetooth Dongle

LabChart Data Analysis Software

There are a number of wired and wireless Add-Ons to the system that allow recording of additional parameters or add other features.



Galvanic Skin Response Sensor

Wired SpO<sub>2</sub> Adapter  
*Connects the MLT321 SpO<sub>2</sub> Finger Clip to an Equivital Belt*

External Battery Pack

### Applications include:

Exercise Physiology • Sport and Performance • Psychophysiology • Heart Rate Variability  
Electrocardiogram Analysis • Sleep • Autonomic Function



## All your data in one platform with LabChart

Equivital's wireless physiological monitoring system allows you to accurately record human physiological data such as ECG, breathing rate, skin temperature and acceleration on a stationary or moving subject. By maintaining freedom of movement for your subjects, you can ensure you are observing realistic human activity in your research.

When combined with LabChart, you have a powerful and comprehensive range of analysis tools at your disposal to analyze, extract and manipulate your recorded data as needed. LabChart provides a platform for multiple data recording devices to work together, allowing you to acquire signals from simultaneous sources and apply advanced calculations as your experiment unfolds. LabChart tracks every action that is recorded and never modifies your raw data, ensuring the integrity of your results.

## Signals

Signal	System required	Sample rate
ECG (2 Channels)	Core	256 Hz
Breathing Trace	Core	25.6 Hz
Accelerometer (3 Axis)	Core	25.6 Hz
Skin Temp (SEM)	Core	1/15 s
GSR	Core + GSR Add-On	2 Hz
SpO <sub>2</sub>	Core + Wired SpO <sub>2</sub> Add-On	1 Hz

## System highlights

- Easy setup and simple use
- High data quality with low data loss rates
- Noise and movement artifact-free ECG
- Up to 13 hours battery life (extendable with ancillary pack)

## Videos and further information

Visit our blog for videos outlining:

- Configuring your SEM
- How to appropriately fit the belt to your subject
- Live streaming direct into LabChart
- LabChart's Analysis Modules and the Data Pad tool to analyze recorded data

Plus:

Articles covering the basics of live streaming;  
How to use the LabChart logging import tool;  
A webinar exploring the inner workings of Data Pad.



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