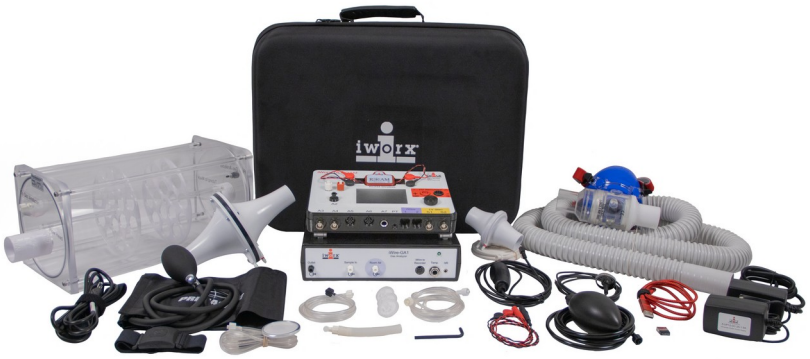
Making Physiology Happen

iWorx offers complete solutions for the teaching of exercise Physiology, as well as advanced, high performance systems for metabolic research. iWorx TA-ROAM recorder is the heart of iWorx TA-ROAM systems and is designed to simplify many of the tedious set-up and calibration routines typically required to perform a lab.

Exercise Physiology
Advanced Lab Kit



Step-by-step instructions

61 labs and 100+ exercises

Adaptable to any lab manual

Quick setup

Exercise Physiology Kits Include:

- TA-ROAM Recorder with Wireless ROAM (ECG, EMG) Amplifier, Built-in Pre-calibrated Sensors
- LabScribe™ Software with Metabolic Calculations Module
- GA-200 or GA-300 Gas Analyzer and Calibration Kit
- Reusable 1000L and 300L Flow Head
- Polar Heart Rate Transmitter/Receiver
- Non-Invasive Blood Pressure Sensor
- Pulse, SPO2 and Temperature Sensor
- Heart Sounds Sensor
- Grip Force Sensor and Event Marker
- Striated Muscle Transducer
- Face Mask, Head Gear Assembly and Nonrebreathing Valve
- Mixing Chamber, Electrodes and Tubing
- Lab Manual

Metabolic Measurements:

- VO_2 Max
- Basal Metabolic Rate (BMR)
- Resting Metabolic Rate (RMR)
- Respiratory Exchange Ratio (RER)
- Basal Metabolic Rate (BMR)
- Resting Metabolic Rate (RMR)
- Respiratory Exchange Ratio (RER)
- Sedentary to light activity VO_2 and VCO_2

As well as the measurement of blood pressure, cardiograms, myograms, encephalograms, reflex responses, heart rate, spirometry, and more.

Exercise Physiology Lab Manual

iWorx lab manual includes over 61 experiments and 100 exercises in cardiovascular, neuromuscular and spirometric physiology, as well as all of the components and a professionally developed lab manual. Use pre-configured teaching kits or iWorx unique LabsByDesign approach to simply choose only the equipment you need for the labs you want to teach.

Exercise Physiology/Kinesiology Experiments:

- Resting Metabolic Rate (RMR / RER)
- Regulation of Body Temperature and the Respiratory Exchange Ratio (RER)
- Metabolic and Thermal Response to Exercise
- Recovery from Exercise
- Exercise, Blood Pressure, and Oxygen Saturation Levels
- Resting, Active, and Exercising Metabolic Rates

Human Muscle:

- Grip Strength and Electromyogram (EMG) Activity
- EMG Activity in Antagonistic Muscles
- Oculomotor Muscle Activity
- Response, Work, Summation and Tetanus in Human Muscles

Human Spirometry:

- Breathing Parameters at Rest and after Exercise
- Breathing and Gravity
- Factors that Affect Breathing Patterns
- Lung Volumes and Heart Rate

Human Nerve:

- Auditory and Visual Reflexes
- Stretch Receptors and Reflexes with Reflex Hammer
- Stretch Receptors and Reflexes with Plethysmograph

Human Circulation:

- Blood Pressure, Peripheral Circulation, and Body Position
- Blood Pressure, Peripheral Circulation, and Imposed conditions
- Pulse Wave Velocity
- Pulse Contour Analysis

Human Heart:

- The Electrocardiogram (ECG) and the Pulse
- Heart Sounds and the Electrocardiogram (ECG)
- The Effects of Exercise on the Electrocardiogram (ECG) and the Pulse
- The Six-Lead Electrocardiogram
- The Diving Reflex
- Heart Rate Variability (HRV)

Human Nerve:

- Electroencephalogram (EEG) Wave Patterns and Cortical Arousal using Snap Electrodes
- Heart Rate, Blood Pressure
- Personality and Vagal Tone
- Vigilance and Reaction Time
- Cynicism/Hostility and the Hot Reactor

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