

Biopac Student Lab[®] Lesson 17 HEART SOUNDS

Procedure

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II. EXPERIMENTAL OBJECTIVES

- To listen to human heart sounds and describe them qualitatively in terms of intensity or loudness, pitch, and duration.
- To correlate the human heart sounds with the opening and closing of cardiac valves during the cardiac cycle and with systole and diastole of the ventricles.
- To determine the nature of the change in the relationship between electrical and mechanical events of the cardiac cycle as heart rate increases.

III. MATERIALS

- BIOPAC Stethoscope (\$\$30L)
- BIOPAC Electrode Lead Set (SS2L)
- BIOPAC Disposable Electrodes (EL503.) 3 electrodes per Subject
- BIOPAC Electrode Gel (GEL1) and Abrasive Pad (ELPAD)
- Biopac Student Lab System: BSL 4 software, MP36, MP35 or MP45 hardware
- Computer System (Windows 8, 7, Vista, XP, Mac OS X 10.5 10.8)

IV. EXPERIMENTAL METHODS

A. SETUP

FAST TRACK Setup

- 1. Turn the computer ON.
 - If using an MP36/35 unit, turn it OFF.
 - If using an MP45, make sure USB cable is connected and "Ready" light is ON.
- 2. Plug the equipment in as follows:

Stethoscope (SS30L) — CH 1 Electrode lead set (SS2L) — CH 2

3. Turn ON the MP36/35 unit.

Detailed Explanation of Setup Steps



Fig. 17.5 MP3X (top) and MP45 (bottom) equipment connections

Setup continues....

Biopac Lesson 17 Teachers Guide

Bible Study Guide For All Ages

Biopac Lesson 17 Teachers Guide:

Laboratory Manual for Anatomy & Physiology Michael G. Wood,2005 Michael G Wood s straightforward and complete lab manual guides students through hands on exercises that reinforce concepts they ve learned in their anatomy physiology lecture course The full color illustrations and step by step instructions are designed to help students visualize structures understand three dimensional relationships and comprehend complex physiological processes Many of the illustrations are the same as the illustrations by William Ober and Claire Garrison that appear in Martini Fundamentals of Anatomy Physiology Seventh Edition making this lab manual a perfect companion to that textbook Primary Teacher Guide Lessons 53-78 (416 Lesson Program) Bible Study Guide For All Ages, 2020-05 Lessons 53 78 of the Primary Teacher Guide 416 lesson program of Bible Study Guide For All Ages Spring Forward Unit 17 Teacher Guide Benchmark Education Co., LLC Staff, 2015-01-01 Teacher Guide corresponding to specific Spring Forward Program by grade and unit Not for individual sale Sold as part of larger package only

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