BIOPAC Systems, Inc.
42 Aero Camino, Goleta, CA 93117
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Biopac Student Lab® Lesson 17
HEART SOUNDS
Procedure
Rev. 01152013

Richard Pflanzer, Ph.D.
Associate Professor Emeritus
Indiana University School of Medicine
Purdue University School of Science

William McMullen
Vice President, BIOPAC Systems, Inc.

II. EXPERIMENTAL OBJECTIVES

1. To listen to human heart sounds and describe them qualitatively in terms of intensity or loudness, pitch, and duration.
2. 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.
3. 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 (SS30L)
- 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.

Setup continues....

Detailed Explanation of Setup Steps

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

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