Experiment HP-8: The Galvanic Skin Response (GSR) and Investigation into 'Cheating'

This iWorx lab experiment was graciously provided by Dr. Paul Wagner and Dr. Tracy Wagner, Asst. Professors, Washburn University, Topeka, KS.

Equipment Required

PC or Mac Computer

IWX/214, USB cable, IWX/214 power supply

GSR-200 GSR amplifier, electrodes, and cable

PT-104 Pulse plethysmograph

Folder of 10 Photographs - include neutral and emotional photos

Directions for the Investigators and Subjects

Start the Software

1. Click on LabScribe
2. Click Settings → Human Psychophysiology → GSR-Investigation
3. Once the settings file has been loaded, click the **Experiment** button on the toolbar to open any of the following documents:
    - Appendix
    - Background
    - Labs
    - Setup (opens automatically)

GSR and PT-104 Setup

1. Locate the PT-104 pulse plethysmograph and plug it into the Channel 3 input of the IWX/214 (Figure HP-8-S1).
2. Locate the GSR-200 galvanic skin response amplifier, male-male DIN8 cable, and GSR electrodes (Figure HP-8-S2) in the iWorx kit.
3. Plug one end of the male-male DIN8 cable into the female DIN8 connector on the GSR-200 galvanic skin response amplifier. Plug the other end of the DIN8 cable into the Channel 4 input of the IWX/214 (Figure HP-8-S3)

Figure HP-8-S1: PT-104 pulse plethysmograph.

Calibration of GSR Amplifier

1. Place the GRS electrodes on the lab bench so they are not touching any surfaces.
2. Click on the Record button; record data for 1 minute.
3. Click on the Stop button.

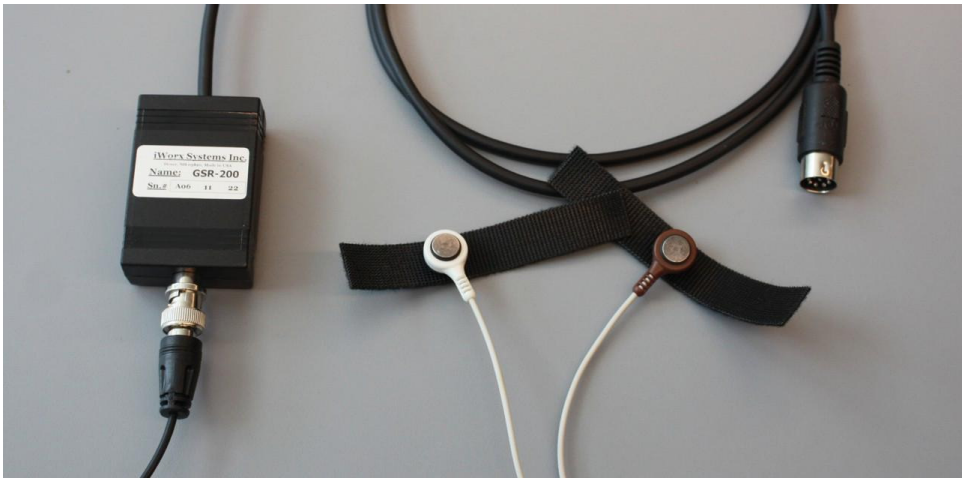

Figure HP-8-S2 The GSR-200 galvanic skin response amplifier.

4. Set the baseline to zero:
    - Click V2-V1 to the right of the GSR channel
    - Click Set Offset (Figure HP-8-S4)
    - Set the offset to 0 and check Apply to all blocks
    - Click OK.

Figure HP-8-S3: The equipment needed to record GSR.

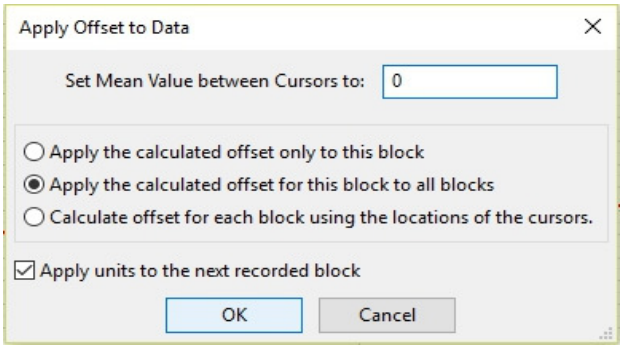

Figure HP-8-S4: Apply Offset window for setting the GSR unit to "0".

Note: *The GSR-200 galvanic skin response amplifier is factory calibrated so that an output of 1 Volt is equal to 5 microSiemens (µS). This calibration factor is programmed into the LabScribe recording software by the GSR-Investigation-LS2 settings file used in this experiment.*

5. To check the programming of the calibration:
    - Click on V2-V1 to the right of the Skin Conductance Level channel to open the channel menu.
    - Select Simple.
    - The Simple Units Calibration window will appear with the values for the two-point calibration of the GSR-200 amplifier already entered.

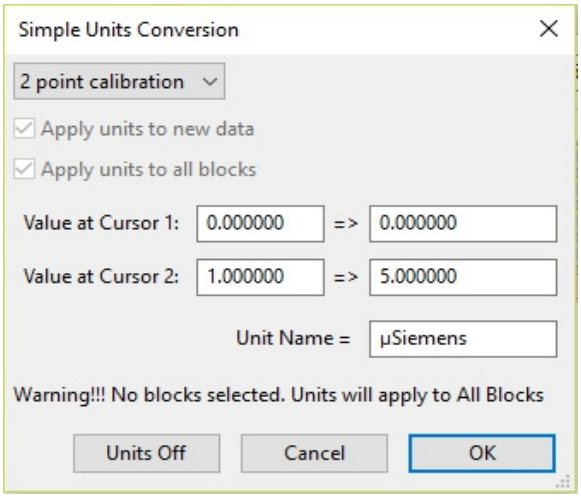

Figure HP-8-S5: Simple Units Conversion window for GSR-200 amplifier.

Note: *These exercises are best performed in groups of 4 or 6 individuals. Plan accordingly so that each group has enough members so that some are investigators and some are suspects.*

SEE APPENDIX FOR PERTINENT INSTRUCTIONS FOR THIS EXPERIMENT.