Kristal Machado

Lab 10

Lab 10- Electrocardiography
10-A: Recording the EKG-Lead II

Purpose:

For this lab my partner and I will be hookup to two lead EKG and record. EKG are graphical records that measure the change in the electrical activity of the heart.

Procedure:

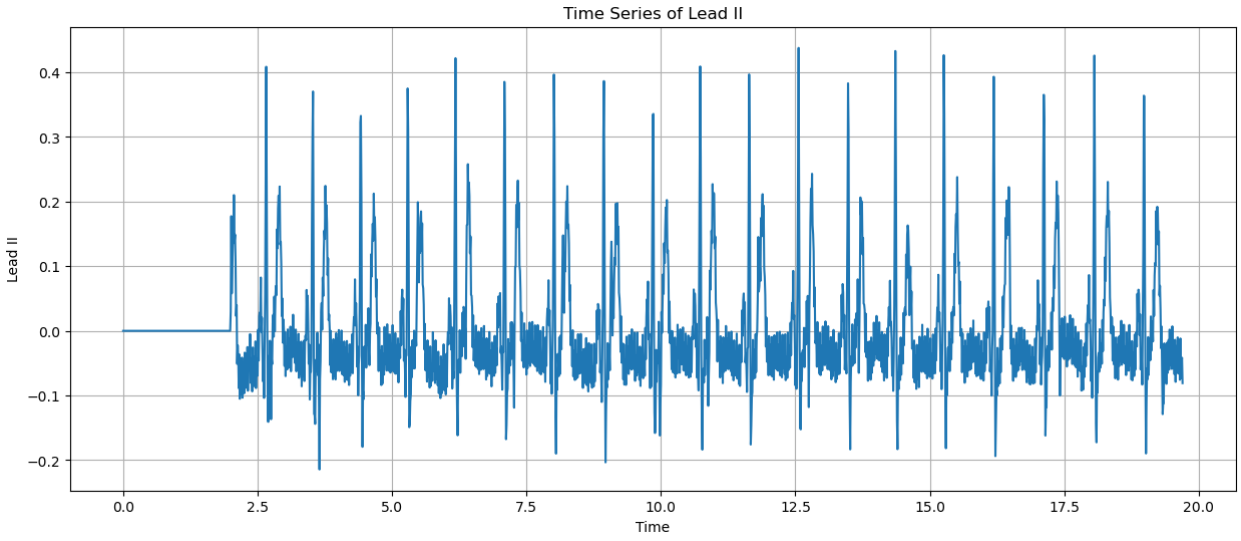
1. To get things started:

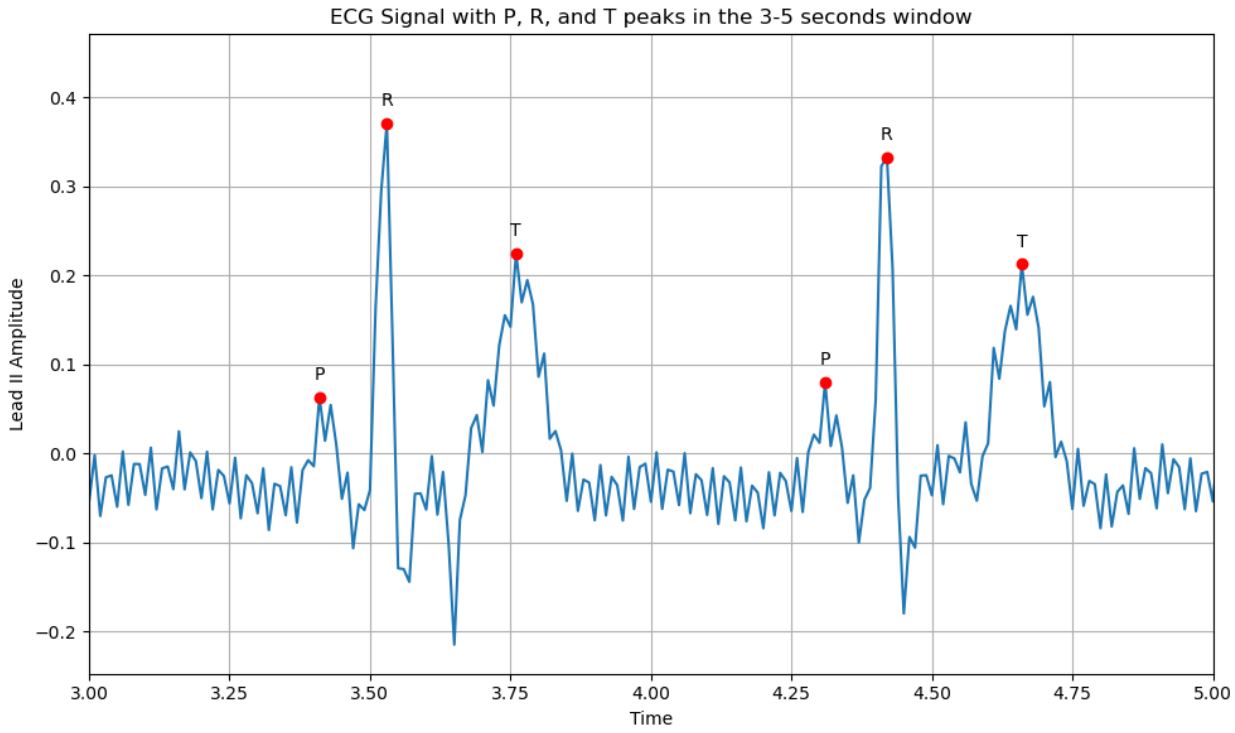
- Before you turn anything on, be sure the IWWX/214 unit is plugged in, and that the IWX/214 unit is connected to the laptop the USB cable.
- Be sure that the C-AAMI-504 EEG cable is inserted into the isolated inputs of Channel1 and 2 of the IWX/214. Be sure that the three-color-coded leas wire are correctly inserted in the lead pedestal of the C-AAMI-505 EEG cable. Insert the connectors on the red, black, and green electrode lead wires into the color-coded matching sockets on the lead pedestal of the ECG cable.
- Once everything is connected, First turn on the laptop and allow it to fully boot up before you turn on the IWX/214 unit. Once the Iworx unit is on, the red indicator light on the Iworx unit should light up and you may hear the USB chime from the laptop.

2. Open the Labscribe3 program by clicking on the Labscribe3 ion on the desktop. As soon as the program opens, you should see a window pop-up that says “Hardware found IWX214:2008-1-24,” click ok.
3. In the second from the top row, click on the “settings” tab. About one third of the way down the drop-down window should be a tab called “Human Heart”. Click on that tab and that should lead you to the tab called “ECG-HeartSounds.” Click on that tab and the main window will look like this after you close the Pdf file:
4. Since Lab 10 is about the ECG only, we can hide the lower “Heart Sounds” row by clicking on the upside-down triangle symbol to the left of the row label, then click on the “Hide” tab, and then “Yes”. The main window will then look something like this: (Recording you ECG)
5. Remove the disposable ECG electrodes from its envelope and snap the lead wires onto the electrodes while the electrodes are still on the plastic shield. Instruct the subject to remove all jewelry from their wrist and ankles. Use an alcohol swab to clean a region of skin on the subject great rest and the inside of both ankles. Let the area dry.

6. Play the Black (-1) electro to the scrubbed area on the right wrist. Repeat steps, five and six for the inside of the left ankle, and the inside of the right ankle, so that the following lead to is arranged:
    - The black (-1) lead is attached to the right wrist,
    - The red (+1) lead is connected to the left ankle
    - The green (C or ground) lead is connected to the right ankle.
7. Instruct the subject to sit quietly with their hands in their lap. If the subject moves, the ECG trace will move off the top or bottom of the screen. If the subject moves any muscle in the arms or upper body, electromyogram (EMGs) from the muscle will appear on the ECG recording as noise.
8. Click on record button, located on the upper right side of the lab scribe main window. The signal should begin scrolling across the screen. If the ECG appears upside down and lead II, click on the upside-down triangle on the far left of "A1:ECG0.3-35Hz", then click on the first option invert. This should correct the image of your lead II ECG to be right side up but do this only once.
9. When you have a suitable trace, type "Subject's name" Lead II in the mark box to the right of the Mark button. Press the enter key on the keyboard after the recording has started to attach the comment to the data.
10. On the auto scale tab at the upper margin of the ECG channel. You are recording she'll look like the figure in step #4. If the ECG waves appear to compress, consider clicking the tab above the "Mark" tab that looks like a snow-capped pyramid. When the mouse is on top of this tab, it will say half display time. Clicking this tab will spread out your ECG patterns for step 11. If you overdo the last steps, reverse it by clicking on the tab that looks like double pyramids just to the right of the half display time tab.
11. Record for approximately one minute and then click stop to halt recording. Label one set of the five ECG waves. Noticed that every cycle is similar, but not identical, and the distance between the QRS complexes may alter slightly.

Results:





Discussion:

Alternating leads can affect the amplitude of the EKG wave components. EKG can trace abnormalities including MI, heart blockage, sinus brady, sinus tach, Afib,and sinus rhythm.

Concussion:

As an EKG tech there is also so much to learn with EKG one out the hardest thing to read. As little as placing the electrode tabs can have a huge difference in the reading of the EKG.