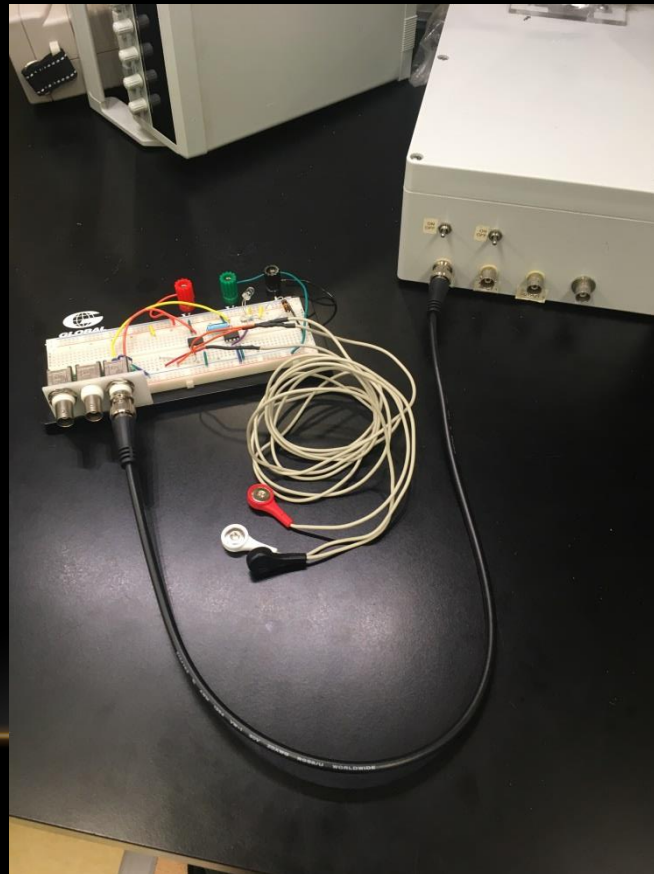


## WEEK 8: ACQUIRE AND RECORD HUMAN ECGS

- Use your ECG amplifier and VI to display and record your ECGs
  - Save data files
  - Try recording on both station partners (the more data the better!)
  - Remember electrical safety precautions!
  - Create ECG plots with SigmaPlot. Remember to update axis labels and units!
-

# RECORD YOUR ECG: INSTRUMENTATION

- Connect your ECG amplifier to the A/D input with a BNC wire
- Make sure A/D switch is On
- Run your VI to acquire this signal
- Very noisy without any input (why?)



# RECORD YOUR ECG: HUMAN TEST SUBJECT

- Place ECG pads on both wrists (+/- amplifier inputs).
- 3<sup>rd</sup> (ground) pad is needed: near wrist or ankle. Connects to ground in the amp circuit.
- Note which of the clinical 12-lead ECG “leads” this configuration approximates.
- Test subject sits still; partner runs computer and all instrumentation
- Subject should not touch grounded metal objects (like the table)
- Turn on amplifier (re-insert batteries); run VI; Record several heart beats from each subject. The previous setup for the VI will record for 3 3seconds.



# RECORD YOUR ECG: DATA

- Save each LabView data file for analysis next week
- Create a plot of the ECG vs. time, similar to the week 7 plots of sine waves.
- As always, take files with you via USB, e-mail or other electronic means; don't trust a public computer with your valuable data!



# WEEK 8 TOPICS FOR FINAL REPORT

- Describe the setup for recording a human ECG
- Electrical safety considerations with this system
- Note locations of skin electrodes
- Plots of human ECG recordings (with proper axes and labels)

