

BioInstrumentation Chapter

Experiments

- **BI-1 ECG Signal Conditioning**

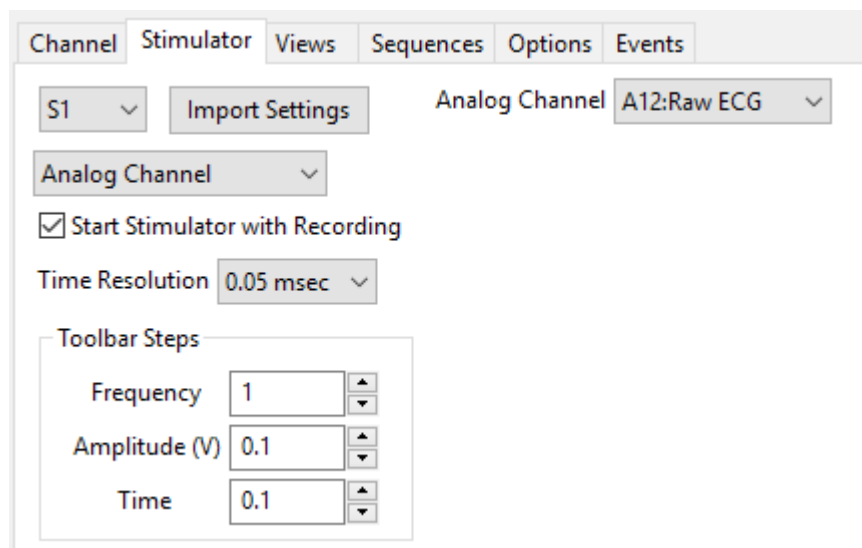
Overview

The IX-TA-220 Recorder has the ability to output any signal that is being recorded on its input, through the Stimulator. This includes the signals recorded from the iWire ports. This enables us to perform the following:

- 1) Record a signal using any sensor that can be plugged into the IX-TA.
- 2) Output the signal recorded using the S1 stimulator.
- 3) Send the signal to the breadboard, using the C-BNC-BB cable.
- 4) Signal condition the signal on the breadboard.
- 5) Send the conditioned signal back to the IX-TA-220, using the C-DIN-BB cable. The C-DIN-BB cable also provides +5V and -5V power to power the circuit.

Any of the Physiology labs can be modified to enable additional signal conditioning as follows.

- 1) Open the Lab settings in LabScribe
- 2) Open the Preferences Dialog. Click Stimulator
- 2) Setup the Stimulator S1, to output the signal from an Analog Channel
- 3) Choose the Analog channel
- 4) Connect the Stimulator S1 to the breadboard using the C-BNC-BB cable.
- 5) Use the C-DIN-BB cable to connect the output of the breadboard to Channels A5 or A6 on the IX-TA-220.



Optionally: you can use an additional C-BNC-BB cable to connect the output of the breadboard to

channels A3 or A4 of the IX-TA-220.

6) Name and select the channels to be recorded from the Preferences → Channels tab

7) Close the preferences dialog

8) Save the Settings file by click File → SaveAs → and choose iwxset from the drop down menu

9) This saved settings file can be opened from File → Open on the menu bar.