

The following instructions are for connecting the PC-505B ( $V_C \times 10$ , I MONITOR, COMMAND IN, and GAIN TELEGRAPH) to Axon's Digidata and pCLAMP program. Feel free to skip any steps for items you do not wish to connect.

Also, you are welcome to make connections to Digidata inputs different than those specified here. Just make sure to use the same software input number as the physical input you selected.

Begin by making take the following general connections. (Use BNC's):

PC-505B		Digidata	
Gain Telegraph	rear panel	Gain Telegraph - Input #0	rear panel
I Monitor	front panel, output section	IN #0	front panel
$V_C \times 10$	front panel, output section	IN #7	front panel
Command IN $\div 10$	rear panel	OUT #0	front panel

### Software setup

1. Open Clampex
2. Verify that the digitizer (Digidata) is active and properly configured to Clampex.
  - [1] From the main menu, select *Configure/Digitizer*
  - [2] Select your Digidata Model
  - [3] Select *Configure*, then *Detect*
  - [4] Disconnect the BNC from the OUT #0 on the front of the Digidata
  - [5] Select *Calibrate*
  - [6] Reconnect the OUT #0 BNC
3. From the main menu, select **Configure/Telegraphed Instrument**
  - [1] Under Input Channels, select *Analog Input #0*
  - [2] Under Telegraph Instrument, select *PC-505B (updated)* from the drop-down list
  - [3] Under Telegraph Connections, select *Telegraph Input 0* for gain from the drop-down list
  - [4] Click OK to close the window. Say OK to the info dialog box that appears.
4. From the main menu, select **Configure/Lab Bench**
  - [1] Select the Input Signals tab.
    - a) In the Digitizer Channels section
      - select *Analog IN #0*
    - b) In the Signals section
      - Click on the *Add* button
      - Enter the word *Current*
      - Click OK

- c) In the Scaling section
    - Select signal units to be *pA*
    - Set the scale factor to 0.001 V/pA
  - d) In the Digitizer Channels section
    - Select *Analog IN #7*
  - e) In the Signals section
    - Click on the *Add* button
    - Enter the word *Voltage*
    - Click OK
  - f) In the Scaling section
    - Select signal units to be *mV*
    - Set the scale factor to 0.01 V/mV
- [2] Select the Output Signals tab
- a) In the Digitizer Channels section
    - Select *Analog OUT #0*
  - b) In the Signals section
    - Click on the *Add* button
    - Enter the word  *Holding*
    - Click OK
  - c) In the Scaling section
    - Select signal units to be *mV*
    - Set the scale factor to be 100 mV/V
  - d) Click OK to close the window.
5. From the main menu, select **Acquire/Edit Protocol**
- [1] Under the Mode/Rate tab
    - Set the acquisition mode to *gap-free*
  - [2] Under the Inputs tab
    - Select *Channel #0*
    - Select *Current* from the drop-down menu.
    - Select *Channel #7*
    - Select *Voltage* from the drop-down menu.
  - [3] Under the Outputs tab
    - Select  *Holding* from the drop-down menu for Channel #0
  - [4] Click OK to close the window

The Digidata and pCLAMP should now be configured to work with the PC-505B. Attach the model cell and perform a checkout of the instrument.