Scanning the Monochromator with Terminal in Experiment 1B, Part VIIB. For Station 7 CB-3

1. Open the folder C:\CH461 and launch the program Terminal.

2. From the "File" menu in Terminal, open CH461.TRM.

3. Turn on the power to the stepper motor controller (CB-3).

4. Strike the spacebar on the keyboard. Something similar to the following should appear on the screen, **v2.07** ; if not, contact a TA (or restart Terminal).

5. Type E**2** and press enter. This energizes the stepper motor.

6. Once communication with the controller has been established you can begin to send commands in the table below. **Note: Steps in the negative direction increase wavelength for the CB-3.**

Purpose & Explanation	**Command**
A. Go to the Starting Wavelength	
Set scan rate to maximum value of 3750 nm / min for initial set-up. Scan rate (nm/min) = (3.75) V / D = (3.75)* 1000/ 1 = 3750	D1 & press enter V1000 & press enter
Sends stepper motor to Home at V=1000 (3750 nm/min)	F1000,0 & press enter
Scan to zero order. ***In place of the number 327, insert the offset posted on top of <u>your</u> monochromator*.** You should see wavelength display near 0 nm.	(Read note at left before you do anything ...) -327 and press enter*
Go to starting wavelength of scan, 300 nm. 300 nm x 16 steps / nm = 4800 steps	-4800 and press enter*
B. Select Scan Rate for Spectral Scan (nm/min)	
Set scan rate of 200 nm / min for spectral scan. Scan rate (nm/min) = (3.75) I / D = (3.75) * 160 / 3 = 200	V160 & press enter D3 & press enter
C. Choose Final Wavelength and Start Scan	
Scan starts immediately when you press enter, so be ready to start the recorder before you press enter. (750 nm - 300 nm) x 16 steps /nm = 7200 steps.	(Read note at left before you do anything ...) -7200 and press enter*
D. Return to Initial Wavelength after the Scan Is Over	
change scan rate to 3750 nm/min (slew)	V1000 & press enter D1 & press enter
slew back to 300 nm	+7200 & press enter*

7. When finished, turn off stepper motor controller (switch on back).

* In case an error is made in wavelength specification and monochromator is "grinding" at end of scan range, promptly turn controller off with switch on back.