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OOINLCorrect Loading Non-Linearity Correction Coefficients Instructions

► Procedure

- 1. Run the OOINLCorrect software by selecting **Start | Programs | Ocean Optics | OOINLCorrect | OOINLCorrect**.
- 2. Choose **Spectrometer** | **Hardware Configuration** from the menu to set system parameters as follows:

Parameter	Setting
Spectrometer type	S2000/PC2000/USB2000HR2000
A/D Type	USB2000
USB Serial Number	Serial number for your USB2000 Spectrometer

3. Click OK.

4. Set the software parameters on the right side of the screen as follows:

Parameter	Setting
Equation	7 th Order
Integ. Period	300
Average	8
Boxcar smooth	10
Low integration	10
High integration	300
Integration step	10
Saturation val	3800



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🖰 Ocean	Optics, Inc. NL Correction Software		
File View	ipectrometer Windows Help		
	Scan Continuous Auto Scale Y Auto Scale X Scale X Euroor X: 2045 Y: 4		
4100 -		/thurder 💽	
3800 -		Integ. Period 300 ms	
3600-		Average 8	← Software ← Parameters
3400 -		Boxcar smooth 10	i ulunetera
3200 -		High Integration 300 ms	
3000 -		Integration Step 10 ms	
2800 -		Saturation val 3800	
2600-		Operator Moshe	
2400 -		Date 10/5/2005	
µ 2200−		Time 3:11 PM	
10 10 2000 -		Spectrometer USB2G6142	
8		Customer	
1600-		Pixel Index	
1400 -		A Second 1150	
1200-		N Third 1250	
1000-		E Fourth 1375	
800-		Fifth 1500	
600-		E Seventh 1750	
400 -		E Eight 1875	
200-		C Nineth 2000	
0-		L Tenth 2100	
Ŭ	200 400 600 800 1000 1200 1400 1600 1800 20 Pixel Number	17	

- 5. Choose Spectrometer | Pixel Selection
- 6. Click OK.
- 7. Adjust the light (attenuate if necessary) until the peak intensity is above the 3800 Saturation Val. You should have a nice curve above the 3800 line just saturated (goes flat) at about 4000 counts.
- 8. Click the **SELECT** button in lower right hand corner.







- 9. Choose Spectrometer | Linearize from the menu or click Non Linearity Correct to start the experiment. You will see spectra on the graph, starting from low light intensities increasing up to saturation. When the experiment is finished you will see a Linearity report displayed on the screen.
- 10. On the **Report Prompts** dialog box, select **OK**. If you see a "*file 'Moshe.txt' was not found in application's directory. Would you create a new file?*" dialog box, choose **New.** Then close the **Linearity Report** dialog box by selecting **File** | **Close.**



- 11. From the main menu choose **Spectrometer** | **USB2000 Data** from the main menu. The *USB2000 Internal Parameters* dialog box appears.
- 12. Click the Read USB2000 Internal Parameters button.
- 13. Click the Get Calculated Non-Linearity Values button.
- 14. Click the **Update USB2000** button to write the Non-Linearity correction coefficients to the USB2000's EEPROM.



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- 15. Now that the Non-Linearity correction coefficients have been successfully written to the USB2000's EEPROM, you can view the coefficients with the OOIBase32 software. To do this:
 - a. Open the OOIBase32 software.
 - b. After arriving at the main menu (intensity vs. wavelength), select **Spectrometer** | **Configure** | **Detector Linearity** to view the coefficients.