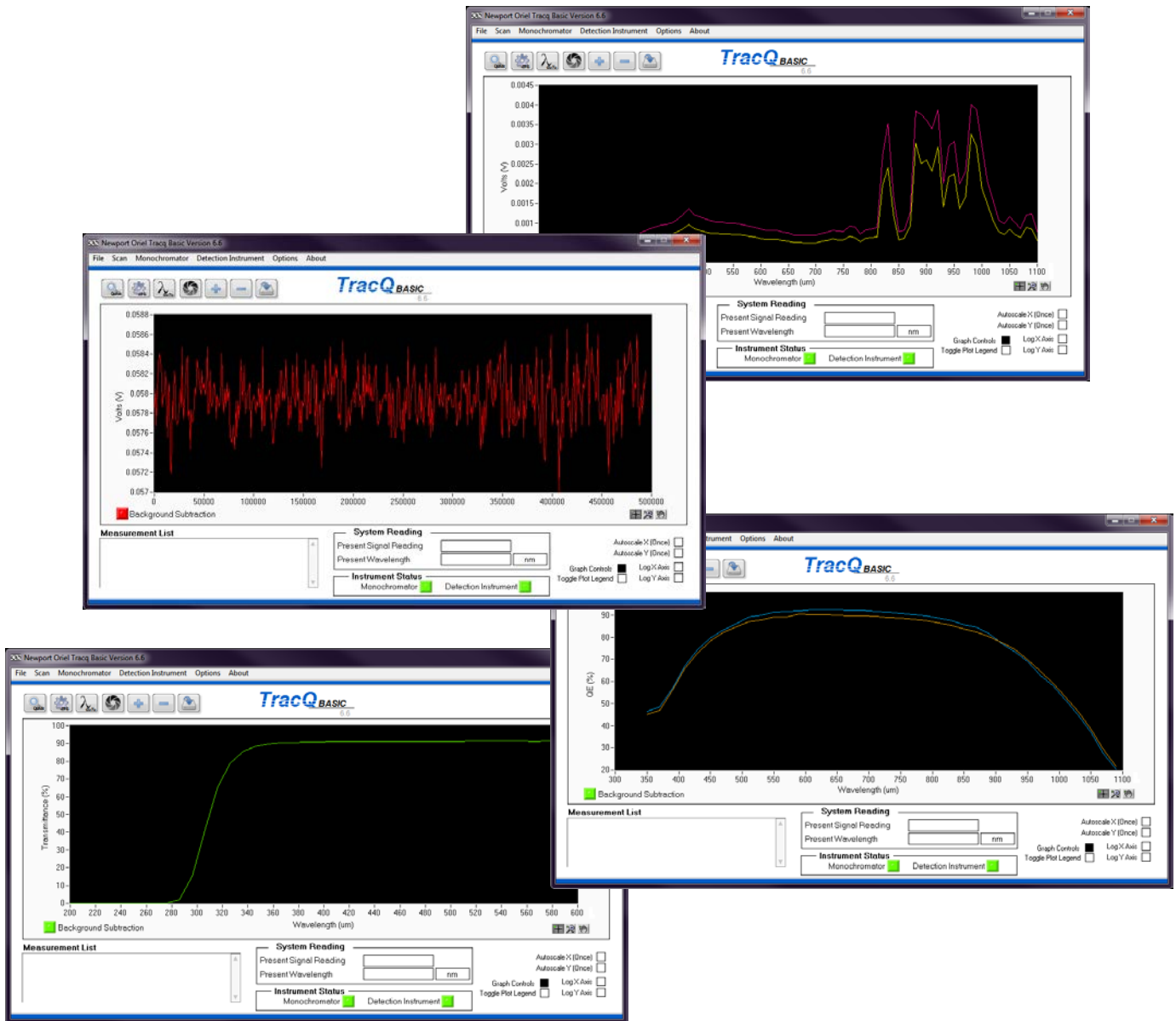


TracQ™ Basic

Spectroscopy Software v6.6



Quick Start Guide



1 INTRODUCTION

Thank you for your purchase of the TracQ™ Basic software application from Oriel Instruments®.

Please carefully read the important safety precautions provided with each instrument that will be controlled by the software, prior to unpacking and operating the equipment. In addition, please refer to the complete User's Manual and all other documentation provided for additional important notes and cautionary statements regarding the use and operation of the instruments.

Do not attempt to operate any system without reading all the information provided with each of the components. Software installation instructions and instrument library selection are covered in the user manual provided with TracQ Basic on a USB memory stick. The manual is in a .pdf format and requires Adobe Reader to view it.

Please read all instructions that were provided prior to operation of the system. If there are any questions, please contact Oriel Instruments or the representative through whom the system was purchased.

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2 QUICK START GUIDE

Ensure all instruments are connected to the computer, powered on and visible in the Device Manager or National Instruments Measurement & Automation Explorer (accessible from NI Max icon on desktop).

A detection instrument is required for taking measurements, while monochromator is optional. However, scans can be loaded for viewing without any instruments connected. The following instructions assume that both a detection instrument and monochromator are being utilized. It also assumes the light source is turned on and warmed up.

Double click the TracQ Basic icon to open the application, ensure the instrument status indicator is green for the detection instrument and green for the monochromator, if used. If they are red, proceed to Section 2.1 to establish communication. If the indicators are green, skip to Sections 2.2 and 2.3 to set up the instrument parameters.

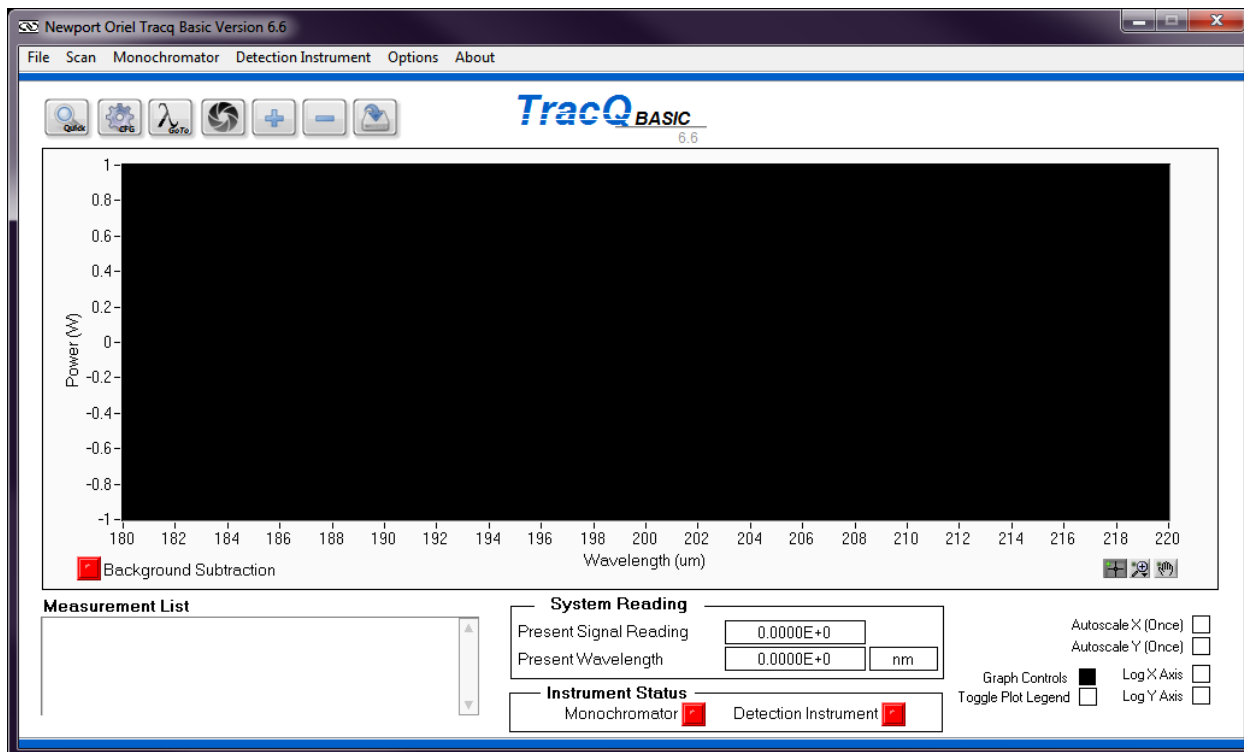


Figure 1: Main Application Window

2.1 SELECTING INSTRUMENTS AND ESTABLISHING COMMUNICATION

A detection instrument is selected by going to the following pulldown menu:
Detection Instrument → Select Detector Library Path

Navigate to C:/Program Files/Newport – Oriel Instruments/TracQ Basic or the location in which the software has been installed.

Click on the folder of the instrument library corresponding to the instrument being used.

If the instrument indicator remains red and the instrument is GPIB or USB, update the com port or address by going to Detection Instrument → Setup Communications.

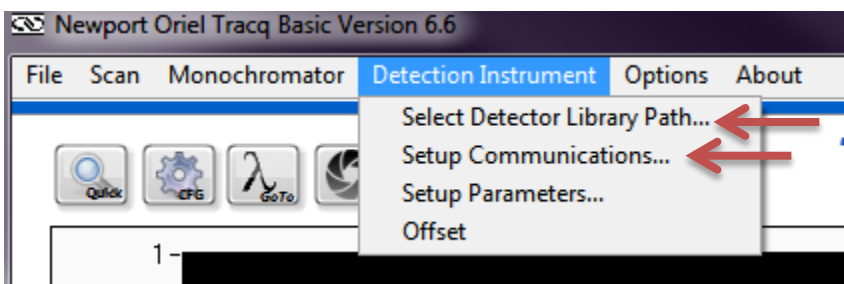


Figure 2: Detection Instrument Library and Communication Selection

A monochromator is selected by going to the following pulldown menu:
Monochromator → Select Monochromator Library Path

Navigate to C:/Program Files/Newport – Oriel Instruments/Tracq Basic or the location in which the software has been installed.

Click on the folder of the instrument library corresponding to the instrument being used.

If the instrument indicator remains red and the instrument is GPIB or USB, update the com port or address by going to Monochromator → Setup Communications.

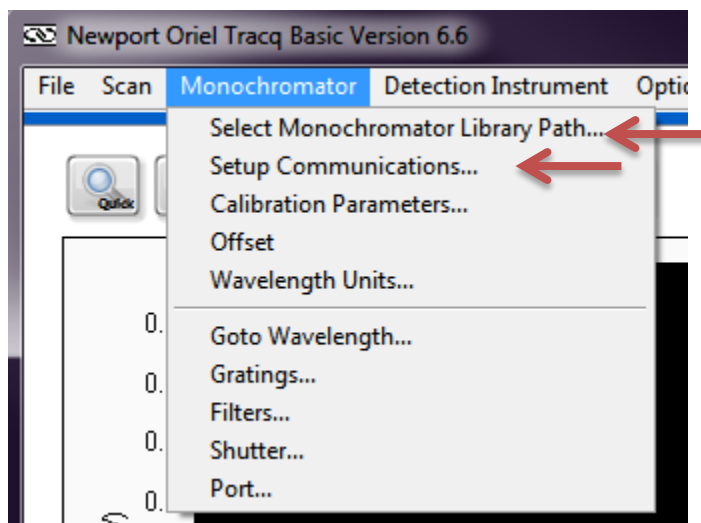


Figure 3: Monochromator Library and Communication Selection

2.2 SETTING UP MONOCHROMATOR AND FILTERS

Navigate to the menu options shown in Figure 4 and select the grating, filter and output port to be used for the scan. An individual filter or grating may be selected. To automatically change the grating, filter and output port at specific wavelengths, select the “Auto” feature and fill out the wavelength changeover tables. Please note that not all instruments are available with dual output ports.

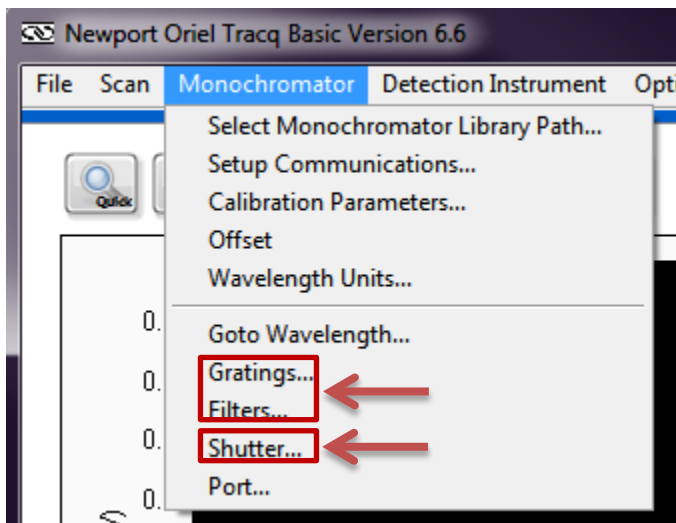


Figure 4: Monochromator and Filter Setup

2.3 SETTING UP DETECTION INSTRUMENT

Navigate to the menu shown in Figure 5 and configure the instrument parameters as appropriate for the application.

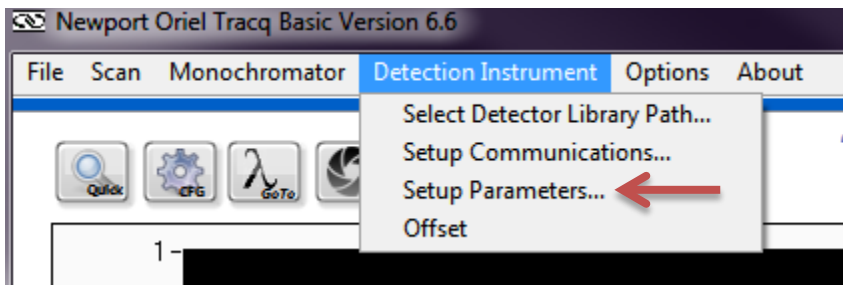


Figure 5: Detection Instrument Setup

2.4 SELECTING WAVELENGTH AND UNITS

Scans may be performed using nanometers (nm), micrometers (μm) or wavenumber (cm^{-1}). The default units are nanometers. To change the units, go to the menu shown in Figure 6. To assist with aligning the detector or sample, go to a wavelength which the detector is sensitive to or an easily visible wavelength such as 555 nm. The Go to Wavelength icon is shown in Figure 7.

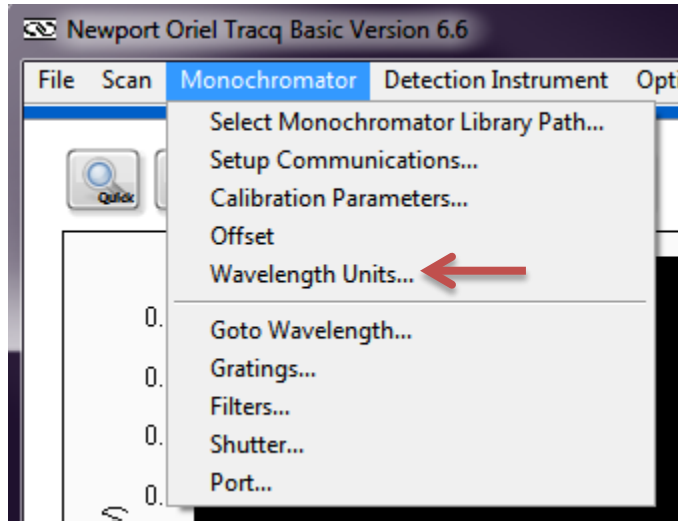


Figure 6: Wavelength Units Selection

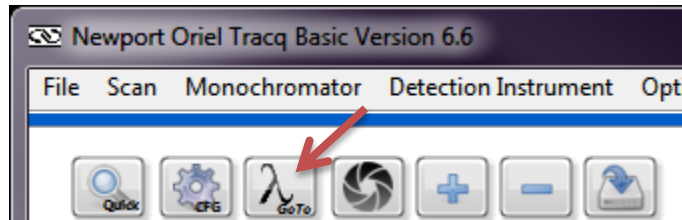


Figure 7: Set Monochromator to a Specific Wavelength

2.5 CONTROLLING THE SHUTTER

Open the shutter that is built into the monochromator, allowing light to illuminate the detector or sample by using the menu command or front panel icon shown in Figure 8. Make any final adjustments to the detector or sample position as required.

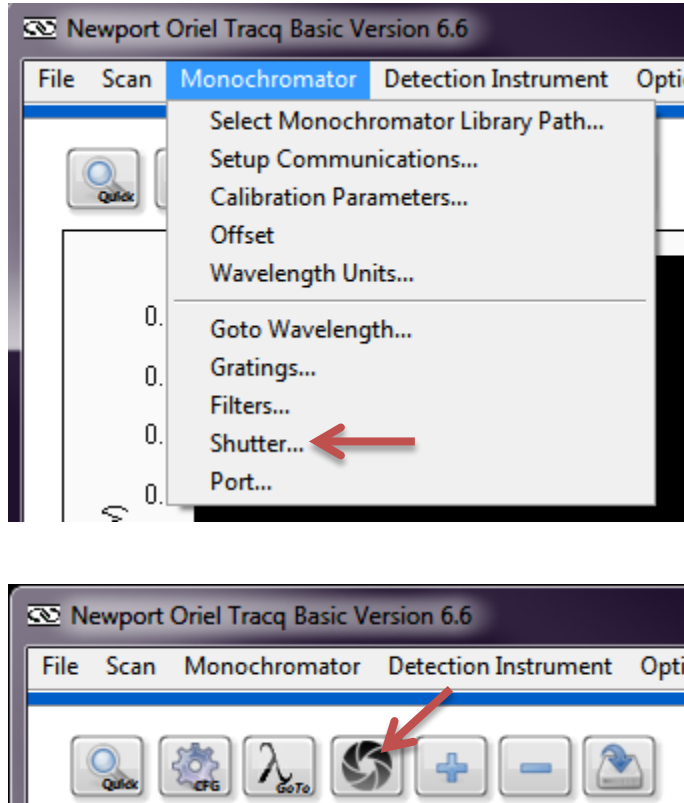


Figure 8: Opening the Monochromator Shutter

2.6 CHOOSING SCAN PARAMETERS

Click the CFG icon shown in Figure 9. Enter the starting and ending wavelengths, wavelength interval (step size) and delay time between wavelengths.

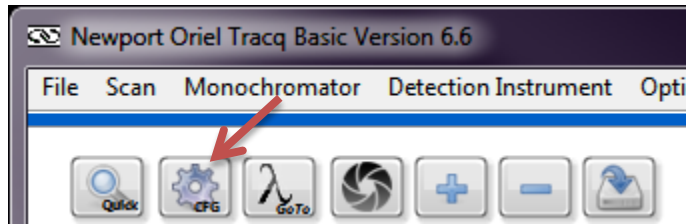


Figure 9: Scan Parameters Configuration Icon

2.7 PERFORMING A WAVELENGTH SCAN

Click the Quick Scan icon shown in Figure 10.

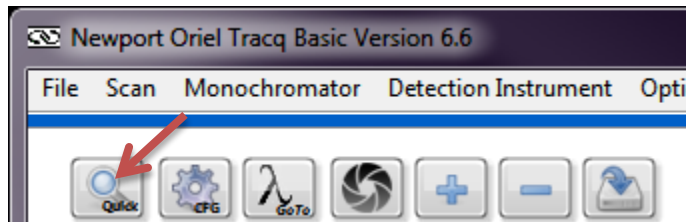


Figure 10: Start Scan Icon

2.8 ABORTING A SCAN

While the scan is underway, an Abort icon will appear in the main application window, as shown in Figure 11. Click this icon to cancel the scan at any time. Cancelled scans will not be saved.



Figure 11: Abort Icon

2.9 SAVING A FILE

To save a file, click the icon shown in Figure 12. Files are saved in text tab delimited format. When multiple scans are run, a window opens up to allow the user to select which scan to save.

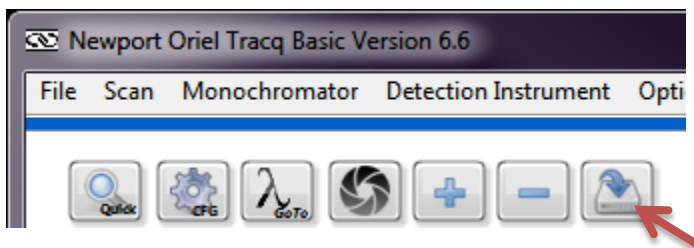


Figure 12: Save Scan File Icon

2.10 CLEARING GRAPH WINDOW

To clear the plotting window of completed graphs, highlight the graphs to be deleted and click the Clear icon in Figure 13. Always ensure scans are saved before clearing them.

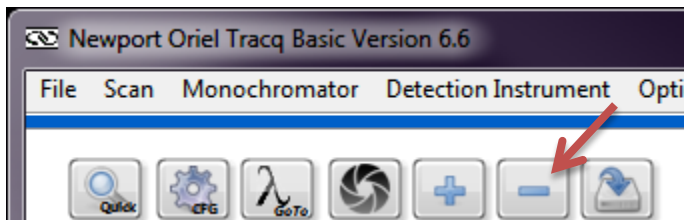


Figure 13: Clear Graph Icon

2.11 LOADING A PREVIOUSLY SAVED FILE

To load a previously saved scan or other data, click the Load Scan icon shown in Figure 14. In addition to being able to open data saved in TracQ Basic, any text tab delimited data set matching the TracQ format may be loaded. One example of non-TracQ data would be an Oriel detector calibration file.

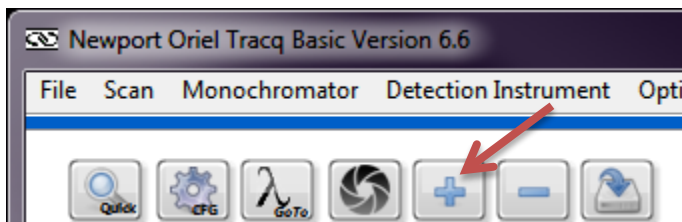


Figure 14: Load File Icon

2.12 EXITING TRACQ BASIC

Exit TracQ Basic using either the red X in the upper right corner of the application, or the pulldown menu selection shown in Figure 15. A prompt will appear asking to save settings as shown in Figure 16. In order to save the instrument selections and their basic setup information, select "Yes".

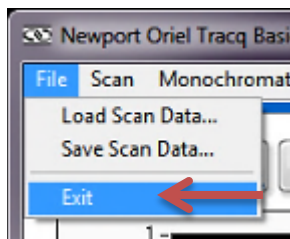


Figure 15: Exiting TracQ Basic

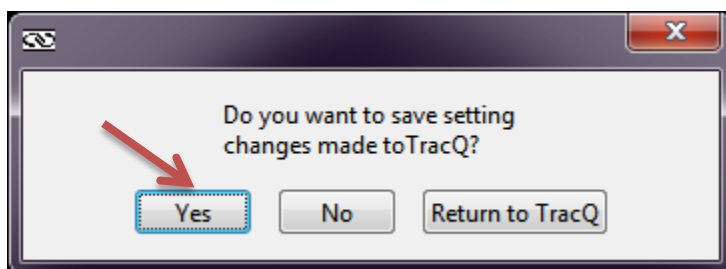


Figure 16: Saving Software Settings