Mono-Utility v5.1

Oriel[®] Utility Software for Monochromators and Spectrographs

🕸 MonoUtility Ver. 5.1.4		- 🗆 X
Mono-Utility for Cornerstone Series Monochromator		Newport [™] Oriel Instruments
	Grating Filter Port	Calibration Slits FW Update
Present Wavelength	554.986 nm 🗸 🌑	Grating Number Current Grating Grating Blaze Grating Lines
Set Wavelength	555.000 *Automatic grating, filter, and output port features	AUTO 2
	and a vailable with wavelength stepping feature.	Filter Wheel Current Filter Filter Label - Type to change the label AUTO 2 - Press "Estor reset - Press "Estor reset
Output Port	Current Outport Shutter	Filter # [Wheel 2] Current Filter 2 Filter Label #2
AUTO	OPEN V	AUTO 0
Start Wavelength	100	Newport Corp Cornerstone 260B SN:008 v:2.12
End Wavelength	Go Scan	
Interval Wavelength	100 Continuous?	[06/16/2020 01:58:42] Operation Complete
Delay (ms)	0 Abort Scan	(C) COPYRIGHT 2018 Newport Corporation - Oriel Instruments Division. All rights reserved



Quick Start Guide

Newport[®]

MONOUTILITY-QSG, Rev C

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1 INTRODUCTION

Thank you for your purchase of this spectroscopy instrument from Oriel Instruments. Please read this Quick Start Guide prior to installing the utility software and operating the monochromator or spectrograph. For additional important information regarding this instrument, refer to the complete User's Manual. Do not attempt to operate the system without reading all the information provided with each of the components.

This utility software allows users to control the following:

- Cornerstone 260B Monochromators.
- Cornerstone 130B Monochromators.
- With legacy support for the following:
- Cornerstone 130 Monochromators.
- Cornerstone 260 Monochromators.
- MS257 Monochromators and Spectrographs.
- MS260i Spectrographs.

While the Cornerstone CS260B and CS130B Monochromators only support USB or RS232 connections, support for legacy Instruments remains unchanged and includes either USB or RS232/GPIB connections. The following communication methods are supported by the utility software:

- USB
- RS232
- IEEE-488 (GPIB)

Utility software instrument control features:

- Set wavelength
- Set wavelength units
- Open/closeshutter
- Select grating
- Select Filter
- Select output port [dual output port instruments only]
- Automatic grating, filter and port changeover setup
- Set slit widths [motorized slits only]
- Automatic bandpass adjustment [motorized slits only]
- Set up scan parameters
- Run/abort scan
- Adjust calibration factors during field recalibration

Utility software instrument monitoring features:

- Present wavelength
- Wavelength units
- Output port selected
- Shutter position
- Grating in use, blaze wavelength and line density
- Filter in use, filter label
- Calibration parameters

2 **REQUIREMENTS**

2.1 SOFTWARE INSTALLATION REQUIREMENTS

The computer user performing the software installation must be logged on with Administrator privileges. Computer requirements:

Operating System	Windows 7/10, 32-bit and 64-bit macOS Sierra*
Memory	2 GB minimum
Free Hard Disk Space	800 MB

The computer on which the utility software is to be installed on must have a USB port to access the software contained on the USB drive provided with the instrument.

NOTE: A legacy version of the utility software is available for Windows XP users.

The following procedure does not apply for monochromators or spectrographs that are to be used with the optional Oriel TracQ[™] Basic software.

If a prior version of the utility software has been installed on the computer, it must be uninstalled prior to installation of the newest version of software. The uninstallation procedure is covered in the Appendix of the Quick Start Guide.

*Only compatible with the CS130B models.

2.2 IEEE-488 (GPIB) COMMUNICATION (Windows)

Before installing the utility software, it is required to have a National Instrument's IEEE-488 controller card or a GPIB/USB converter cable. In either case, associated drivers must be installed on the computer. It is important to configure the computer and establish communications before proceeding with application software. The GPIB board index and instrument address assigned should be noted for establishing communication when running the utility software.

It is recommended that National Instruments Measurement & Automation Explorer (NI Max) be installed prior to installation of this utility software, since it will aid in the configuration and testing of your GPIB communication interfaces (See: <u>http://www.ni.com/tutorial/4594/en/</u> and https://www.ni.com/getting-started/set-up-hardware/instrument-control/gpib-usb).

2.3 RS232 COMMUNICATION (Win)

It is important to configure the computer and establish communications before proceeding with the installation and use of the utility software. The COM PORT should be noted for establishing communication when running the utility software. It is recommended that National Instruments Measurement & Automation Explorer (NI Max) be installed prior to installation of this utility software, since it will aid in the configuration and testing of your RS232 communication interfaces.

(See: https://www.ni.com/getting-started/set-up-hardware/instrument-control/serial-connect).

2.4 USB COMMUNICATION (Win & MacOS)

A USB2 port is required in order to establish USB communication. The ORIEL_USB.SYS driver must be installed before the instrument can be controlled via a computer. It is recommended that National Instruments Measurement & Automation Explorer (NI Max) be installed prior to installation of this utility software, since it will aid in the configuration and testing of your USBTMC communication interfaces.

(See: https://knowledge.ni.com/KnowledgeArticleDetails?id=kA00Z0000019NsmSAE).

3 SOFTWARE INSTALLATION

3.1 SOFTWARE INSTALLATION (Windows)

The software installation screens that follow are applicable to a Windows 7, 32-bit operating system. The screens shown may differ slightly, depending on the operating system type and whether any versions of the National Instruments LabVIEW Runtime Engine had been installed previously. Do not connect the instrument to the computer until the software installation is complete and the computer has been restarted.

Insert the USB drive that came with the instrument and open it to view the contents. Select the appropriate folder that matches the target OS upon which the Mono Utility software is being installed (Fig. 1).



Figure 1: Select folder for Mono Utility installation.

For Windows, right-click on the setup.exe application and select Properties (Fig. 2).



Figure 2: Right-click on, "setup.exe."

Click on the Compatibility tab. Check box next to, "Run this program as an administrator." Select "Apply" and "OK" (Fig. 3).

setup.exe Properties						
General Compatibility Security Details Previous Versions						
If you have problems with this program and it worked correctly on an earlier version of Windows, select the compatibility mode that matches that earlier version. Help me choose the settings						
Compatibility mode						
Windows XP (Service Pack 3)						
Settings						
Run in 256 colors						
Run in 640 x 480 screen resolution						
Disable visual themes						
Disable desktop composition						
Disable display scaling on high DPI settings						
Privilege Level						
Change settings for all users						
OK Cancel Apply						

Figure 3: Click on the, "Compatibility" tab.

Double-click on the setup.exe application to begin the utility software installation (Fig. 4).



Figure 4: Double-click on, "setup.exe" to install utility software.

Select the destination directories and click, "Next" (Fig. 5).

MonoUtility 5.1.0	
Destination Directory Select the installation directories.	
All software will be installed in the following locations. To install software into a different location, click the Browse button and select another directory.	1
Directory for MonoUtility 5.1.0 C:\Newport ILXLightwave\MonoUtility 5.1.0\	Browse
Directory for National Instruments products C:\Program Files (x86)\National Instruments\	Browse
<< Back Ne	xt >> Cancel

Figure 5: Select destination directories.

Accept the Newport License Agreement and click, "Next" (Fig. 6).

MonoUtility 5.1.0	
License Agreement You must accept the licenses displayed below to proceed.	
Newport Software Agreement License	
You have the right to use the SOFTWARE indefinitely, subject to the Restriction provisions in this Agreement.	
Restrictions. You may not: (i) reverse engineer, decompile, or disassemble the SOFTWARE (except to the extent such foregoing restriction is expressly prohibited by applicable law); (ii) sub-license, lease, or rent the SOFTWARE; (iii) (other than as	
 I accept the License Agreement. I do not accept the License Agreement. 	
<< Back Next >> Cancel	

Figure 6: Click, "Next" to accept the Newport License Agreement.

Accept the National Instruments License Agreement and click, "Next" (Fig. 7).

License Agreement You must accept the licenses displ	ayed below to proceed.
NATIONAL INSTRUMEN	TS SOFTWARE LICENSE AGREEMENT
AND/OR COMPLETE THE INSTALLATION DOWNLOADING THE SOFTWARE AND/O	RACT. BEFORE YOU DOWNLOAD THE SOFTWARE N PROCESS, CAREFULLY READ THIS AGREEMENT. BY OR CLICKING THE APPLICABLE BUTTON TO
AGREEMENT AND YOU AGREE TO BE B BECOME A PARTY TO THIS AGREEMEN CONDITIONS, CLICK THE APPROPRIAT DO NOT INSTALL OR USE THE SOFTW/ (30) DAYS OF RECEIPT OF THE SOFTW/	ISS, YOU CONSENT TO THE TERMS OF THIS OUND BY THIS AGREEMENT. IF YOU DO NOT WISH TO T AND BE BOUND BY ALL OF ITS TERMS AND E BUTTON TO CANCEL THE INSTALLATION PROCESS, IRE, AND RETURN THE SOFTWARE WITHIN THIRTY ARE (WITH ALL ACCOMPANYING WRITTEN MATERIALS, THE PLACE YOU OBTAINED THEM, ALL RETURNS IRENT RETURN POLICY.
AGREEMENT AND YOU AGREE TO BE B BECOME A PARTY TO THIS AGREEMEN CONDITIONS, CLICK THE APPROPRIAT DO NOT INSTALL OR USE THE SOFTW/ (30) DAYS OF RECEIPT OF THE SOFTW/ ALONG WITH THEIR CONTAINERS) TO	OUND BY THIS AGREEMENT. IF YOU DO NOT WISH TO T AND BE BOUND BY ALL OF ITS TERMS AND E BUTTON TO CANCEL THE INSTALLATION PROCESS, WRE, AND RETURN THE SOFTWARE WITHIN THIRTY ARE (WITH ALL ACCOMPANYING WRITTEN MATERIALS, THE PLACE YOU OBTAINED THEM, ALL RETURNS WRENT RETURN POLICY.
AGREEMENT AND YOU AGREE TO BE B BECOME A PARTY TO THIS AGREEMEN CONDITIONS, CLICK THE APPROPRIAT DO NOT INSTALL OR USE THE SOFTWA (30) DAYS OF RECEIPT OF THE SOFTW ALONG WITH THEIR CONTAINERS) TO SHALL BE SUBJECT TO NI'S THEN CUP	OUND BY THIS AGREEMENT. IF YOU DO NOT WISH TO T AND BE BOUND BY ALL OF ITS TERMS AND E BUTTON TO CANCEL THE INSTALLATION PROCESS, WRE, AND RETURN THE SOFTWARE WITHIN THIRTY ARE (WITH ALL ACCOMPANYING WRITTEN MATERIALS, THE PLACE YOU OBTAINED THEM, ALL RETURNS WRENT RETURN POLICY.

Figure 7: Click, "Next" to accept the National Instruments License Agreement.

The following screen indicates which software is to be installed. This screen's appearance may vary if another version of National Instruments software is already installed on the computer (Fig. 8).

MonoUtility 5.1.0		x
Start Installation Review the following summary before continuing.		
Adding or Changing • MonoUtility 5.1.0 Files		
Click the Next button to begin installation. Click the Back button to change the installation settings	:.	
Save File) <<< Back Next >>	Cancel	

Figure 8: Software installation confirmation screen.

When the software installation is complete, click, "Next."

When prompted, select "Restart" to finish the software installation.

The installation software will have placed a shortcut (Fig. 9) onto the desktop, as shown below. The program may also be accessed through Start \rightarrow Newport \rightarrow Mono Utility 5.1.x.



Figure 9: MonoUtility shortcut icon.

3.2 SOFTWARE INSTALLATION (Mac)

Software installation of the Mono Utility for MacOS is accomplished by the use of a DMG file. The Dmg file extension has MacOS X Disk Image file type, developed by Apple, which is associated with the "disk image files" category.

Associated with Mac OS X, the file is usually used by OS X software installers. It stores raw block data, which may be encrypted or compressed. Users can access the file via the Apple Disk Utility.

The DMG file format is typically used instead of the <u>.IMG</u> format, which has been previously used in Mac OS Classic. Even though DMG files aren't meant to be used in Windows, users can still open them with Windows Daemon Tools.

Prior to installation of the Mono Utility on the MacOS, it is strongly recommended that the Lab VIEW RunTime Engine (2017) for MacOS first be downloaded and installed.

How to open a DMG file:

Double-click on the dmg file to open it. The file will open automatically if file associations have been correctly installed and there is a proper program on your computer; if not, file associations may be corrupted and your OS either cannot find the proper program, or you might not have one for opening the file.

Clicking on the Mono Utility 5... which is now exposed by opening the dmg file, will start the application.

4 ESTABLISHING COMMUNICATION

All instruments that communicate via USB interface must have the driver installation verified prior to using the Mono Utility software. The instrument must finish the startup routine prior to connecting the USB to the computer.

For the Cornerstone 130B and 260B, connect the instrument to the computer and allow it to finish its startup routine. Once the instrument is ready, use the NI MAX application to connect to and interrogate the instrument using the *IDN? Interrogatory command via the communication tools provided.

For all other legacy instruments supported by the Mono Utility, connect the instrument to the computer, turn it on, and allow it to finish its startup routine. Once the instrument is ready, ensure through the Windows Device Manager that communication has been successfully established. Below is a screenshot showing the USB driver correctly installed (Fig. 10).

Device Manager	
le Action View Help	
• 🔿 🖬 🖬 🛛 🗊 💐 😭 🍢 👧	
▷ 📲 DVD/CD-ROM drives	Newport/Oriel Cornerstone Monochromator Properties
Human Interface Devices	General Driver Details
DE ATA/ATAPI controllers	
▶ - ₩ IEEE 1394 Bus host controllers	Newport/Oriel Comerstone Monochromator
Keyboards	
Bernard Mice and other pointing devices Modems	Driver Provider: Newport/Oriel
Modellis Monitors	Driver Date: 12/16/2013
Network adapters	Driver Version: 3.5.0.0
PCMCIA adapters	Pressent and the second second
Portable Devices	Digital Signer: Newport Corporation
Ports (COM & LPT)	
Processors	Driver Details To view details about the driver files.
Sound, video and game controllers	
Storage controllers	Update Driver To update the driver software for this device.
⊳ n∰ System devices	Roll Prode Driver If the device fails after updating the driver, roll
Universal Serial Bus controllers	Roll Back Driver If the device fails after updating the driver, roll back to the previously installed driver.
Generic USB Hub	
USB Hub 	Disable Disables the selected device.
	To uninstall the driver (Advanced).
Newport/Oriel Cornerstone Monochromator	Uninstall Uninstall
USB Mass Storage Device	
USB Root Hub	OK Cancel
🖥 USB Root Hub	

Figure 10: Screenshot of USB driver correctly installed.

Double-click the shortcut icon on the desktop to start the Mono Utility software. A window will appear allowing the software to be configured for the instrument being utilized.

NOTE: Always ensure the instrument has completed its startup routine before opening the software application. The startup routine is complete when the gratings, filters, port selection mirror, and motorized slits are in position and no further noises are made by the instrument.

The supported Communications interfaces are automatically scanned for any supported devices currently connected to the host computer (Fig. 11).

onfiguration Pa Select Check Mark to a		
Connection type	USB	∇
Select Model	Newport Corp CS130B SN:7	∇
Select # of Gratings	2	∇
	c	luit

Figure 11: Configuration Parameters.

The user is presented with a list of discovered devices organized by connection type (USB, COM, and GPIB). The user can use the dropdown menu for the Connection Type and Model to review and/or select a device of interest.

The user is also presented with the number of gratings installed on the device which can be adjusted prior to finalization of the selection.

By selecting the check mark, the selection is finalized and the Utility is launched, presenting the user with the main application window, or the user has the option to quit the application if desired.

5 USING THE UTILITY SOFTWARE

5.1 FRONT PANEL PARAMETER SETTINGS

The main application window, shown below, provides easy access to most of the monochromator functions (Fig. 12).

MonoUT 5.1.0 Ver. 5.1 Mono-Utility for Cornerstone Series Monochromator Grating Filter Port Calibration Slits FW Update						
Present Wavelength 555.005 nm Set Wavelength 555.005 Kt Wavelength 555.005 Automatic grating, filter, and output port features not available with wavelength stepping feature. Output Port Current Outport AUTO CLOSED CLOSED	Grating Number Current Grating Grating Blaze Grating Lines 2 2 Grating2 600 Filter Wheel Current Filter Filter Label Type to change the label AUTO 0 Press 'Enter' to apply Filter # [Wheel 2] Current Filter 2 Filter Label					
Start Wavelength 100 Go Scan End Wavelength 500 Continuous? Interval Wavelength 100 Continuous? Delay (ms) 0 Abort Scan						

Figure 12: Main application window.

Present Wavelength/Set Wavelength: "Present Wavelength" indicates the wavelength position of the monochromator. "Set Wavelength" allows the user to change "Present Wavelength" to a different wavelength value. The "wavelength units" indicator on the right allows the user to set different wavelength units. Choices for units are nanometers (nm), micrometers (μ m), or wavenumber (cm⁻¹).

Step Wavelength/Stop: The icons under the "Set Wavelength" field may be used to step the monochromator wavelength forwards or backwards. Choices are single step or continuous steps. Continuous steps continue to change the wavelength until the Stop icon is clicked.

Output Port: For instruments with dual output ports, this selection allows users to choose either the "Axial" [C] or "Lateral" [B] port. The "Current Output" field displays the selected port.

Shutter: Indicates and allows changing the shutter status. Choices are open or closed.

Go/Abort Scan: Once the Start Wavelength, End Wavelength, Interval Wavelength (step size) and Delay fields are filled in with the desired scan parameters, the Go Scan icon allows the scan to begin. Click on the Abort Scan icon to stop the scan at any time.

Grating Number: shows the currently selected grating position, in addition to its blaze wavelength and groove density in lines per millimeter. Using the pull-down menu, the active grating may be changed or the auto grating selection feature may be enabled.

Filter #: shows the currently selected filter, and the filter wheel number. Note that the Cornerstone and the MS260i models only support a single filter wheel. Using the pull-down menu, the active filter may be changed or the auto filter selection feature may be enabled.

Filter Label: Allows up to eight characters to be entered for labeling the active filter. If the automatic filter selection is enabled, this feature is not enabled. All characters (upper or lowercase letters, numbers, and symbols) may be entered. Labels greater than eight characters are truncated.

(NOTE: FW Update: This option is only supported for the CS130B class of monochromators. It provides an in-field mechanism to perform firmware updates as required.)

5.2 GRATING, FILTER, OUTPUT PORT SETTINGS

The following control menus allow users to set up tables that determine the filter (Fig. 13), grating (Fig. 14), and output port (Fig. 15) in use over specific wavelength ranges. The uppermost wavelength is entered as "Inf", which is an abbreviation for Infinity. To activate these settings, the selected grating, filter, and/or port need to be set to "Auto" in the main application window.

The settings may be saved and re-loaded as needed. Type the desired file name and file extension as appropriate for the parameter table. Use file extension .grt (gratings), .flt (filters), or .prt (port).

Auto Table Settings		23	util Auto Table Settings		X
Grating	Load Save		Filter	Load	Save 💉 💌
Grating Cont	rol Menu		Filter Control Menu		
Automatic Grating Change-Over Wavelength Table			Automatic	Filter Change-Over	Wavelength Table
From grating to	grating at	wavelength	From	То	at wavelength
			1	2	0.00
	1 2 0.00		2	3	Inf
2 3 Inf		101	3	4	Inf
			4	5	Inf
			5	6	Inf

Figure 14: Grating Control Menu.

Figure 13: Filter Control Menu.

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5.3 MOTORIZED SLIT SETTINGS

The Utility Menu also allows users to control or change the motorized slits width in "Manual" mode (Fig. 16) by setting the width (in micrometers) for each slit at the input and output ports.

In "Automatic Bandpass" mode (Fig. 17), the user may allow the software to set all input and output port slit widths. The user enters the desired bandpass, and the software adjusts the slit widths to maintain that bandpass at all wavelengths. The desired bandpass is entered in the same units as was selected in the main application window.

Slits	Con	trol	
Manual 🔘	Automatio	c Bandpass 🔘	
INPort A	6	um	*Setting Bandpass to zero or changing SI Width manually turns automatic slit
OUTPort B	498	um	adjustment off. The system Bandpass is determined by the individual slit widths.
OUTPort C	6	um	Apply Exit

Figure 16: "Manual" mode.

Slits Width and Bandpass Control	8
Slits Control Manual Automatic Bandpass	
Auto Bandpass 0.00 nm	*Setting Bandpass to zero or changing Slit Width manually turns automatic slit adjustment off. The system Bandpass is determined by the individual slit widths.
	Apply Exit

Figure 17: "Automatic Bandpass" mode.

5.4 CALIBRATION PARAMETERS SETTINGS

The Parameters icon in the main application window allows the calibration parameters (Fig. 18) to be displayed and changed, if desired, for the active grating. Additionally, the grating line density and blaze wavelength may also be viewed or updated.

Use caution when changing grating factors or offsets. Refer to the instrument's user manual for more information.

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Figure 18: Parameter Settings.

6 APPENDIX: UNINSTALLING PREVIOUS SOFTWARE VERSIONS (Windows)

- 1. Connect the monochromator or spectrograph to the computer and power it up.
- 2. In the Windows Start menu, click on "Control Panel," and then select, "Program and Features" (Fig. 19). This shows a list of all software currently installed on the system, including the software version numbers. Select and uninstall, "Mono Utility version x.x.x." Uninstalling MonoUtility will take approximately 5 minutes.

<u>E</u> dit <u>V</u> iew <u>T</u> ools <u>H</u> elp						
Control Panel Home	Uninstall or change a program					
View installed updates	To uninstall a program, select it from the list and then	click Uninstall Change or Repair				
Furn Windows features on or	ro uninstan a program, seccer e nom the list and then	ener offitiation, enunge, of hepair.				
off	Organize - Uninstall					
nstall a program from the			Installed On			Gen .
etwork	Name	Publisher			Version	
	MonoUtility 5.1.0	Newport Corporation	4/24/2018	15.8 MB		
	MiKTeX 2.9	MiKTeX.org	4/24/2018		2.9	
	Akamai NetSession Interface	Akamai Technologies, Inc	4/24/2018			
	Dell System Detect	Dell	4/24/2018		7.11.0.6	
	Alicrosoft Office Communicator 2005	Microsoft Corporation	4/23/2018		1.0.559.232	
	New Focus Chopper Application	New Focus	4/23/2018	2.36 MB		
	Adobe Flash Player 29 NPAPI	Adobe Systems Incorporated	4/10/2018		29.0.0.140	
	Adobe Flash Player 29 ActiveX	Adobe Systems Incorporated	4/10/2018		29.0.0.140	
	Graphviz	AT&T Research Labs.	4/3/2018	115 MB	2.38	
	E GPL Ghostscript doxygen 1.8.14	Artifex Software Inc. Dimitri van Heesch	4/3/2018	81.0 MB		
	InstaCal and Universal Library for Windows	Measurement Computing Corp	4/3/2018 3/27/2018	81.0 MB 70.9 MB		
	Temporal Stability	Newport Corporation	3/27/2018	258 MB		
	I emporal Stability DAOami	Measurement Computing	3/27/2018	45.9 MB		
	Microsoft Visual C++ 2015 Redistributable (x86) - 14.0		3/26/2018		14.0.24123.0	
	National Instruments Software	National Instruments	3/26/2018	21.5 MB	14.0.24123.0	
	Newport LDDTEC Firmware Downloader	Newport	3/12/2018	1.46 MB	3.0.0	
	Newport Model 500B-300B Software	Newport Corporation	3/12/2018	9.51 MB		
	Microsoft Office 365 ProPlus - en-us	Microsoft Corporation	3/1/2018	5.51 110	16.0.9029.2167	
	Newport Laser Diode and Temperature Controller Sof	Newport Corporation	2/26/2018	29.3 MB		
	Adobe Acrobat Reader DC	Adobe Systems Incorporated	2/23/2018		18.011.20038	
	Cy USB 2 CV	USB-IF	2/21/2018	50.1 MB		
	Microsoft Visual C++ 2017 Redistributable (x64) - 14.1		2/21/2018		14.12.25810.0	
	VISA Shared Components 5.8.0 (64-Bit)	IVI Foundation	2/16/2018	2310 1110	5.8	
	VI VI Package Manager 2017	Ж	2/9/2018	71.1 MB	17.0.2014	
	VISA.NET Shared Components 5.6.0 (64-Bit)	IVI Foundation	2/8/2018		5,6,0301	
	AD. TTV 0 70 (64 1-4)	Circuit Table	3/7/2019	3 60 140	0.70.0.0	

Figure 19: Programs and Features.

3. If the instrument is connected by a USB cable on the computer, then go to the Windows Device Manager. Expand the Universal Serial Bus Controllers (Fig. 20). Right-click on "Newport/Oriel Cornerstone Monochromator" to display the option menu dialog box. Select, "Uninstall". A confirmation dialog box will appear next. Check the box to "Delete the driver software for this device" and then click, "OK." Refresh the Device Manager to ensure that the "Newport/Oriel Cornerstone Monochromator" driver was removed.

Figure 20: Universal Serial Bus Controllers in Device Manager.

4. In Windows Explorer, navigate to the following directory: C:\Windows\System32\drivers (Fig. 21). Delete the file named "oriel_usb.sys."

	New folder	8	- FI @
Organize 🔻 🦾 Open 💌 I	New folder		- 🔟 🔞
😭 Favorites	Name	Date modified	Туре
🧮 Desktop	intforwards in the second seco	1/23/2014 6:18 PM	SYS File
🐌 Downloads	in null.sys	7/13/2009 4:11 PM	SYS File
Secent Places	NV AGP.SYS	7/13/2009 6:20 PM	SYS File
	Nrraid.sys	8/18/2012 7:15 AM	SYS File
词 Libraries	Nrstor.sys	8/18/2012 7:15 AM	SYS File
Documents	Nucleus view	7/13/2009 4:52 PM	SVS File
J Music	o2flash.exe	2/10/2010 5:50 PM	Application
E Pictures	© o2mdfw7.sys	1/4/2011 1:44 PM	SYS File
Videos	O2MDRw7.svs	1/4/2011 2:41 PM	SYS File
negroup	o2sdiw7.sys	3/23/2011 2:50 PM	SYS File
	lohci1394.sys	7/13/2009 4:51 PM	SYS File
	oriel ftir.sys	8/14/2014 5:31 PM	SYS File
🖳 Computer	i oriel_usb.sys	12/31/2013 12:05	SYS File
🚢 OS (C:)	S pacer.sys	7/13/2009 4:54 PM	SYS File
🙀 Network	S parport.sys	7/13/2009 4:45 PM	SYS File
	artmgr.sys	8/18/2012 7:15 AM	SYS File
	arvdm.sys	7/13/2009 4:45 PM	SYS File
	S PBADRV.sys	8/18/2012 5:47 AM	SYS File
	() ()	11 (20./2010 1.20 014	eve ru.

Figure 21: C:\Windows\System32\drivers.

- 5. Navigate to C:\Windows\inf directory and perform the following steps:
 - Locate and delete the "Cornerstone drivers" directory (if this directory cannot be found, it was removed automatically by Windows in step 2).
 - Search for and delete both "x64" and "x86" directories (if these directories cannot be found, they were removed automatically by Windows).
- 6. If Mono Utility 4.7 was installed, delete files "oriel_cs.cat" and "oriel_usb.inf". If these files cannot be found, they were removed automatically by Windows.
- 7. Disconnect the monochromator or spectrograph from the computer and proceed with installation of the latest utility software as noted in this Guide.

7 WARRANTY AND SERVICE

7.1 CONTACTING ORIEL INSTRUMENTS

Oriel Instruments belongs to Newport Corporation's family of brands. Thanks to a steadfast commitment to quality, innovation, hard work and customer care, Newport is trusted the world over as the complete source for all photonics and laser technology and equipment.

Founded in 1969, Newport-Oriel is a pioneering single-source solutions provider of laser and photonics components to the leaders in scientific research, life and health sciences, photovoltaics, microelectronics, industrial manufacturing and homeland security markets.

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To obtain information regarding sales, technical support or factory service, United States and Canadian customers should contact Newport directly.

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Telephone: 800-222-6440 (toll-free in United States) 949-863-3144

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Customers outside of the United States must contact their regional representative for all sales, technical support and service inquiries. A list of worldwide representatives can be found on Newport's website: https://www.newport.com/contact/contactslocations

7.2 REQUEST FOR ASSISTANCE / SERVICE

Please have the following information available when requesting assistance or service:

- Contact information for the owner of the product.
- Instrument model number (located on the product label).
- Product serial number and date of manufacture (located on the product label). Description of the problem.

To help Oriel's Technical Support Representatives diagnose the problem, please note the following:

- Is the system used for manufacturing or research and development? What was the state of the system right before the problem?
- Had this problem occurred before? If so, when and how frequently?
- Can the system continue to operate with this problem, or is it non-operational?
- Were there any differences in the application or environment before the problem occurred?

7.3 LOANER / DEMO MATERIAL

Persons receiving goods for demonstrations or temporary use or in any manner in which title is not transferred from Newport shall assume full responsibility for any and all damage while in their care, custody and control. If damage occurs, unrelated to the proper and warranted use and performance of the goods, recipient of the goods accepts full responsibility for restoring the goods to their original condition upon delivery, and for assuming all costs and charges.

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