Mono-Utility v5.0

Oriel[®] Utility Software For Monochromators and Spectrographs

Mono Utility v5.0	
Mono-Utility for Cornerstone Series Mon	ochromator
Grating Filter Port	Calibration Slits Comm
Present Wavelength 1373.0350 nm Set Wavelength 1373.04 Automatic grating, filter, and output port features not available with wavelength stepping feature Output Part	Grating Number Current Grating Grating Blaze Grating Lines 1 1 750 600 Filter # [Wheel 1] Current Filter Filter Label - Type to change the label 6 6 - Press Tenter to apply - Press Tenter to apply - Press Tenter to apply
AXIAL [PORT C] C OPEN	Filter # [Wheel 2] Current Filter 2 Filter Label #2 AUTO 0
Start Wavelength100End Wavelength500Interval Wavelength100Delay (ms)0	[12/09/2014 06:36:31] Operation Complete (C) COPYRIGHT 2014 Newport Corporation - Oriel Instruments Division. All rights reserved





Quick Start Guide





Family of Brands – ILX Lightwave[®] • New Focus[™] • Ophir[®] • Corion • Richardson Gratings[™] • Spectra-Physics[®] MONOUTILITY-QSG, Rev A

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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 130 Monochromators
- Cornerstone 260 Monochromators
- MS260i Spectrographs

Instruments are available with either USB or RS232/GPIB connections. The following communication methods are compatible with the utility software:

- USB
- RS232
- IEEE-488 (GPIB)

Utility software instrument control features:

- Set wavelength
- Set wavelength units
- Open/close shutter
- 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

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

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

The computer on which the utility software is to be installed on must have a USB port in order 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 onto the computer, it must be uninstalled prior to installation of the newest version of software. The uninstallation procedure is covered in the Appendix at the back of this Quick Start Guide.

2.2 SOURCE CODE

This program is a closed executable file written in National Instrument's LabVIEW[™]. LabVIEW developers may access example VIs through the MonoTERM program. Refer to the API document for more information.

2.3 IEEE-488 (GPIB) COMMUNICATION

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, its associated drivers must be installed on the computer. It is important to configure the computer and establish communications before proceeding with any application software. The GPIB board index and instrument address assigned should be noted for establishing communication when running the utility software.

2.4 RS232 COMMUNICATION

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.

2.5 USB COMMUNICATION

A USB2 port must be available on the PC. The ORIEL_USB.SYS driver must be installed before the instrument can be controlled via a computer.

3 SOFTWARE INSTALLATION

The software installation screens shows 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.

Oriel MonoUtility_v5.0.4 >	- ∮ ₇	Search Orie 🔎
Organize 🔻 📷 Open 🔻 New folder		• 🔟 🔞
Name	Date modified	Туре
퉬 bin	12/5/2014 2:39 PM	File folder
🐌 license	12/5/2014 2:39 PM	File folder
퉬 supportfiles	12/5/2014 2:39 PM	File folder
nidist.id	12/5/2014 4:18 PM	ID File
🛃 setup.exe	6/6/2014 10:08 AM	Application
🗿 setup.ini	12/5/2014 4:18 PM	Configuration sett
۲ []		÷.

Right click on the setup.exe application and select Properties.



a official	Compatibility	Security	Details	Previous Versions
lf you h an earli matche	ave problems w er version of W s that earlier ve	vith this pro indows, se rsion.	ogram and lect the c	it worked correctly on ompatibility mode that
<u>Help n</u>	ne choose the	settings		
Comp	atibility mode			
	Run this program	n in compa	atibility mo	de for:
Wi	ndows XP (Sen	rice Pack :	3)	-
Settings				
Run in 256 colors				
Run in 640 x 480 screen resolution				
Disable display scaling on high DPI settings				
Privilege Level				
1	Run this program	n as an ad	ministrato	r
~				
Change settings for all users				

Click on the Compatibility tab. Check "Run this program as an administrator." Click "Apply" and "OK".

Double click the setup.exe application to begin the utility software installation.



💷 Moi	no Utility 5.0.4
	Destination Directory Select the primary installation directory.
	All software will be installed in the following locations. To install software into a different location, click the Browse button and select another directory.
	Directory for Mono Utility 5.0.4 C:\Program Files\Newport\Mono Utility 5.0.4\ Browse
	Directory for National Instruments products C:\Program Files\National Instruments\ Browse
	<< <u>B</u> ack <u>N</u> ext >> <u>C</u> ancel

Select the destination directories and click "Next".

Accept the Newport License Agreement and click "Next."

🐙 Mono Utility 5.0.4		X
License Agreement You must accept the licenses displayed below to proceed.		
Newport Software Agreement License		* II
You have the right to use the SOFTWARE indefinitely, subject to the Restr provisions in this Agreement.	iction	
Restrictions. You may not: (i) reverse engineer, decompile, or disassembl SOFTWARE (except to the extent such foregoing restriction is expressly p applicable law); (ii) sub-license, lease, or rent the SOFTWARE; (iii) (other	e the rohibited than as	by +
I accept the License Agreeme I do not accept the License A	int. greement.	
<< Back Next >>	Ca	ncel

Accept the National Instruments License Agreement and click "Next."

🐙 Mono Utility 5.0.4	
License Agreement You must accept the licenses displayed below to proceed.	
NATIONAL INSTRUMENTS SOFTWARE LICENSE AGRI	EEMENT 🔒
INSTALLATION NOTICE: THIS IS A CONTRACT. BEFORE YOU DOWNLOAD THE SI AND/OR COMPLETE THE INSTALLATION PROCESS, CAREFULLY READ THIS AGI DOWNLOADING THE SOFTWARE AND/OR CLICKING THE APPLICABLE BUTTON COMPLETE THE INSTALLATION PROCESS, YOU CONSENT TO THE TERMS OF T AGREEMENT AND YOU AGREE TO BE BOUND BY THIS AGREEMENT. IF YOU DO BECOME A PARTY TO THIS AGREEMENT AND BE BOUND BY ALL OF ITS TERMS./ CONDITIONS, CLICK THE APPROPRIATE BUTTON TO CANCEL THE INSTALLATIO DO NOT INSTALL OR USE THE SOFTWARE, AND RETURN THE SOFTWARE WITH (30) DAYS OF RECEIPT OF THE SOFTWARE (WITH ALL ACCOMPANYING WRITTE ALONG WITH THEIR CONTAINERS) TO THE PLACE YOU OBTAINED THEM. ALL R SHALL BE SUBJECT TO NI'S THEN CURRENT RETURN POLICY.	OFTWARE REEMENT. BY TO HIS NOT WISH TO AND ON PROCESS, HIN THIRTY N MATERIALS, ETURNS
The software to which this National Instruments license applies is Mono Utility 5.0.4.	
 I accept the License Agreemen I do not accept the License Agreement 	nt. greement.
<< Back Next >>	Cancel

The following screen indicates which software is to be installed. This screen's appearance may vary if other National Instruments software is already installed on the computer.

4 Mono Utility 5.0.4						×
Start Installa Review the f	t ion bllowing summary	before continuing				
Cannot install						
NI-488.2 3.1.1 (high NI I/O Trace 3.1 (high Upgrading	r version already i her version alread	installed) dy installed)				
• National Instruments Adding or Changin	system componer	nts				
 Mono Utility 5.0.4 File NI-VISA 5.4 Run Time Suppo NI System Configura 	s tion 14.0.0					
Click the Next button to b	egin installation. (Click the Back bu	tton to change the	e installation settings		
		Save File	<< Back	Next>>_	Can	cel

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

🐙 Mono Utility 5.0.4		х	J
Installation Complete			
The installer has finished updating your system.			
Back Next >	Finish		-

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



The installation software will have placed a shortcut onto the desktop, as shown below. The program may also be accessed through Start \rightarrow Newport \rightarrow Mono Utility 5.0.x.



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 computer.

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 screen capture showing the USB driver correctly installed.



Double click on 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.

Being by selecting the instrument model first. Available choices are the Cornerstone 130 or Cornerstone 260/MS260i models.

Configure Para Selecting the check mar	meters k when complete.	
Select Model Connection Type	Cornerstone 130 USB	•
Select # of Gratings	1	

The default connection type is USB. The GPIB or RS232 options may be selected. The VISA resource Name field allows the GPIB board index and address to be selected, or the RS232 COM Port.

Configure Paran Selecting the check mark	neters when complete.	Configure Para Selecting the check ma	ameters ark when complete.	
Select Model Connection Type VISA resource Name Select # of Gratings	Cornerstone 130 GPIB GPIB GPIB0::4::INSTR	Select Model Connection Type VISA resource Nam Select # of Gratings	Cornerstone 130 RS232 COM4	
Sciece » of offitings		Select # of ordings	L	

Select the number of gratings installed in the instrument. If unsure, refer to the calibration parameters supplied with the instrument on the USB drive. Then click the green check mark to proceed to the main application window.

5 USING THE UTILITY SOFTWARE

5.1 FRONT PANEL PARAMETER SETTINGS

The main application window, shown below, provides easy access to most of the Cornerstone functions.

til Mono Utility v5.0	
Mono-Utility for Cornerstone Series Mor Grating Filter Port	A Newport Corporation Brand
Present Wavelength 1373.0350 nm Set Wavelength 1373.04 *Automatic grating, filter, and output port features not available with wavelength stepping feature. Output Port Current Outport Shutter AXIAL [PORT C] C OPEN	Grating Number Current Grating Grating Blaze Grating Lines 1 1 750 600 Filter # [Wheel 1] Current Filter Filter Label - Type to change the label 6 6 - Press 'Enter' to apply Filter # [Wheel 2] Current Filter 2 Filter Label #2 AUTO 0 - Type to change the label
Start Wavelength100End Wavelength500Interval Wavelength100Delay (ms)0	[12/09/2014 06:36:31] Operation Complete (C) COPYRIGHT 2014 Newport Corporation - Oriel Instruments Division. All rights reserved

Present Wavelength/Set Wavelength: "Present Wavelength" indicates the wavelength position of the monochromator. "Set Wavelength" allows the user to change "Present Wavelength" to different wavelength value. The wavelength units indicators on the right allows 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 field are filled in with the desired scan parameters, the Go Scan icon allows the scan to begin. Click 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 case, lowercase, letters, numbers and symbols) may be entered. Labels greater than eight characters are truncated.

5.2 GRATING, FILTER, OUTPUT PORT SETTINGS

The following control menus allow users to set up tables that determine the filter, grating and output port 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).

til Auto Table Settings		X	👬 Auto Table Settings		X
Grating	Load	Save 💉 💌	Filter	Load	Save 😢 💌
Grating C Automatic Grat	Grating Control Menu Automatic Grating Change-Over Wavelength Table		Filter Control Menu Automatic Filter Change-Over Wavelength Table		
From grating	to grating	at wavelength	From	То	at wavelength
	2	0.00	1	2	0.00
1	2	Inf	2	3	Inf
2		111	3	4	Inf
			4	5	Inf
			5	6	Inf

ti Auto Table Settings	8
Output Port	Load Save
Output Automatic	Port Control Menu ort Change-Over Wavelength Table
AXIAL [PORT C]	o LATERAL [PORT B] 💌 at 0.00

5.3 MOTORIZED SLIT SETTINGS

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

In "Automatic Bandpass" mode, 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.

Itil Slits Width an	id Bandpass C	ontrol	2	til Slits Width an	d Bandpass Control	22
Slits Control		Slits Control				
Manual 🔘	Automatic B	andpass 🔘		Manual 🔘	Automatic Bandpass 🧿	
INPort A	6 u	ım	*Setting Bandpass to zero or changing Slit Width manually turns automatic slit	Auto Bandr	Dass	*Setting Bandpass to zero or changing Slit Width manually turns automatic slit adjustment off The system Bandpass is
OUTPort B	498 u	ım	adjustment off. The system Bandpass is determined by the individual slit widths.	0.00	nm	determined by the individual slit widths.
OUTPort C	6 u	ım	Apply Exit			Apply Exit

5.4 CALIBRATION PARAMETERS SETTINGS

The Parameters icon in the main application window allows the calibration parameters 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.

Calibration Settings		
Present Wavelength	1011.9620	1
Calibrate Wavelength	1011.96	1
Displaying Prop	perties for Grating: 1	
Grating Factor	0.999270	1
Grating Factor Grating Offset	0.999270	1
Grating Factor Grating Offset Grating Lines	0.999270 0.612397 600	

6 APPENDIX: UNINSTALLING PREVIOUS SOFTWARE VERSIONS

- 1. Connect the monochromator or spectrograph to the computer and power it up.
- In the Windows Start menu, click on Control Panel, and then select Program and Features. This shows a list of all software currently installed on the system, including the version numbers. Select and uninstall Mono Utility version x.x.x and National Instrument Software. Uninstallation will take approximately 10 minutes total.

~~~~						• ×
🔾 🔾 🗟 🖡 Control Panel 🕨	All Control Panel Items		•	Search Pr	ograms and Features	Q
File Edit View Tools Help						
Control Panel Home View installed updates Turn Windows features on or	Uninstall or change a program To uninstall a program, select it from the list and then	click Uninstall, Change, or Repai				
off	Organize 🔻 Uninstall				8==	• 🕡
Install a program from the network	Name	Publisher	Installed On	Size	Version	-
	🕅 McAfee VirusScan Enterprise	McAfee, Inc.	11/4/2014	94.9 MB	8.8.04001	
	Microsoft .NET Framework 4.5.1	Microsoft Corporation	4/24/2014	38.8 MB	4.5.50938	
	Microsoft Conferencing Add-in for Microsoft Office	Microsoft Corporation	4/24/2014	26.2 MB	8.0.6362.149	
	🔄 Microsoft Office Communicator 2005	Microsoft Corporation	4/24/2014	10.4 MB	1.0.559.0	
	Microsoft Office Live Meeting 2007	Microsoft Corporation	4/24/2014	52.1 MB	8.0.6362.149	
	S Microsoft Office Professional Plus 2010	Microsoft Corporation	11/6/2014		14.0.7015.1000	
	Microsoft redistributable runtime DLLs VS2005 SP1(x86)	SAP	4/24/2014	4.28 MB	8.0.50727.4053	
	Microsoft redistributable runtime DLLs VS2008 SP1(x86)	SAP AG	4/24/2014	8.89 MB	9.0	
	Microsoft redistributable runtime DLLs VS2010 SP1 (x	SAP	4/24/2014	10.3 MB	10.0.40219.1	
	🗇 Microsoft Silverlight	Microsoft Corporation	11/4/2014	22.6 MB	5.0.61118.0	
	Microsoft Visual C++ 2005 Redistributable	Microsoft Corporation	11/4/2014	338 KB	8.0.59193	
	Microsoft Visual C++ 2005 Redistributable (x64)	Microsoft Corporation	11/4/2014	620 KB	8.0.59192	
	Mono Utility 4.7.0	Newport Corporation	11/20/2014	2.67 MB	4.7.0	
	MSXML 4.0 SP2 (KB973688)	Microsoft Corporation	11/6/2014	1.33 MB	4.20.9876.0	
	🌾 National Instruments Software	National Instruments	11/20/2014			

NOTE: Removing National Instruments software requires user interaction to select all NI programs as displayed under the "Products" tab. After selecting all products, click "Remove".

😹 National Instruments Software		
Products Patches NI I/O Trace 3.1.0 NI LabWindows/CVI Shared Run-Time Er NI Measurement & Automation Explorer		Modify Change which application features are installed. Displays the Select Features dialog, which lets you configure individual features.
NI PXI Platform Services 3.2.3 NI PXI Platform Services 3.2.3 Configurati NI System Configuration Runtime 5.5.0 NI-488.2 3.1.1	ų,	Repair Reinstall missing or corrupt files, registry keys, and shortcuts. Preferences stored in the registry may be reset to default values.
NI-Serial 4.0 NI-VISA 5.4.0	$\times$	Remove Remove product from this computer.

Close

3. If the instrument is connected by a USB cable to the computer, go to the Windows Device Manager. Open the Universal Serial Bus controllers category. Right click "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 click OK. Refresh the Device Manager to ensure the e "Newport/Oriel Cornerstone Monochromator" driver was removed.

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

Contraction of the local division of the loc				23
😋 🔵 🗢 🚺 🕨 Computer 🕨 OS (C:) 🕨 Win	✓ Search	<ul> <li>✓ ✓</li> <li>Search drivers</li> </ul>		
Organize ▼		8==	- 🔟 (	?
★ Favorites ■ Desktop	Name imaproxy.sys image ntfs.sys	Date modified 7715/2009 4:12 PIVI 1/23/2014 6:18 PM	Type Storne SYS File	
Recent Places	<ul> <li>null.sys</li> <li>NV_AGP.SYS</li> <li>nvraid.sys</li> </ul>	7/13/2009 4:11 PM 7/13/2009 6:20 PM 8/18/2012 7:15 AM	SYS File SYS File SYS File	
🥽 Libraries 🖹 Documents ✔ Music	<ul> <li>nvstor.sys</li> <li>nwifi.sys</li> <li>o2flash.exe</li> </ul>	8/18/2012 7:15 AM 7/13/2009 4:52 PM 2/10/2010 5:50 PM	SYS File SYS File Application	
든 Pictures 📔 Videos	© o2mdfw7.sys © O2MDRw7.sys	1/4/2011 1:44 PM 1/4/2011 2:41 PM 2/22/2011 2:50 PM	SYS File SYS File	
Nonegroup	<ul> <li>obci1394.sys</li> <li>oriel_ftir.sys</li> </ul>	7/13/2009 4:51 PM 8/14/2014 5:31 PM	SYS File SYS File	
S (C:)	oriel_usb.sys     pacer.sys	12/31/2013 12:05 7/13/2009 4:54 PM	SYS File	
🗣 Network	parport.sys     partngr.sys	7/13/2009 4:45 PM 8/18/2012 7:15 AM	SYS File SYS File	
	parvom.sys     PBADRV.sys	8/18/2012 5:47 AM	SYS File	۴
oriel_usb.sys Date modified: 12/31 SYS File Size: 48.6 K	/2013 12:05 PM Date created: 12/31/2013 B	12:05 PM		

- 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, it was 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 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.

Newport Corporation proudly serves customers across Canada, Europe, Asia and the United States through numerous international subsidiaries and sales offices worldwide. Every year, the Newport Resource catalog is hailed as the premier sourcebook for those in need of advanced technology products and services. It is available by mail request or through Newport's website. The website is where one will find product updates, interactive demonstrations, specification charts and more.

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

Newport - Oriel Instruments 1791 Deere Avenue Irvine, CA 92606 USA

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

Fax: 949-253-1680

Sales: <u>oriel.sales@newport.com</u> Technical assistance: <u>oriel.tech@newport.com</u> Repair Service: <u>rma.service@newport.com</u>

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 Oriel's website: <u>http://www.newport.com/oriel</u>.

#### 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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Newport Corporation 1791 Deere Avenue Irvine, CA, 92606 USA