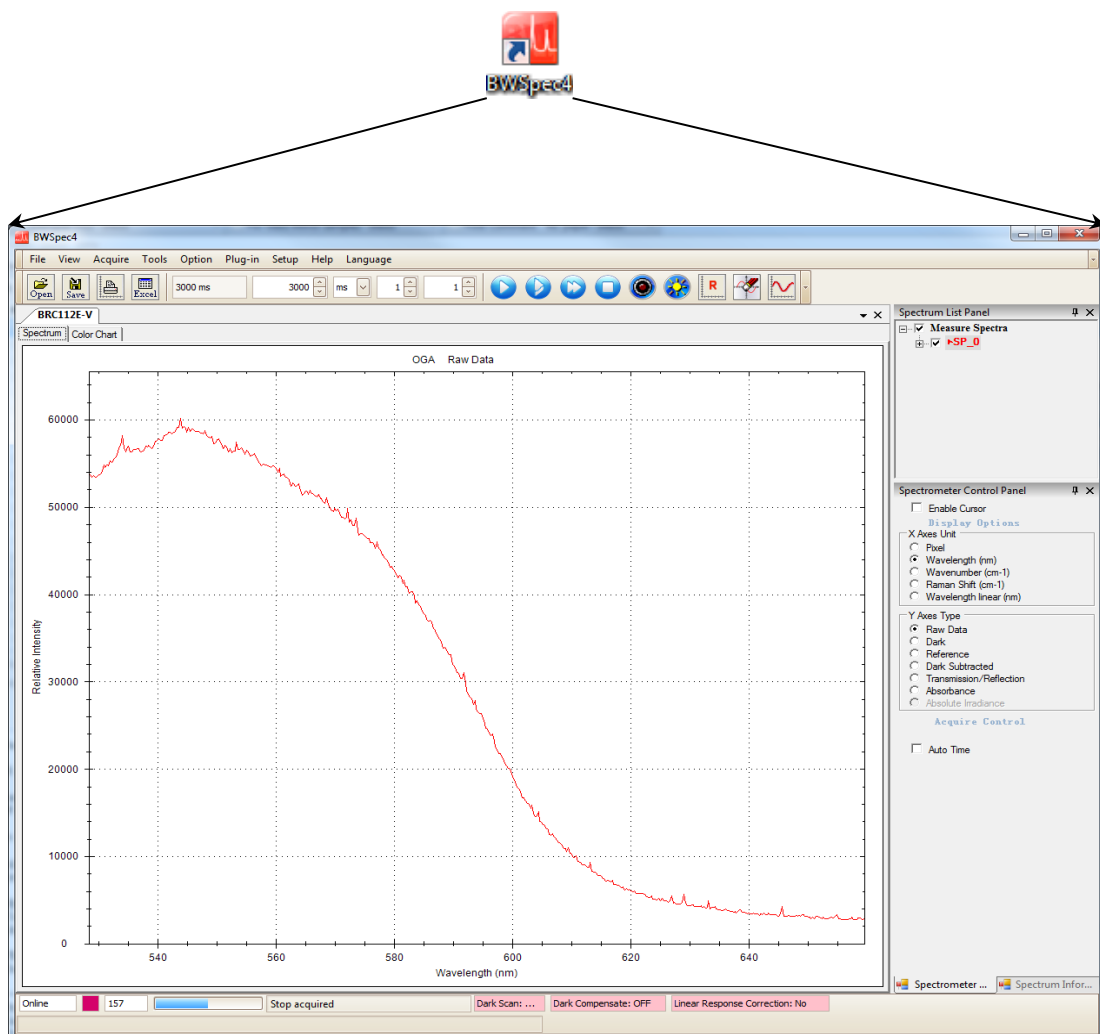




BWSpec™ 4.15 Software and Hardware Installation Guide

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1. Introduction

These instructions will guide you through the software installation of the BWSpec software and the driver/hardware installation of your spectrometer onto your Windows-based computer.

This manual is designed for BWSpec v4.15_8 or greater.

2. Supported Operating Systems

Windows 10* (32 bit & 64 bit)

Windows 11 64 bit

***NOTE:** Although the above operating systems do not include Windows XP, Windows 7, Windows 8 / 8.1 and Windows Server, BWSpec software may run on these Windows version but with no performance insurance. None of these versions except listed above has been tested. For installation on these Windows versions please contact BWTEK product team before purchase and service team before installation.

Some screenshots below indicate the 32-Bit software and 64-Bit software versions are being installed. The same windows apply for both Bit operating systems versions, except where noted.

3. Minimum System Requirements

Meets or exceeds the System Requirements for your PC's Operating System respectively

Processor: 1.5GHz or faster

RAM: 4GB or more

Hard disk space: 500MB available or more*

* The requirements are for normal use and do not include resource intensive features like Burst Mode

** Additional hard disk space may be required to store generated data by the application.

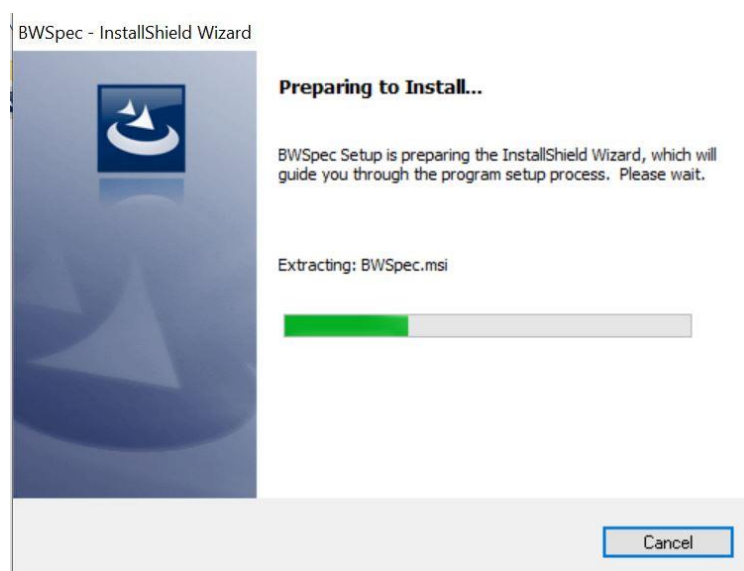
4. Prerequisites

Internet access is not required for automatic installation of .Net Framework.

.Net Framework 4.8 or higher is required.

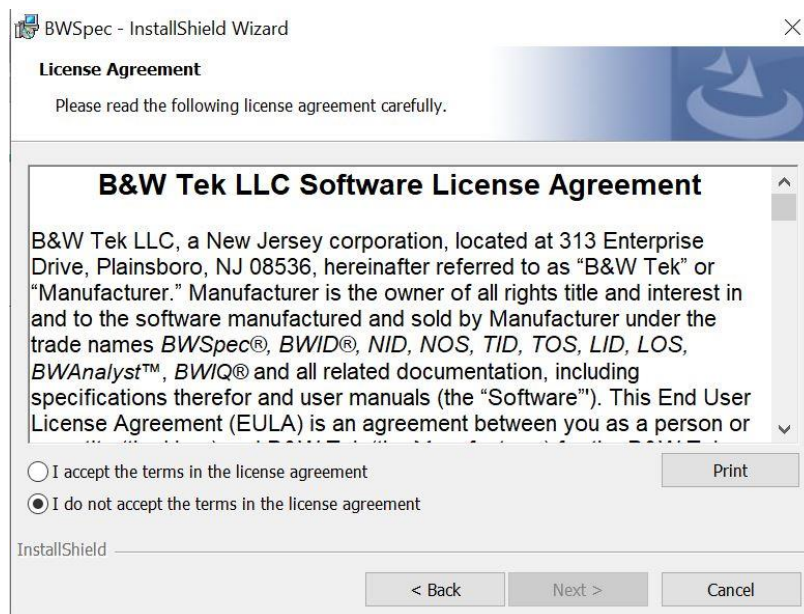
5. Software Installation

- **For computers with installed BWSpec, it is highly recommended to uninstall the existing one and execute the following steps:**
 - To uninstall: Go to Control Panel > Programs and Features. Select BWSpec and select Uninstall.
- Locate BWSpec software installation package and copy the entire package to local computer. **Installation through network is not recommended and success is not guaranteed;**
- Locate proper setup.exe from either 32bit or 64bit subfolder, double left click to start the installation process.
- After software installation open/run the BWSpec program.
- Installation steps:

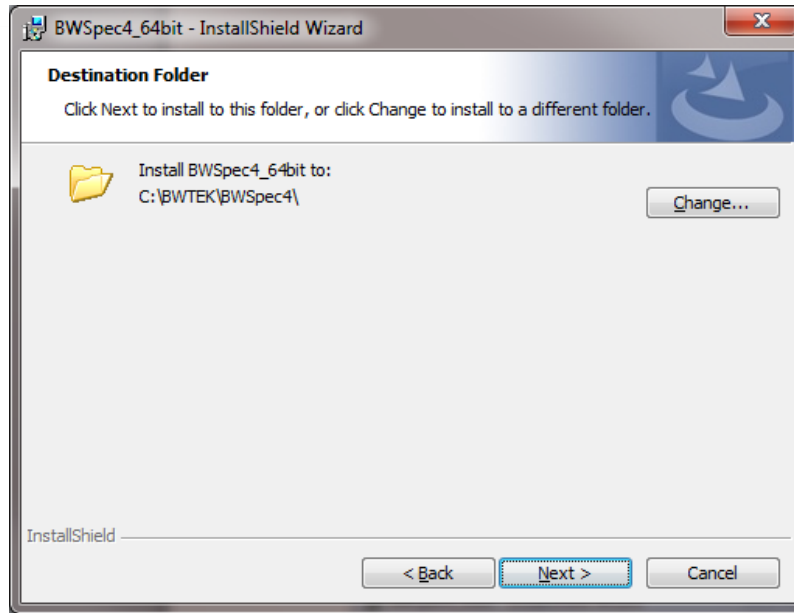




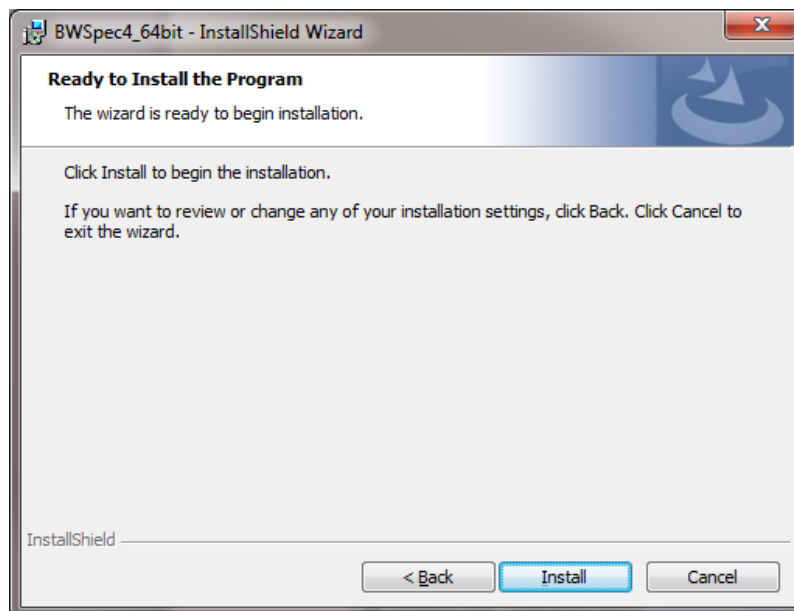
Click “Next” to continue.



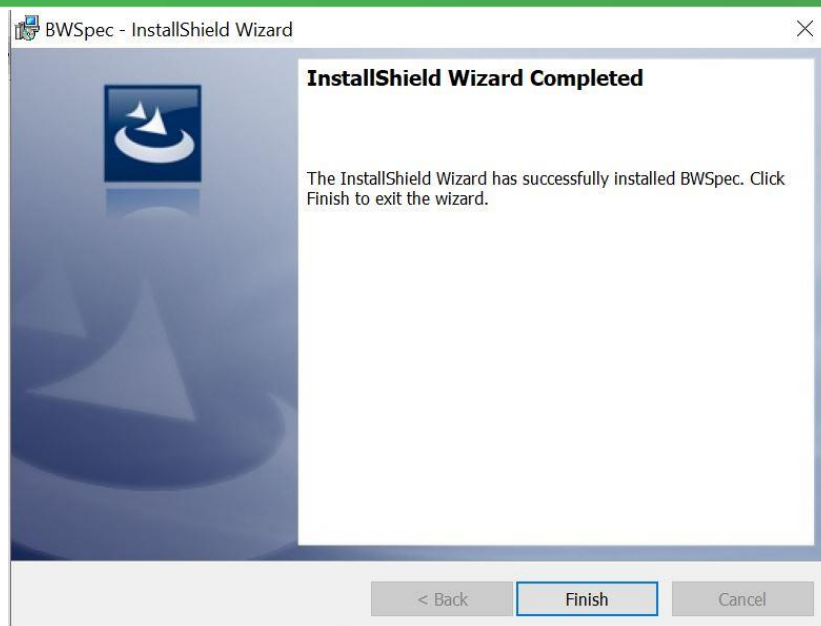
Read the license agreement and select, “I accept the terms in the license agreement” to continue with installation.



Click “Next” to continue.



Click “Install”.



Installation is completed. Click “Finish”

6. Driver Installation

Below there are several different installation guides for 32-Bit OS, 64-Bit OS, USB 2.0 and USB 3.0. Normally the drivers will install automatically when the unit is powered on and plugged into the USB slot. If the drivers do not automatically install a manual driver installation may be attempted.

Find and follow the appropriate installation guide for your computer and spectrometer hardware.

If you are not sure of your computers settings or capabilities, check with your IT Department.

Definitions:

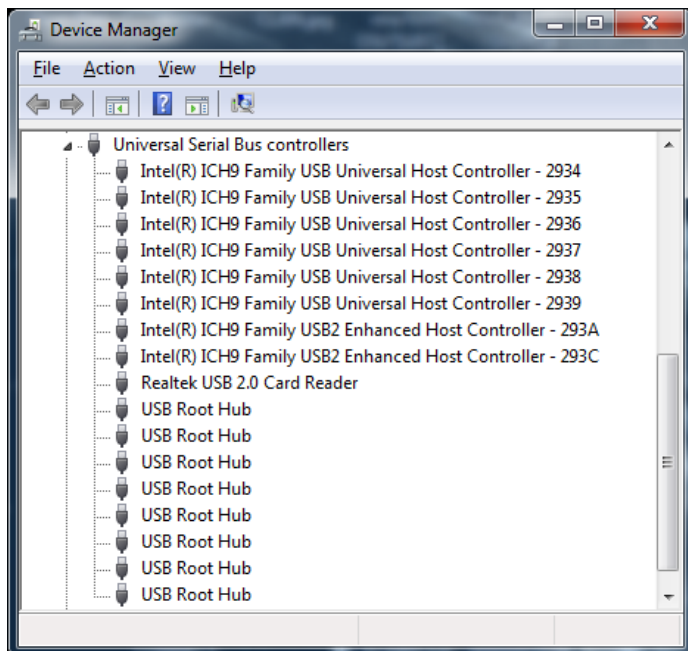
Spectrometers which have USB 3.0 capabilities we refer to as ‘USB 3.0’

Spectrometers which have only USB 1.1/2.0 capabilities will be referred to as ‘USB 2.0’ spectrometers.

Open Device Manager

- In the Search Bar type **Device Manager** and click Enter.
- **Or** Press ‘Windows Key + R’, in the ‘Run’ window type: **mmc devmgmt.msc**, and Press OK
- The Device Manager window will open
- In the Device Manager window expand the “Universal Serial Bus controllers” [USB] section.
- Plug the spectrometer or Raman unit USB cable into the computer and power on the unit

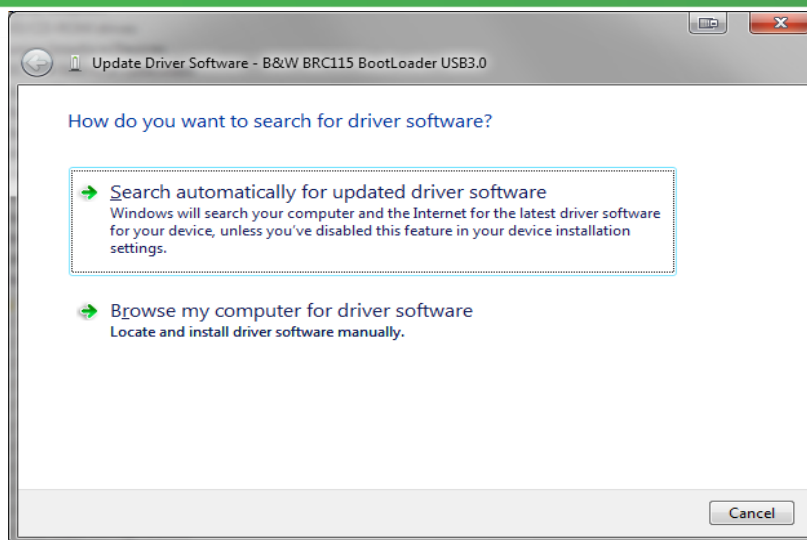
(if applicable).



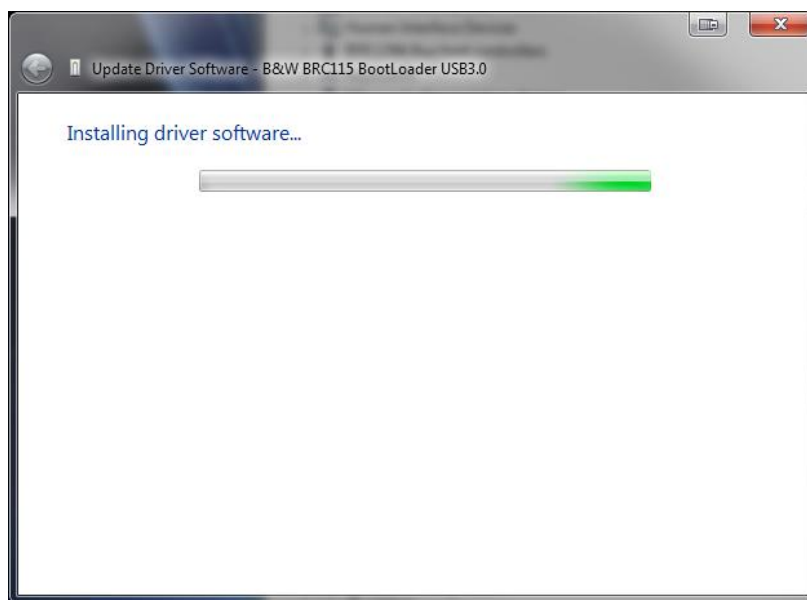
Manual Installation

If your driver installation was unsuccessful, you may attempt to manually install the drivers. For more assistance feel free to contact our customer support team at bwtek.com/support/.

- Right Click on “Unknown Device” and select “Update Driver Software...”
- Search Options:

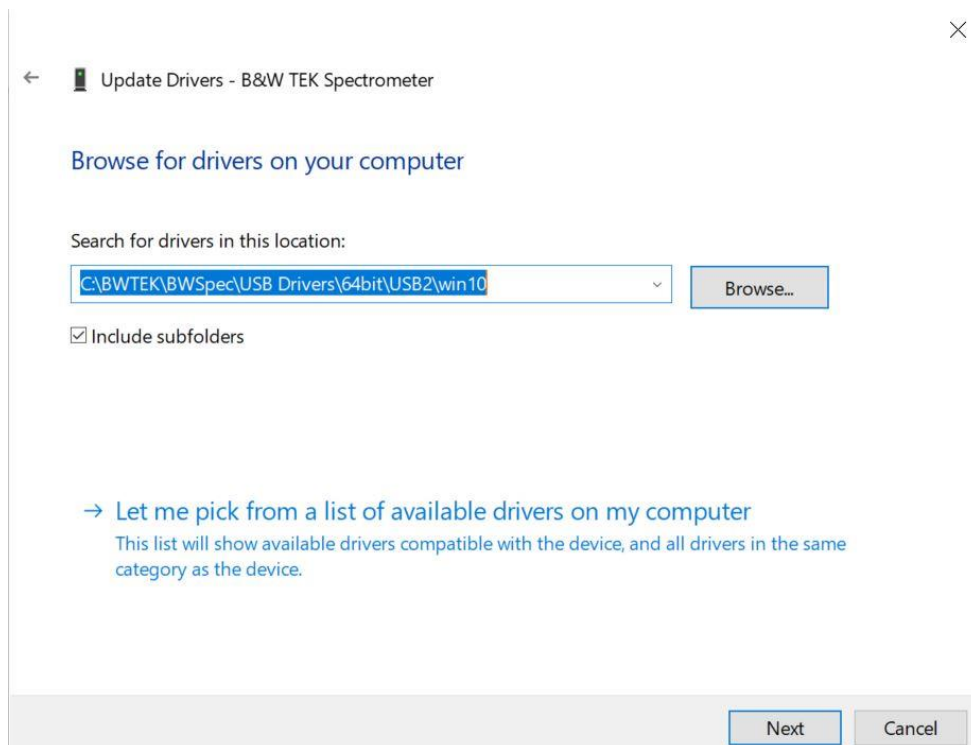


- Select “Search automatically for updated driver software”

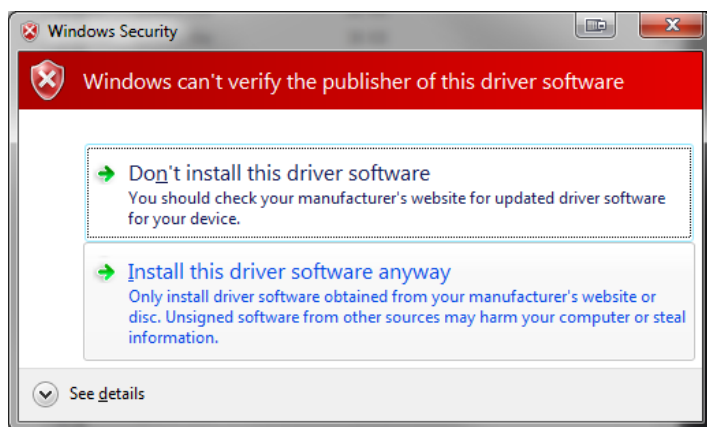


- If “Search automatically for updated driver software” was unsuccessful, select “Browse my computer for driver software” and select this location:
C:\BWTEK\BWSpec\USB Drivers
 - In the USB Drivers folder, select the sub folders for 32bit or 64bit depending on your computer, the sub folder USB2, and the sub folder for your windows version.
 - **Windows 11 users, please select the Windows 10 folder.**
 - For example on a 64 bit Windows 10 computer, the pathway would be:
C:\BWTEK\BWSpec4\USB Drivers\64bit\USB2\win10.

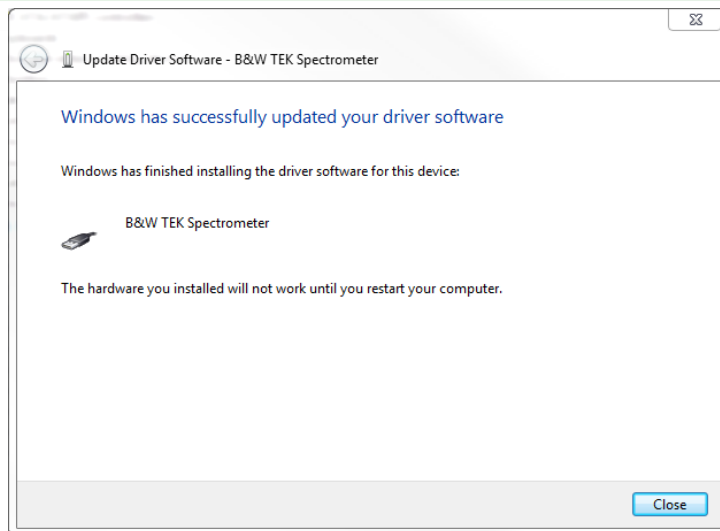
- Warning! Be sure to select the path that applies to your computer's settings!



- Click “Next”
- Installation will begin
- You may see a Windows Security Prompt:



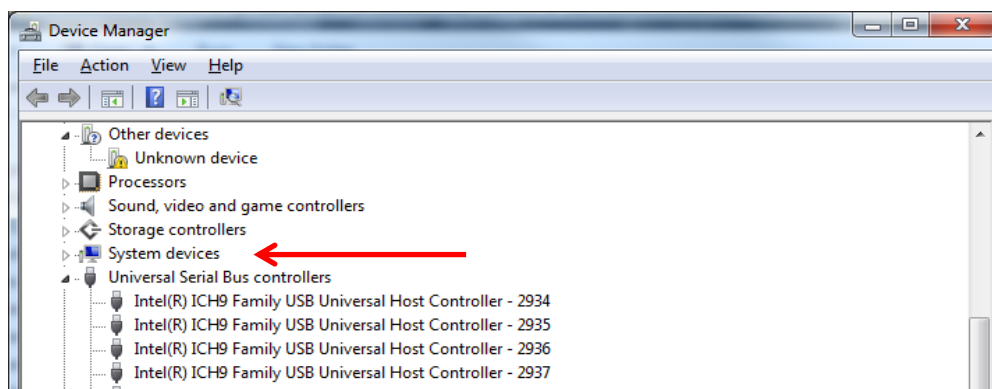
- Select “Install this driver software anyway”
- Driver will install successfully



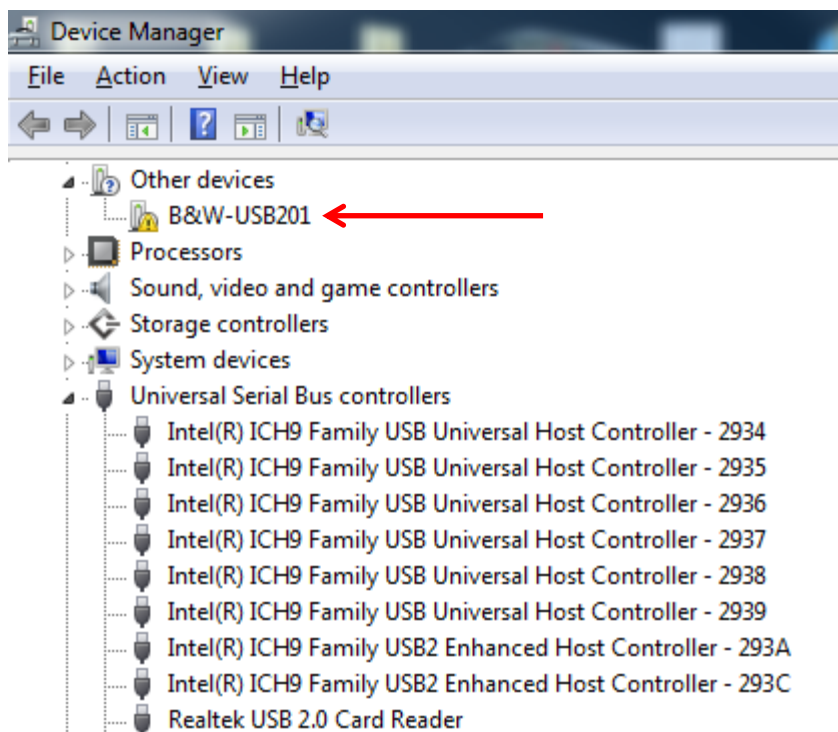
- Click "Close"

USB 2.0 Spectrometer Hardware Driver Installation for 32-Bit OS and 64-Bit OS

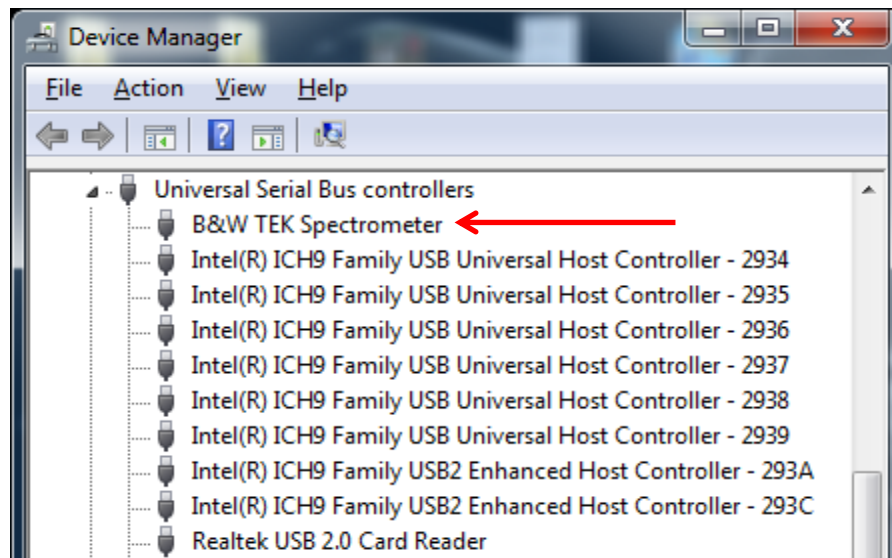
- If your spectrometer has a Power Supply, properly connect to an outlet and the spectrometer.
 - Connect the USB 2.0 Cable to any USB Port on your computer and then to your spectrometer.
- The spectrometer will first show up as an 'Unknown device'



After about 30 seconds the 'Unknown device' will change to 'B&W-USB201' automatically.



After about 30 seconds the 'B&W-USB201' will change to 'B&W TEK Spectrometer' automatically.



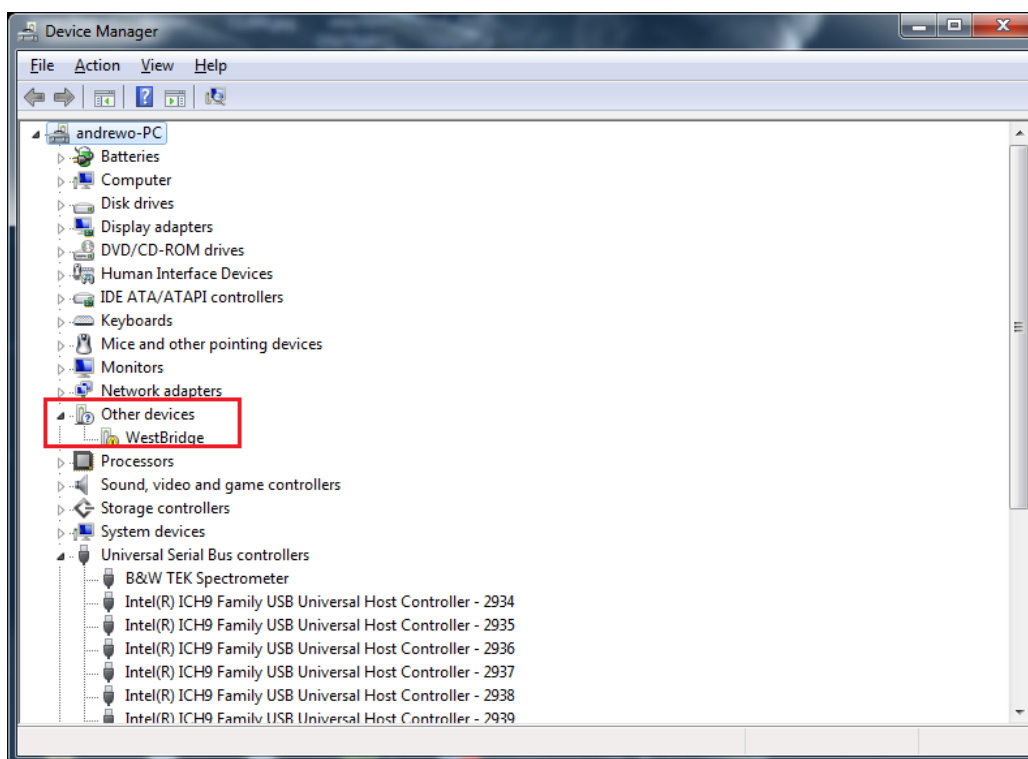
You are now ready to Open BWSpec 4 and run the spectrometer.

USB 3.0* Spectrometer Hardware Installation

- If your spectrometer has a Power Supply, properly connect to an outlet and the spectrometer.
Connect the USB 3.0 Cable to any USB Port on your computer and then to your spectrometer.

*The USB Port on the PC does **Not** need to be a USB 3.0 port for the spectrometer to operate.

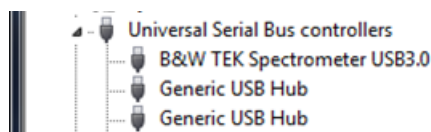
Using less than a USB 3.0 port will simply reduce the transfer speed between the spectrometer and PC.



- After about 30 seconds the “WestBridge” driver will appear in the Device Manager.
- After about 30 seconds the “WestBridge” will change to “B&W BTC665N BootLoader USB3.0” or “B&W BTC655N BootLoader USB3.0” or “B&W BRC115 BootLoader USB3.0” or similar and will then appear under USB Controllers in the Device Manager.



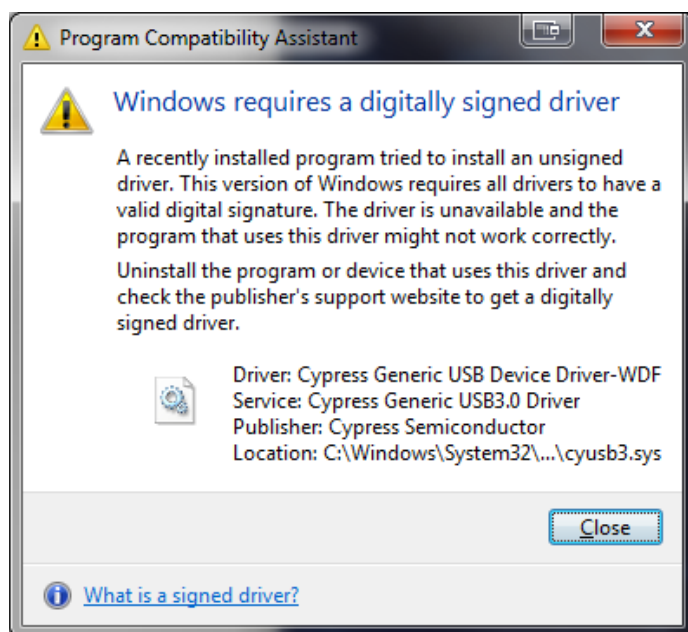
- After about 30 seconds, “B&W (model number) BootLoader USB3.0” will change into “B&W TEK Spectrometer USB3.0” under USB Controllers.



You are now ready to Open BWSpec4 and run the spectrometer.

For certain versions of Windows 8/8.1/10, there are incompatibilities with the “Digital Driver Signatures”. By disabling this “feature” you can correctly install the spectrometer unit’s drivers. Apply these steps after you have properly installed the BWSpec4 software, and changed the Compatibility Mode to Windows 7 in [Section 4.1.2](#). Your computer may restart during this procedure. Please save all your work and close any open programs or applications.

- You may also receive the following “Program Compatibility Assistant” message concerning an unsigned driver:



- Click “Close”.
- Unplug spectrometer unit from PC
- Perform a Swipe action on your screen/touchscreen from the right side to the left to bring up the “Charms Bar”. Go to Settings and choose “Change PC Settings”