

SPECTECH

UCS 30

Universal Computer
Spectrometer (USB)

Quick Start Guide

April 2008

IMPORTANT NOTE

Software for this spectrometer should be installed before it is connected and powered on. If you have already connected the **UCS 30** to your computer, do not power on until software installation is complete.

Spectrum Techniques, LLC.

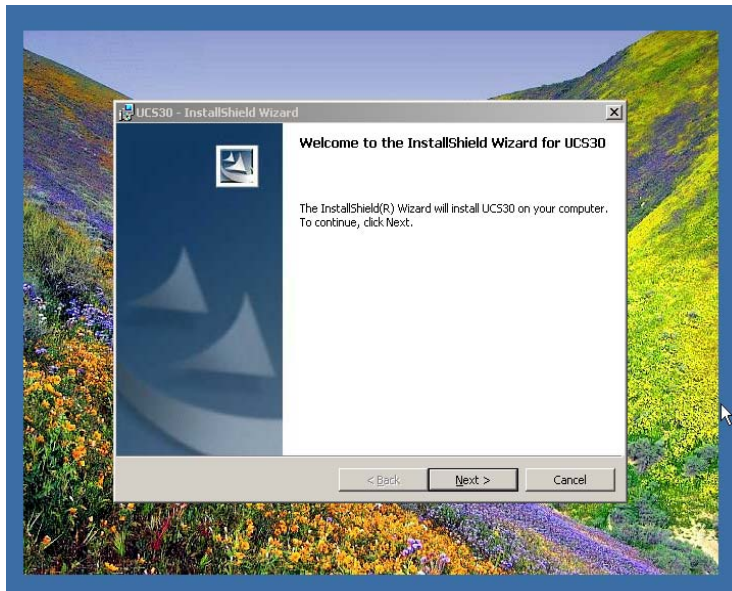
Oak Ridge, Tennessee USA.

INTRODUCTION

The purpose of this guide is to provide you with assistance to quickly install, setup, and begin using your **UCS 30** Universal Computer Spectrometer (USB).

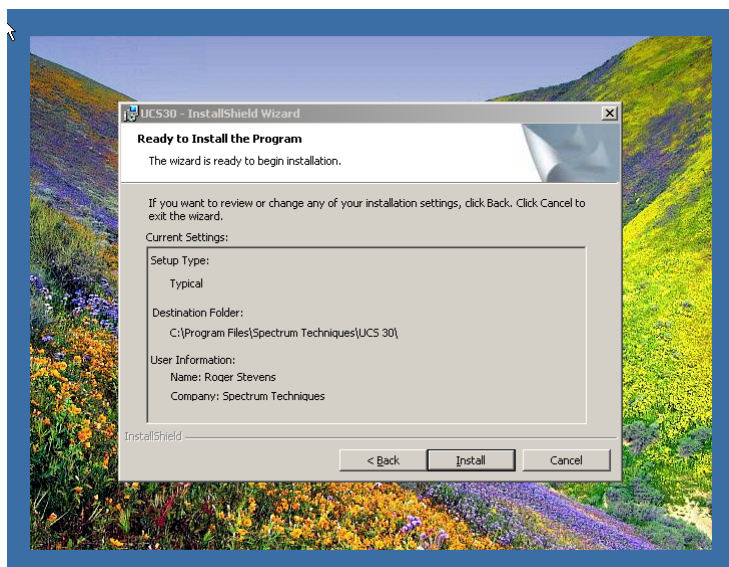
INSTALL SOFTWARE

Install the software CD shipped with your **UCS 30** system into your CD ROM drive. The auto-start feature will open the InstallShield Wizard. Click **Next** to continue.



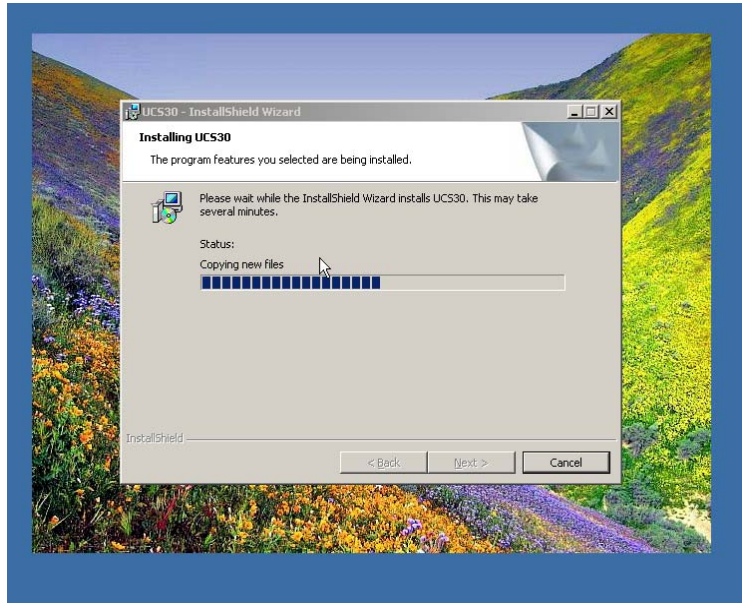
Verify your user information and the default destination folder **C:\Program Files\Spectrum Techniques\UCS30**.

You might want to note this Program installation path in case you want to store spectra in this location.



Click **I**nstall to begin program installation if you are satisfied with your entries.

The installation will begin. You can monitor the install progress by watching the status bar. The install should be reasonably quick and will conclude by displaying the **InstallShield Wizard Completed** screen. Click **F**inish to exit the install wizard.



Note the **UCS 30** icon that has been installed on your desktop.

Using your Windows Explorer, examine the contents of **C:\Program Files\Spectrum Techniques\UCS30**. This file should contain a **Drivers** folder, an **Examples** folder, and several **UCS 30** files including the **UCS 30 Manual** in Adobe PDF format. You may want to create a shortcut to the manual and place it on your desktop for quick reference.

Remove the installation CD from the CD ROM drive and store it in a safe place.

SYSTEM SETUP

Connect your detector to the **UCS 30**. Connect the detector high voltage cable to the **MHV** connector on the **UCS 30** labeled **POS HIGH VOLTAGE**.

Connect the **BNC** signal cable from the detector to the **BNC** connector on the **UCS 30** labeled **INPUT**.

NOTE: If you are using a detector with a preamplifier included, connect to the **INPUT BNC** connector and set the **UCS 30 MODE** to **PHA (Amp In)**.

If you are using a detector with a preamplifier AND external amplifier, connect the detector signal cable to the **INPUT BNC** connector on the **UCS 30** and set the **MODE** to **PHA (Direct In)**.

Turn on the power to the **UCS 30**.

Your PC should detect the presence of a new hardware device and may automatically install the required software. If the software does not load automatically, follow the system prompts. Remember, the location of the software is **C:\Program Files\Spectrum Techniques\UCS30**.

After you specify location of your software, you may see the following screen, or similar:



Select **Continue Anyway** and finish the installation.

Start the **UCS 30** program by double-clicking on the **UCS 30** icon on your desktop.

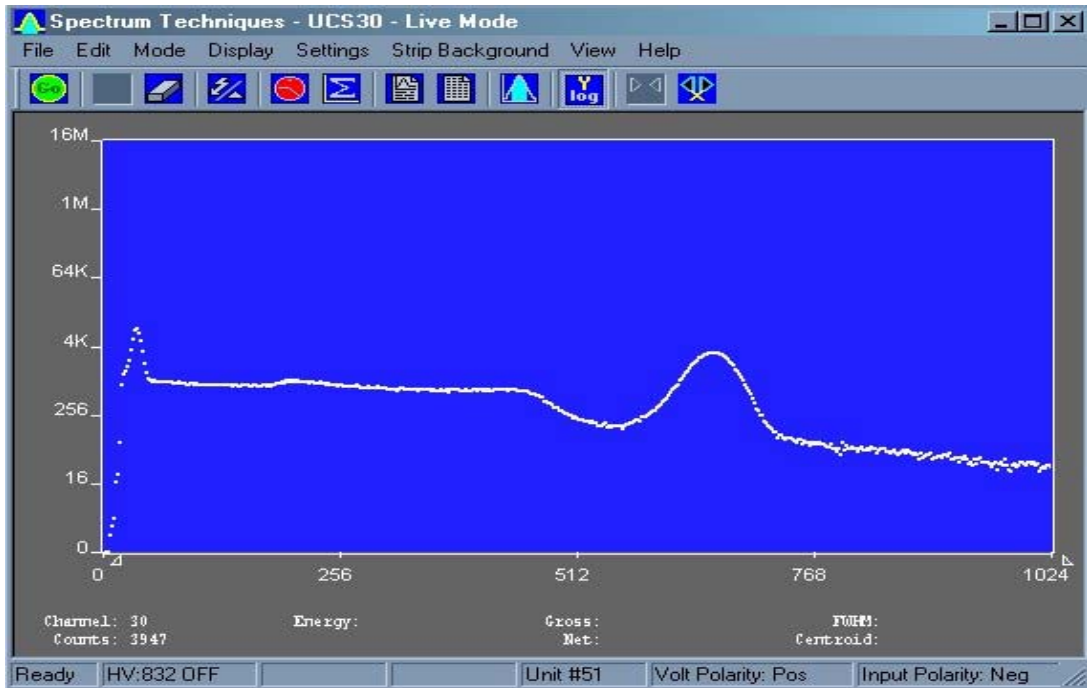
Place a Cs-137 calibration source on your detector.

Next, open the **Settings** pull-down menu. Click on **Energy Calibrate**, then select **Auto Calibrate**. The system will now auto calibrate. This process will take several minutes. Once completed, the message box will display the current settings for high voltage, coarse and fine gain. The screen is now energy calibrated from 0 to 1024 KeV.

Erase spectrum using the **eraser** icon.

Click the **Go** button and take a spectrum until you obtain a well defined peak at the 662 keV line of Cesium. **Stop** the acquisition.

Set the ROI by clicking on **Settings, ROIs**, then **Set ROI**. Place the cursor over the lower channel you wish to start the ROI with, hold down the left mouse key and drag the cursor to the desired upper channel for the ROI. Release the mouse button and the ROI will be set and highlighted. When the cursor is placed anywhere in the ROI, the total counts in the ROI will be displayed.



Now set a preset count. You can choose **Time**, then **Real Time** or **Live Time**, or **Integral Counts**. Let's use **Integral Counts** since we have set a Region of Interest (ROI). Select **Settings, Presets**, then **Integral Counts**. In the box, enter a number for the desired level of counts in the ROI that will stop data acquisition. (Note: You must first have your cursor set in your ROI.)

Click on **File** and **Save Setup**, enter a file name and save. You can use this count protocol whenever you wish by selecting **File, Load Setup** and selecting this file.

USING YOUR SYSTEM

This guide is intended to help you setup and begin using your **UCS 30** as quickly and easily as possible. The more you use the system, the more you will become familiar with its operation.

More detail on operation is provided in the **UCS 30** user's manual.

Contact us if you still have questions, comments or problems pertaining to your system or its operation.

Spectrum Techniques
 (865) 482-9937
<http://www.spectrumtechniques.com>