

Quick Installation Guide Spectrometer Systems (V3)

General:

In case of any uncertainty please check first with your supplier. Detailed information on the MS systems can be found on the tec5USA InfoCD under *Documentations/Spectrometer Systems*.

The InfoCD reflects the status of the software tools when shipped. Latest versions can be found on www.tec5.com/support.

Important Steps:

1. Unpacking: Please unpack carefully and visually inspect all items. The tec5USA InfoCD and/or the tec5 Information CD should be included (at least with your first purchase from us). This CD contains all relevant documentation and software tools. If there is no CD included, please contact your supplier.

We consider it a wise idea to keep the original packaging material. In the case you have to move the equipment, especially through a third party, it helps to protect your precious instrument from being damaged.

2. Cables: Make sure you have all the necessary cables (typically power supply and interface cable).

3. Interfaces / Connections: In case of a PCI interface, the related board has to be inserted into the host computer first. Make sure the power to your computer and to the system is turned off when inserting the PCI board. In case of a USB interface, it is preferable to use a USB high-speed interface on your host computer. Then connect the system to the board by either using the PCI or the USB cable.

4. Drivers: The drivers are located on the Info CD under *Software & Drivers/Operation Electronics drivers*. Normally, the Operating System searches for the driver automatically, so make sure that the t5U InfoCD (or the related CD from tec5) is inserted. The system has to be on when installing the USB board driver.

5. LabVIEW Environment: The MS Pro software is based on LabVIEW. In case you don't have LabVIEW on your PC you have to install the LV RunTime Engine. MS Pro alerts you in case it cannot find an appropriate software environment. You can find the related tool in the subdirectory LVRT. After installing the LV RunTime Engine continue with the MS Pro installation.

6. License Code: All software except for the AdminTool requires a license code which has to be acquired from your supplier. In case you have not received one so far, please check with your supplier directly. The license code itself controls what versions and add-on modules are installed.

Note: All software tools require functioning hardware connected to the computer.

7. MultiSpec Pro Installation: The MultiSpec Pro software as well as all add-ons can be found on the InfoCD under Software Tools & Drivers/ Software Tools/ MultiSpecPro. Make sure the hardware driver is installed first (see 4.)

8. Hardware Wizard: This wizard is part of the MS Pro software and shows up at the end of the installation procedure. The hardware wizard leads you through the installation / preparation of the available hardware. In case you are not certain about what components you have to install go for "typical" or contact your distributor for instructions. Never try to install hardware which is not available. The wizard detects the hardware attached automatically.

9. Stored Coefficients: The hardware wizard allows you to make changes to the calibration coefficients of the integrated spectrometer module. However, don't make any changes unless you definitely know why you want to do so. All settings done by the wizard can be changed later by the MS Pro Options menu.

Please note that the coefficients entered by the factory are the C' coefficients, i.e. the pixel index runs from $N = 1$ to N_{\max} , the number of pixels of the array in use. In case you write your own application software and, therefore, your own fit procedure make sure to follow this procedure. Alternatively, you may enter the C coefficients, which are listed on the Zeiss test certificate shipped with the hardware.

10. Dark Current: Whenever you start the MS Pro software, the system tries to do a dark current measurement first. Depending on the set parameters for integration time and averaging this may take a while, please be patient. The default settings directly after installations are 30ms and 1, so it will not take that long - by default the over-sampling factor for dark current measurements is set to 4, i.e. the averaging of the dark current spectrum acquisition is set to 4 times the set averaging factor for sample measurements. This provides higher accuracy for the data set permanently used for background correction.

11. Light Sources: The new series of MultiSpec light source cassettes do not have a power control switch. The power status is set by default to power on. To change the power status, please use the MS Pro software (under Options/Light Sources) or the AdminTool test software. The button "set as power on status" allows you to save the actual status to the EEPROM of the light source cassette. This status is used when the system is powered on at later times.

The D₂ light source warm-up period is approx. 1min. Be patient and wait until the D₂ control LED is on (see front panel of light source cassette).

12. Log on: You have to log on before you can use the MS Pro software. Use *Administrator* as the user and *admin* for the password - as long as you haven't chosen your own. Even without logging on the system will start performing measurements, if that was the last status before switching off the system.

13. Use: For details on using the MS Pro software, please refer to the manual, which can be found on the InfoCD under Documentations/Software.