



Leica Application Suite  
LAS V3.3

**LAS Installation Guide**

*Leica*

MICROSYSTEMS



# LAS Installation Guide

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# LAS Installation Guide

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Please quote the title and date of the manual. These can be found on the previous page.

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# Chapter 1

## **LAS Installation Guide**





This document describes how to install the *Leica Application Suite*: Please read it before installing your copy of this software.

It also acts as a supplement to the User Guide that is on the LAS installation disk.

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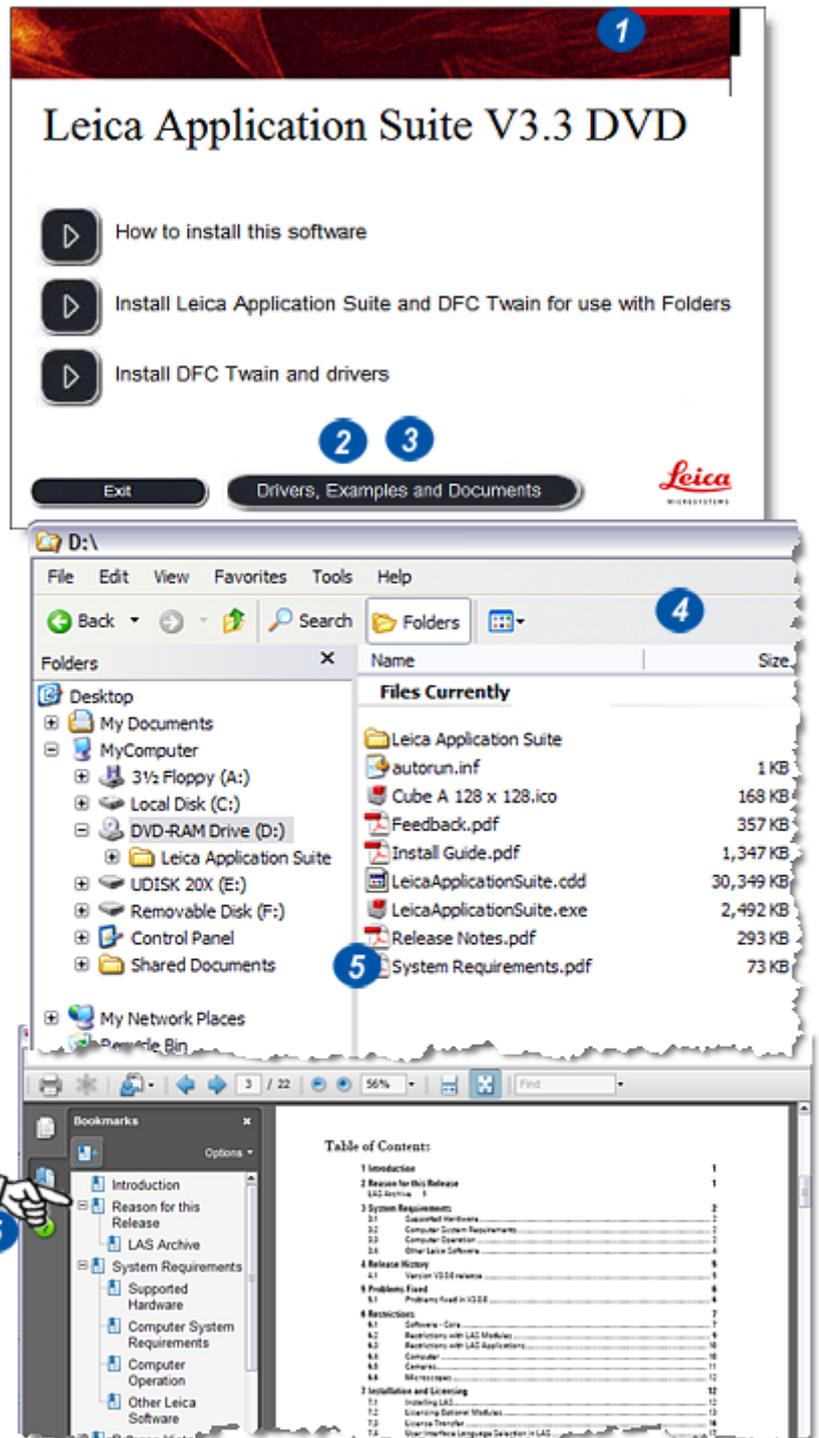


Leica Application Suite Version is supplied on DVD.

Please read the System Requirements and Release Notes before starting the installation. Adobe Acrobat Reader must be installed on the computer to display the files. If it is not, the program is available on the DVD from the Documents and Drivers section..

- 1: Insert the DVD drive. The start up screen should appear automatically.
- 2: Click on the Drivers, Examples and Documents button and then *System Requirements for Using LAS* button which will start Adobe Acrobat Reader and display the file.
- 3: Click on the *Release Notes* button and again, Acrobat will start and display the file.
- 4: If the DVD does not start up automatically, double-click the DVD drive in Windows Explorer.
- 5: From the list of files on the DVD, double click either *System Requirements.pdf* or *Release Notes.pdf* to display the files.

If LAS Power Mosaic is to be used, please see the installation information in this document. LAS Power Mosaic cannot run until the appropriate installation is complete. This must include the installation and configuring of the Oasis drivers.



The LAS software to control a microscope and Leica DFC camera, can be used in accordance with the software license. Optional modules may be used for a 60-day evaluation period but after that they must be licensed for continued use.

If Leica AF6000 software is also to be used then it must be installed before LAS. If Leica AF6000 is subsequently re-installed, LAS must also be re-installed afterward.

### Preparation:

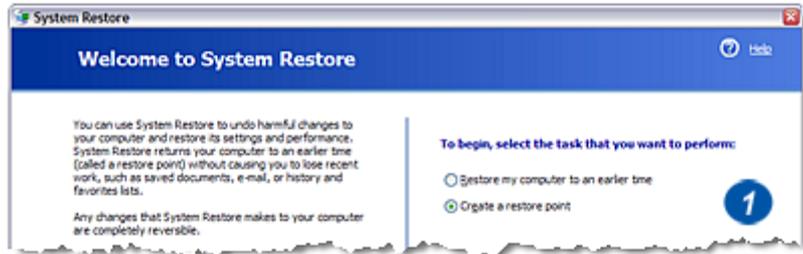
Ensure the computer conforms to the System Requirements. If Windows Vista is the operating system, make sure the Windows Experience Index is 3.5 or higher.

### System Restore: (1)

Create a System Restore Point using the wizard. For guidance read the instructions in Windows Help.

### Languages:

Windows installs different languages for its user interface by means of the Multi-lingual pack. Check that the version of Windows you are using supports the multi-lingual pack for the language you require for Japanese and Chinese. Make sure you have installed the language you require before you install LAS. The language selected for Windows operation determines the user interface language used by LAS. If LAS supports the Windows selected language, LAS will use this. If LAS does not support this language, the user interface will be displayed in English.



Leica DFC Twain camera software is installed for the language being used by Windows at the time of LAS installation. If the language is subsequently changed LAS will change accordingly, but the camera software will not. It must be re-installed with the appropriate language selected.

**Please note that if you are to install Leica AF6000 software on the same PC, then it must be installed before LAS. If you later reinstall Leica AF6000, it will be necessary to reinstall LAS afterwards.**

The installation procedure assumes that all the software components are installed on the first hard disk drive (i.e. C: ) and for this release of LAS the main application is installed there also. The destination directory cannot be changed.

The computer must be started with a user having 'Administrator' privileges to be able to install software or change the camera on Windows XP.

LAS V3.2 or earlier versions do not have to be uninstalled before installing LAS V3.3 but this is recommended. After installing LAS V3.3, it is not possible to revert to LAS V3.2.

**Before installing LAS V3.3, we recommend that a backup is made of any existing archives using the LAS V3.2 Backup tool.**

**Do not delete archives before installing V3.3 as they can only be imported into V3.3 if they are left in an unchanged state.**

Installation for *Windows XP* and *Vista* are treated separately as follows:

### Installation Steps: Windows XP only:

- Install the microscope following the instructions provided.
- Do NOT connect the interface cable between the microscope and the computer.
- Do NOT connect the FireWire cable to the Leica DFC camera until the software has been installed.
- Disconnect the computer from a network during installation to prevent accidental loading of drivers from the Internet if an incorrect option is chosen. All LAS microscope and camera drivers are on the supplied LAS DVD. Do not load any from the Internet.

*Continued...*

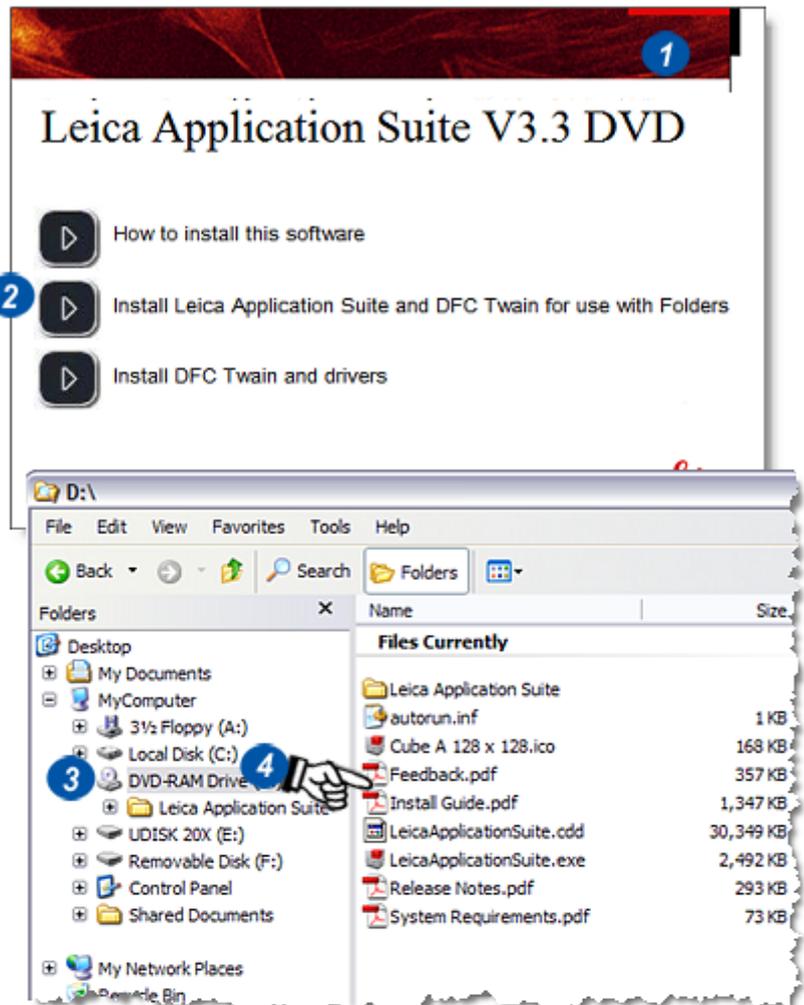
Close any other programs that are running. The best way of ensuring this is to re-boot the computer.

- 1: Place the DVD drive. Usually, the start up screen will appear automatically.
- 2: Click on the *Install Leica Application Suite and DFC Twain* button.
- 3: If the program does not start automatically, navigate to the DVD drive in Windows Explorer and double-click it.
- 4: From the list of files on the DVD, double-click the *LeicaApplicationSuite.exe* file and the start up screen will appear. Click on the *Install Leica Application Suite* button (2).

Follow the instructions that appear on screen. Normally it is only necessary to select the default options.

**Some required Windows components may be installed before LAS, typically .Net and DirectX. These can take several minutes so please be patient.**

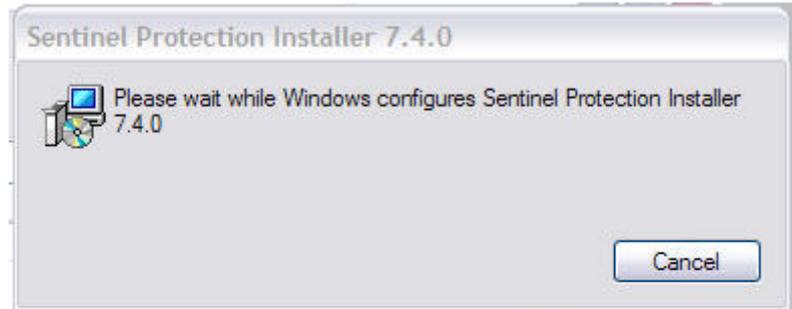
**After .Net has been installed, the PC must be rebooted. After the PC boot process is finished the LAS installation process must be restarted. Go back to Step 1 on this page. This time the .Net files are already loaded so the reboot will not occur and the installation will proceed.**



Please note that if you are installing LAS V3.3 on a PC that already has Leica MM AF installed, then the message shown may appear during installation.

Please ignore this advice as LAS V3.3 is compatible with the newer version of the Sentinel Protection software that is detected.

Do NOT remove the newer version, simply click OK and continue.



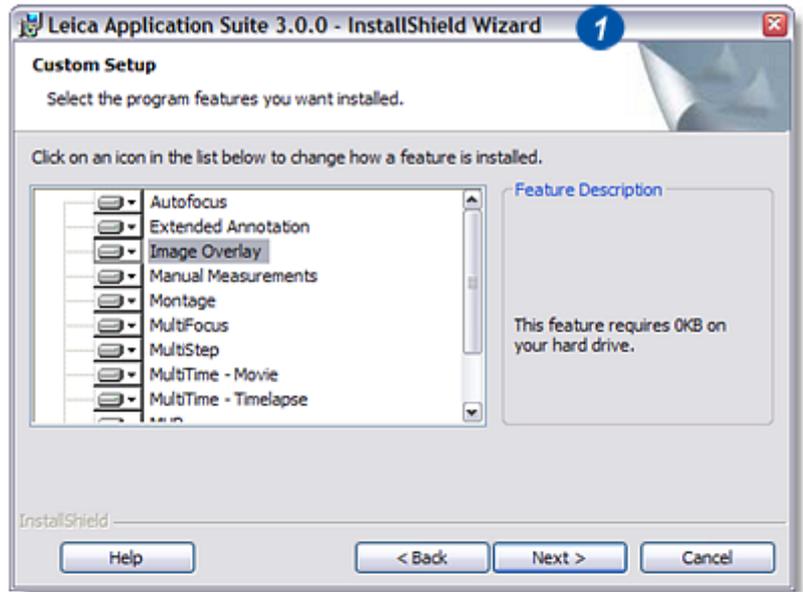
If Minimum Setup is selected during installation, no optional modules will be installed and LAS can be used in the LAS Core mode for use with LAS Image Explorer (Folders). This installation provides the simplest operation and do not require a license file.

If Custom Setup is selected during installation, the optional modules may be chosen individually. Select only those that are required immediately; others can be added later (1).

By default, the Leica DFC camera drivers are installed in the current operating system language. It is not necessary to specifically select 'Install DFC Drivers' from the start up screen. This option is provided for users who do not wish to install LAS but do want to use the cameras with another program.

Make sure that any Leica DFC camera is disconnected whilst installing the DFC Drivers. If the camera is connected, the installation may fail preventing image capture or colour loss.

To install Leica EZ4D first complete the LAS installation and then click *Install EZ4D* on the Documents and Drivers screen. Then follow the screen instructions.



If the LAS MultiTime Movie module is installed with Windows XP(SP2), it may be necessary to install a Microsoft Security Update. A warning appears (1) but do not reboot the system if asked to do so.

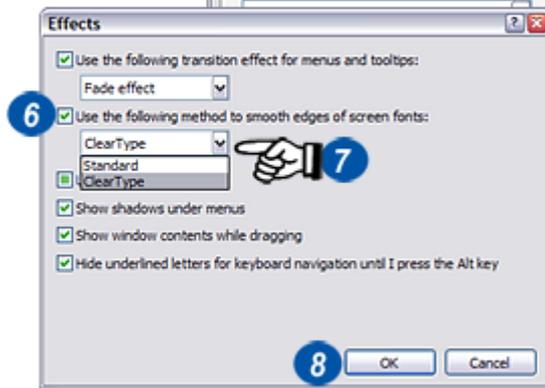
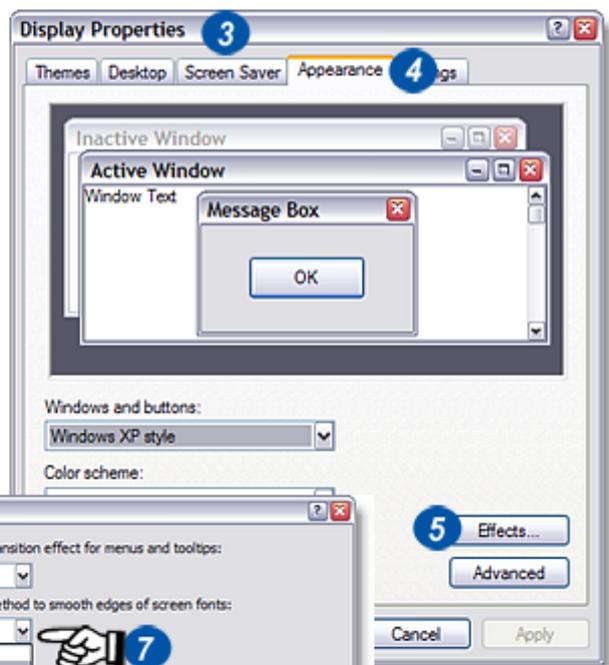
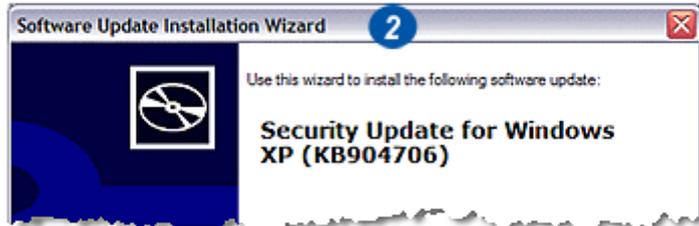
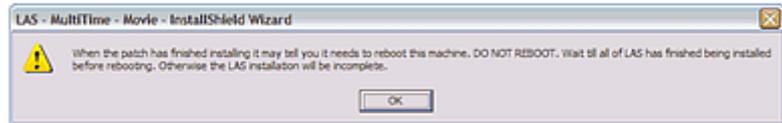
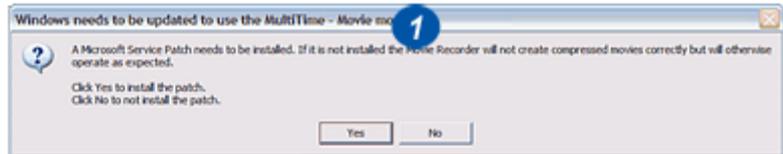
If the Security Update (2) is not available for the language of your Windows XP, then please download it from the Microsoft download centre. Find this by searching for the article KB904706.

See Release Notes under *Restrictions: MultiTime* for further advice.

When module installation is complete the start up screen appears again. Click on the *Exit* button to complete the installation.

The fonts used by LAS require the *Clear Type* option to be enabled. Right-click the computer Desktop and...

- 3: ...select *Properties* from the menu.
- 4: On the dialog select *Appearance* and then *Effects* (5).
- 6: Enable the *Use the following methods to smooth edges of screen fonts* check box.
- 7: Click on the arrow to the right of the list box and from the drop down select *Clear Type*.
- 8: Click *OK*. Restart the computer.



### Connecting the Camera and Microscope:

Connect the FireWire cable to the computer and the Leica DFC camera.

- 1: The first time a camera is used, the *Welcome to the Found New Hardware Wizard* will appear.
- 2: Select the *No, not this time* option to prevent connecting to the Internet to find a camera driver software.
- 3: Click *Next* and follow the instructions.

Connect the Leica microscope cable to the computer. The first time a USB interfaced microscope is used, the *Welcome to the Found New Hardware Wizard* will appear. Select the *No, not this time* option to prevent connecting to the Internet to find a camera driver software. Click *Next* and follow the instructions.

### Go to Selecting Hardware.



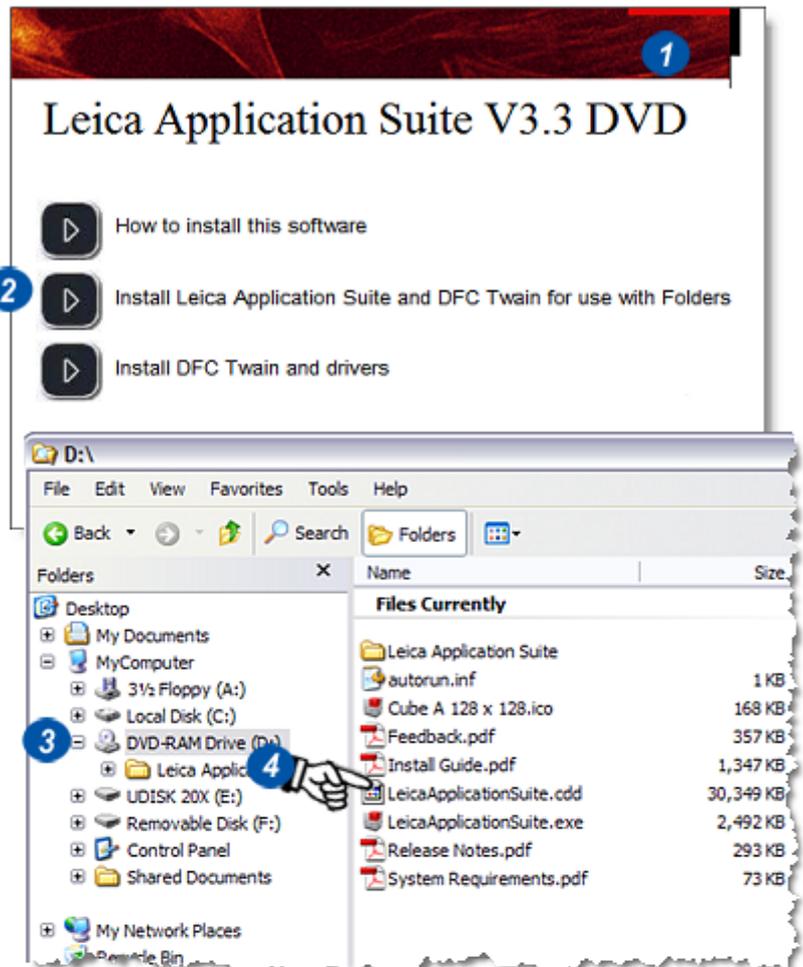
### Installation Steps: Windows Vista only:

Install the microscope following the instructions provided.

- Do NOT connect the interface cable between the microscope and the computer.
- Do NOT connect the FireWire cable to the Leica DFC camera until the software has been installed.
- Disconnect the computer from a network during installation to prevent accidental loading of drivers from the Internet if an incorrect option is chosen. All LAS microscope and camera drivers are on the supplied LAS DVD.

Close any other programs that are running. The best way of ensuring this is to re-boot the computer.

- 1: Place the LAS DVD in the drive. Usually, the start up screen will appear automatically.
- 2: Click on the *Install Leica Application Suite and DFC Twain* button.
- 3: If the program does not start automatically, navigate to the DVD drive in *Windows Explorer* and double-click it.
- 4: From the list of files on the DVD, double-click the *LeicaApplicationSuite.exe* file and the start up screen will appear. Click on the *Install Leica Application Suite* button (2).



The *Windows Vista* operating system includes enhanced security features. Extra confirmation dialogs occur during the installation and you must run LAS in Administrator Mode to modify its licence.

You must have full Windows Administrator privileges to install LAS software. In a corporate network environment, it may be necessary to obtain assistance from the customer's IT department.

After a short delay, the screen darkens and a Windows security dialog appears. This dialog blocks the system until it is dismissed, so it's not possible to provide a screenshot. The dialog is called User Account Control and warns An unidentified program wants access to your computer.

- Check that the program is called: **vcredist\_x86\_ENU.exe**  
...then select *Allow*.
- The User Account Control dialog appears again. Check the program concerned is: **Setup.exe**  
...then select *Allow*.

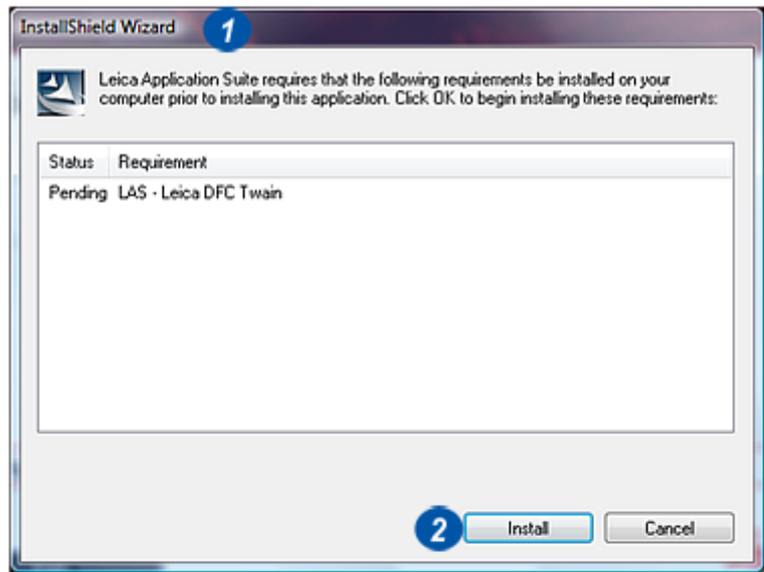
**1:** If DFC Twain is not installed, the dialog appears.

**2:** Click *Install*.

If Vista warns that it cannot verify the publisher of the driver software. Select *Install this driver anyway* and after it has installed click *Finish*.

Follow the instructions that appear on screen for the remainder of the installation. Normally it is only necessary to select the default options. Some required Windows components may be installed before LAS, typically .NET and DirectX.

**After .Net has been installed, the PC must be rebooted. After the PC boot process is finished the LAS installation process must be restarted. Go back to Step 1 on this page. This time the .Net files are already loaded so the reboot will not occur and the installation will proceed.**



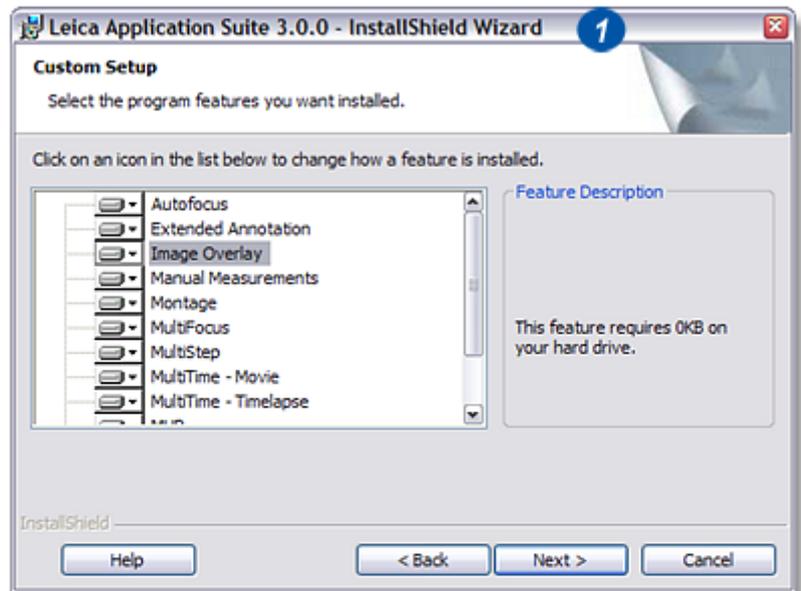
If Minimum Setup is selected during installation, no optional modules will be installed and LAS can be used in the LAS Core mode for use with LAS Image Explorer (Folders). This installation provides the simplest operation and do not require a license file.

If Custom Setup is selected during installation, the optional modules may be chosen individually. Select only those that are required immediately; others can be added later (1).

By default, the Leica DFC camera drivers are installed in the current operating system language. It is not necessary to specifically select 'Install DFC Drivers' from the start up screen. This option is provided for users who do not wish to install LAS but do want to use the cameras with another program.

Make sure that any Leica DFC camera is disconnected whilst installing the DFC Drivers. If the camera is connected, the installation may fail preventing image capture or colour loss.

**To install Leica EZ4D:** First complete the LAS installation and then click *Install EZ4D* on the Documents and Drivers screen. Then follow the screen instructions.



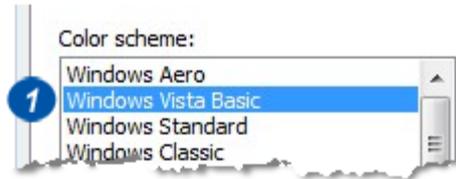
When module installation is complete the start up screen appears again. Click on the *Exit* button to complete the installation.

### Windows Vista Aero:

Aero is the type of graphics used by Vista. Some graphics cards do not perform as expected when Aero is running. For example the sliders bars do not update properly. If this is the case:

- 1: Use *Windows Vista Basic* graphics instead of Aero.

Restart the computer.



### Connecting the Camera and Microscope:

Connect the FireWire cable to the computer and the Leica DFC camera. Windows Vista recognises the camera immediately and there is no *New Hardware wizard*.

Connect the Leica microscope cable to the computer. The first time a USB interfaced microscope is used, the *Welcome to the Found New Hardware Wizard (1)* will appear.

**2:** Select the *No, not this time* option to prevent connecting to the Internet to find a camera driver software.

**3:** Click *Next* and follow the instructions.

**Go to Selecting Hardware in the next section.**



### Selecting Hardware:

The first time Leica Application Suite runs, the microscope and camera models and settings have to be set up and to do this it must be started from an account with Administrator privileges.



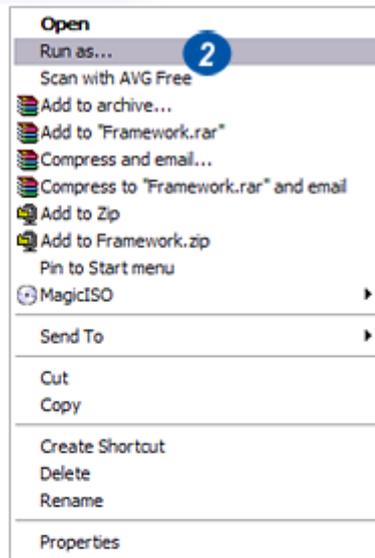
If a Desktop icon for LAS is not present, refer to the next page.

### Starting LAS: Windows XP:

If the current account has Administrator privileges, double-click the left mouse button on the Desktop icon created during the installation and LAS will start normally.

For Limited User accounts:

- 1: Right click the *LAS Desktop* icon.
- 2: Select *Run as...* from the drop down menu.
- 3: Select a user with Administrator privileges, enter the password and click **OK (4)**. LAS will start.

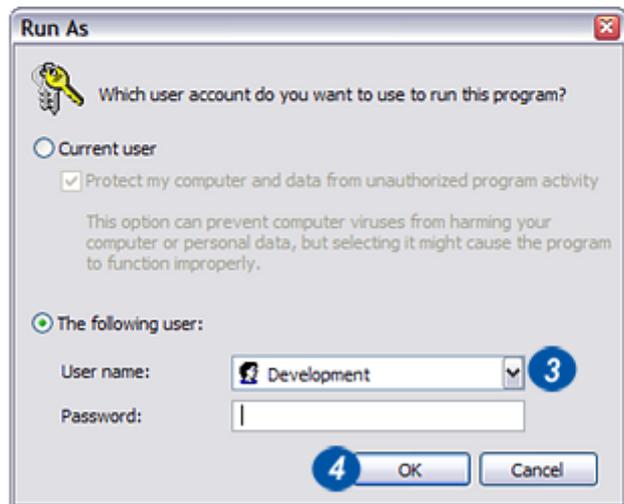


### Starting LAS: Windows Vista:

Double clicking the left mouse button on the Desktop icon will not launch LAS even if Administrator privileges are current, so for a first-time run:

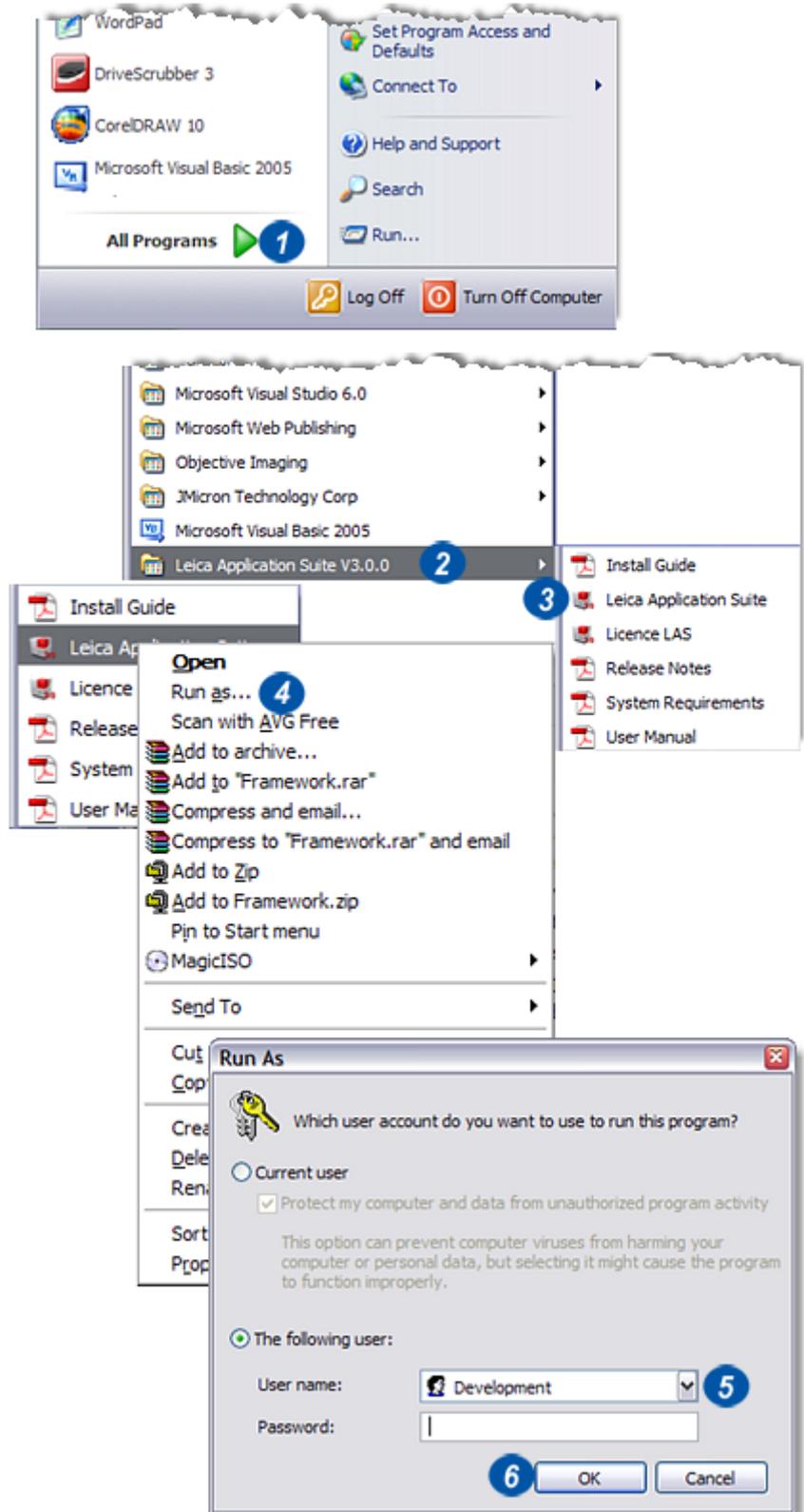
- 1: Right click the *LAS Desktop* icon.
- 2: Select *Run As Admin...* from the drop down menu.
- 3: Complete the Administrator credentials and click **OK (4)**. LAS will start.

*Continued...*



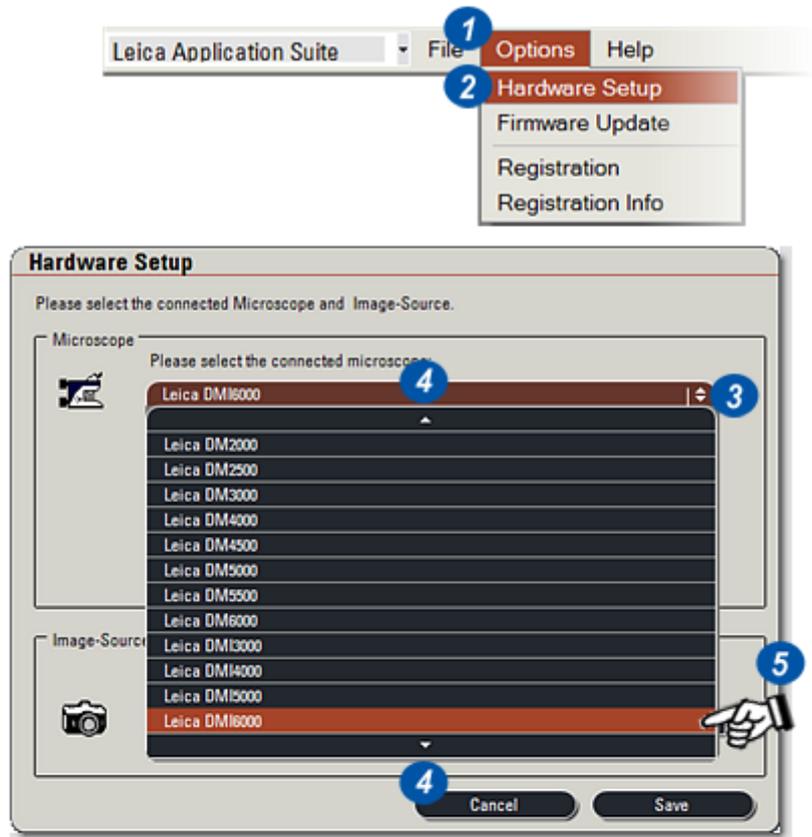
If a Desktop icon for LAS is not present, it can be launched from the computer program list. Administrator privileges are still required.

- 1: Position the cursor over the *Start>All Programs* button.
- 2: Navigate to the *Leica Application Suite V3* entry and position the cursor over it. The *Leica menu* appears.
- 3: Locate the *Leica Application Suite* item and right click it.
- 4: From the menu click to select *Run as...*
- 5: Complete the dialog, selecting a user with Administrator privileges. Click **OK (6)**. The program will run.



If you want to setup the microscope and camera, start LAS in the 'framework' or licensing mode. Do this by selecting License LAS from the Start menu group for LAS. In this mode you can change the Hardware Setup, make a microscope Firmware Update and perform registration tasks.

- 1: Select *Options* on the main header and...
- 2: ...from the drop down menu select *Hardware Setup* by clicking it.
- 3: Click on the arrows to the right of the Microscope window. The microscope selection list appears.
- 4: Use the up/down arrows to scroll through the list.
- 5: Click on the required microscope. The list will close and the microscope selected will appear in the window.



[Continued...](#)

The options and accessories available depend upon the microscope chosen. Automatic and motorised models will certainly have a computer connection option – in the example RS232 COM ports and USB (Universal Serial Bus) options are shown. The list should be checked against the microscope manual.

Some microscopes will have an *Action Logging* facility which can be viewed by:

1: Clicking on the arrow to the right of the microscope selection window. If *Logging* is not available the arrow will be appear dimmed.

2: Use the buttons on the Microscope Advanced Settings dialog to view or clear the log. Logging will occur only if the *Log Communication Traffic* checkbox is checked.

To select the connection type:

3: Click on the arrows to the right of the *Connection* window.

4: Use the up/down arrows to scroll through the list. Select an available connection by clicking it.

Selecting accessories:

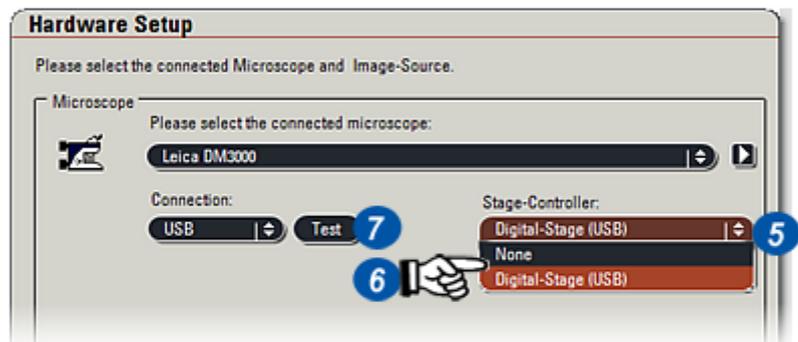
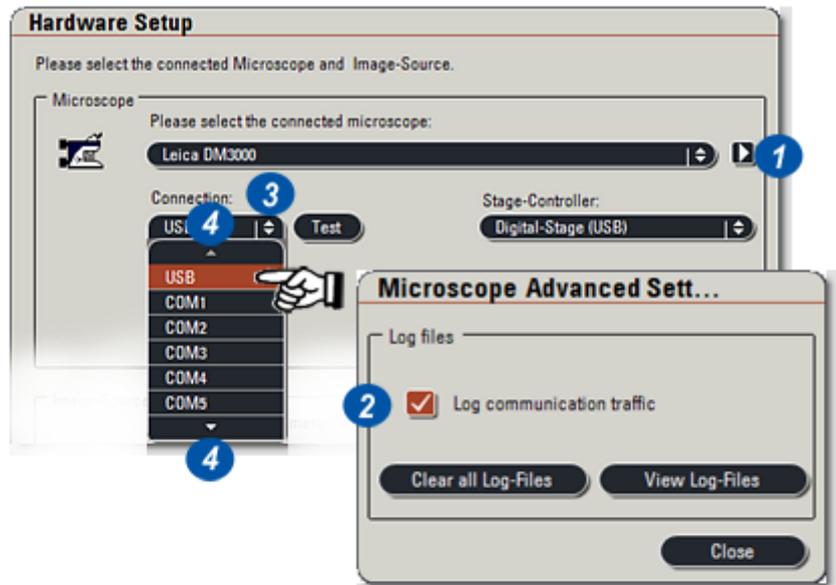
In this example a motorised stage is an option (although may not be fitted).

5: Click on the arrows to the right of the *Accessory (Stage-Controller)* window and from the list choose...

6: ...*None* if the accessory is not fitted or...

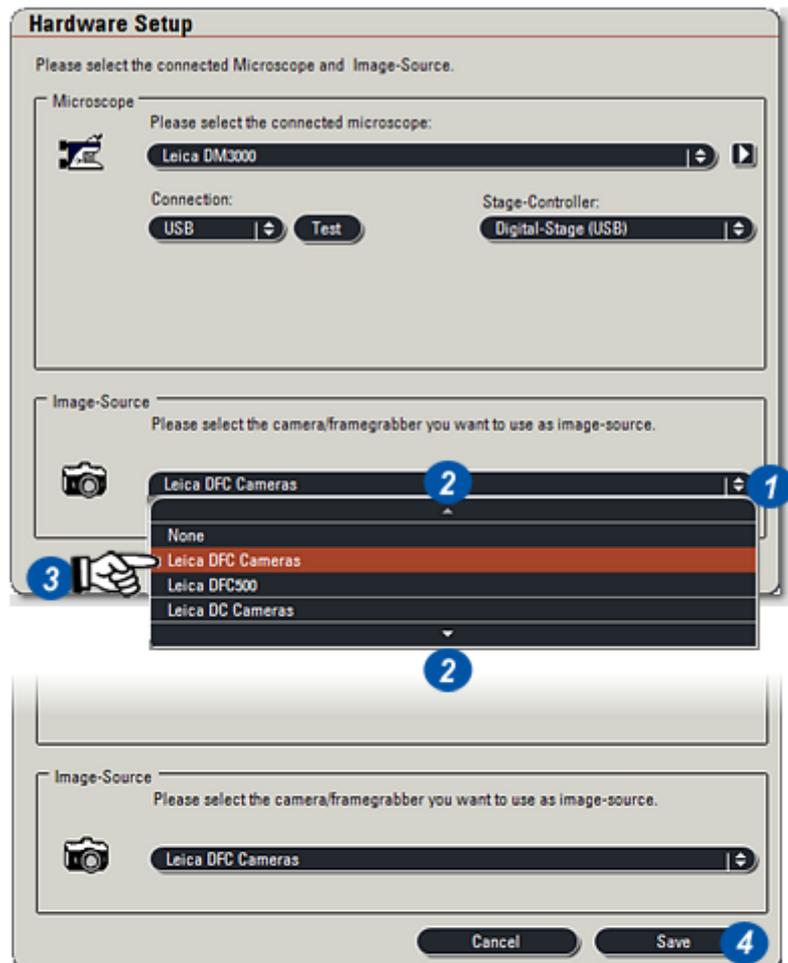
Select the appropriate accessory. Enabling other accessories may also reveal other options. Check the manual and the microscope's delivery manifest before making selections.

7: Click the *Test* button. This will perform a connection integrity test. Incorrect or faulty connections will result in an error message.



A few microscope models do not have a camera option so there will not be an image source (= camera) list. For those microscopes that may be fitted with a camera:

- 1: Click on the arrows to the right of the *Image Source* window.
- 2: Use the up/down arrows to scroll through the list.
- 3: If a camera is fitted to the microscope, find the model type on the list and click to select it. For microscopes without a camera, select the *Demo Camera* or *None* option.
- 4: Click *Save* to save the microscope and camera settings and exit.



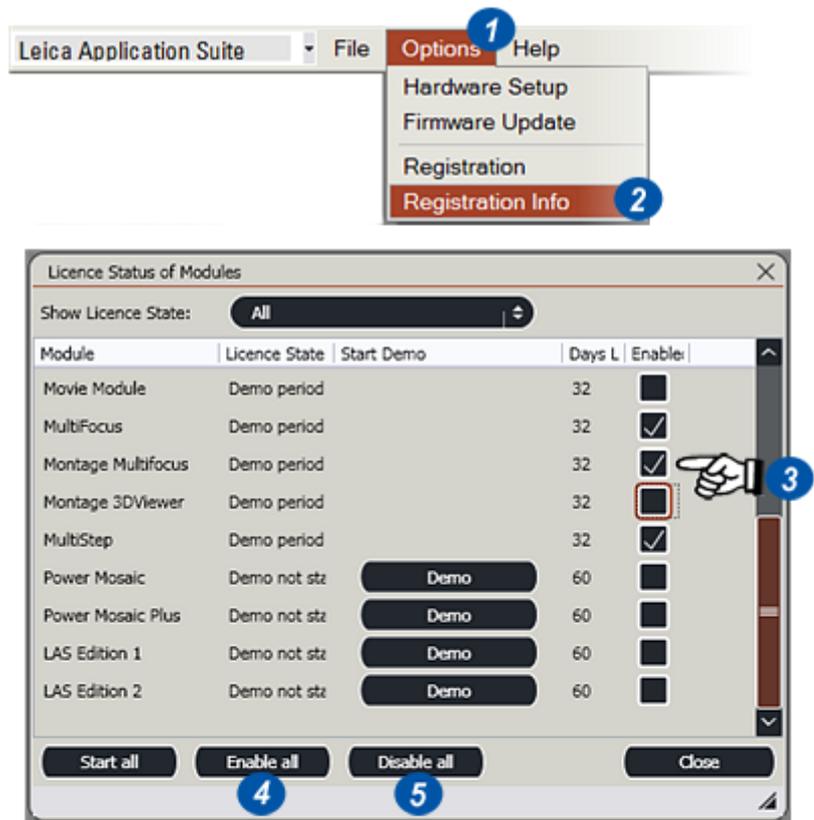
Optional Modules are available for a 60 day free evaluation period. After that a licence has to be purchased for their continued use.

**Do not apply for a license unless you have purchased any optional modules.**

When Leica Application Suite is installed most of the modules are also installed but remain disabled until either Demo mode is started and module(s) are enabled, or a module is purchased and licensed.

Optional modules are started in Demo mode by clicking the Demo button in the Start Demo column. Both licensed and demonstration modules can run together simultaneously.

The 60 day evaluation period begins as soon as a module is enabled in Demo mode and cannot be stopped by disabling the module. Demo mode may be deferred until the user is ready to evaluate the modules.



To start the evaluation period:

- 1: Click on *Options* on the tool bar.
- 2: From the drop down menu, choose *Registration Info*.
- 3: On the Licence Status dialog a check mark indicates those modules that are enabled. Click to enable or disable the required modules.
- 4: The *Enable All* button will enable all of the modules for Demo and (5) the *Disable All* button will clear all modules.

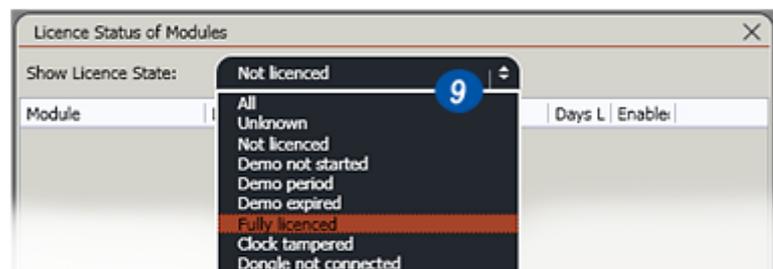
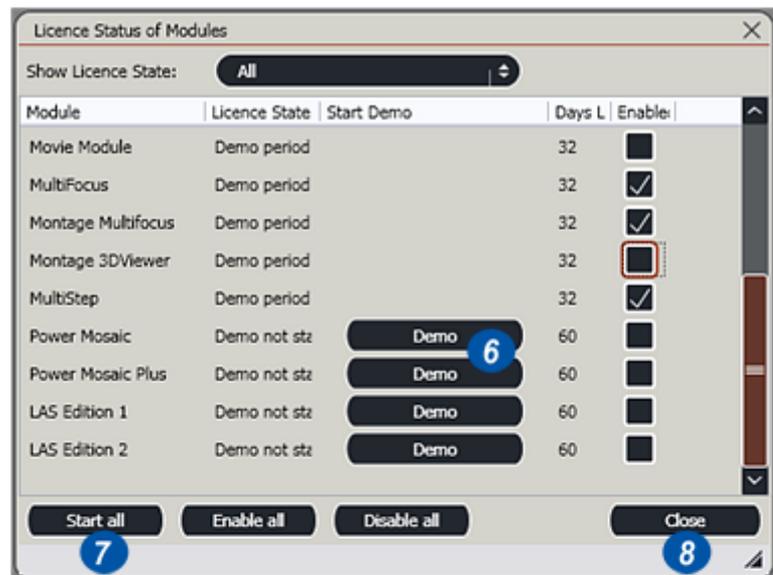
*Continued...*

**6:** To start a module in Demo mode, click the button in the Start Demo column. The enable/disable check box is automatically checked.

**7:** Clicking the *Start All* button will enable all of the modules and start the evaluation period. A confirmation warning is displayed because this action cannot be undone.

**8:** Click *Close*.

**9:** The *Status* dialog can be checked at any time. Use the drop down to select an appropriate status filter. With the modules selected the next step is to licence the Demo period.



With the required modules selected on the *Registration Info: Licence Status* dialog, the Demo licence has to be installed for the modules to become enabled and active:

**1:** Click on *Options* on the header bar and...

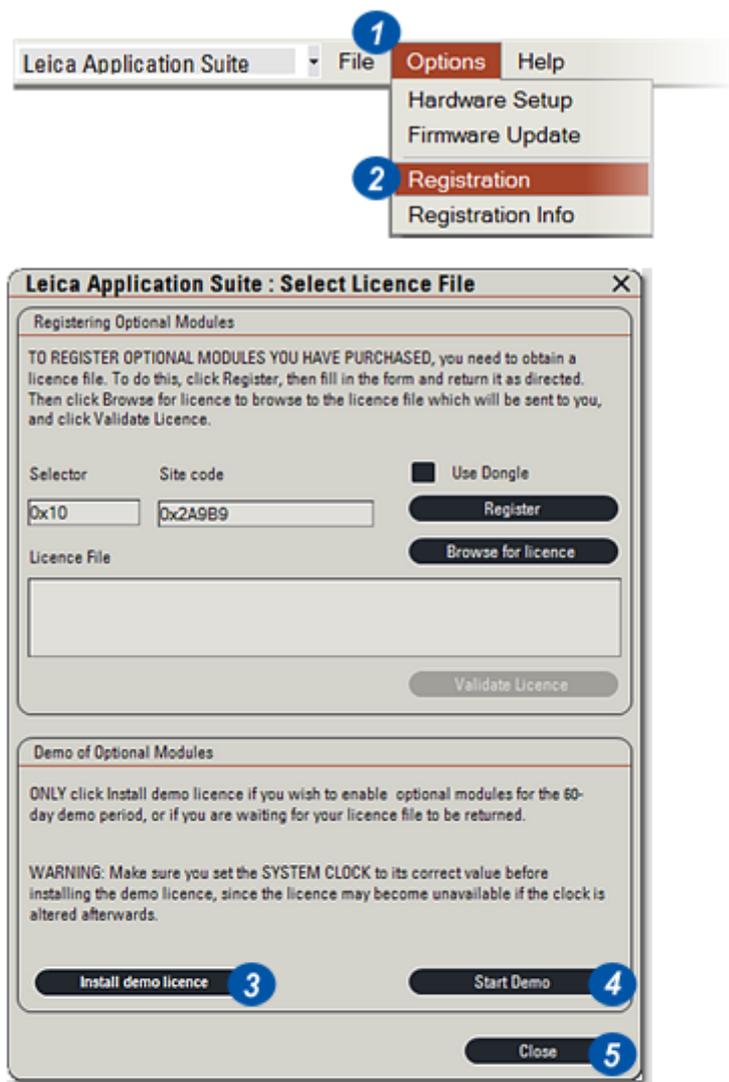
**2:** ...select *Registration*.

The DVD supplied with the Leica Application Suite must be in the computer drive.

**3:** Click on the *Install demo licence* button. The Demo licence number will be automatically retrieved from the DVD and installed on the machine.

**4:** Click on the *Start Demo* button and the Demo period for the selected modules will start.

**5:** Click *Close*.

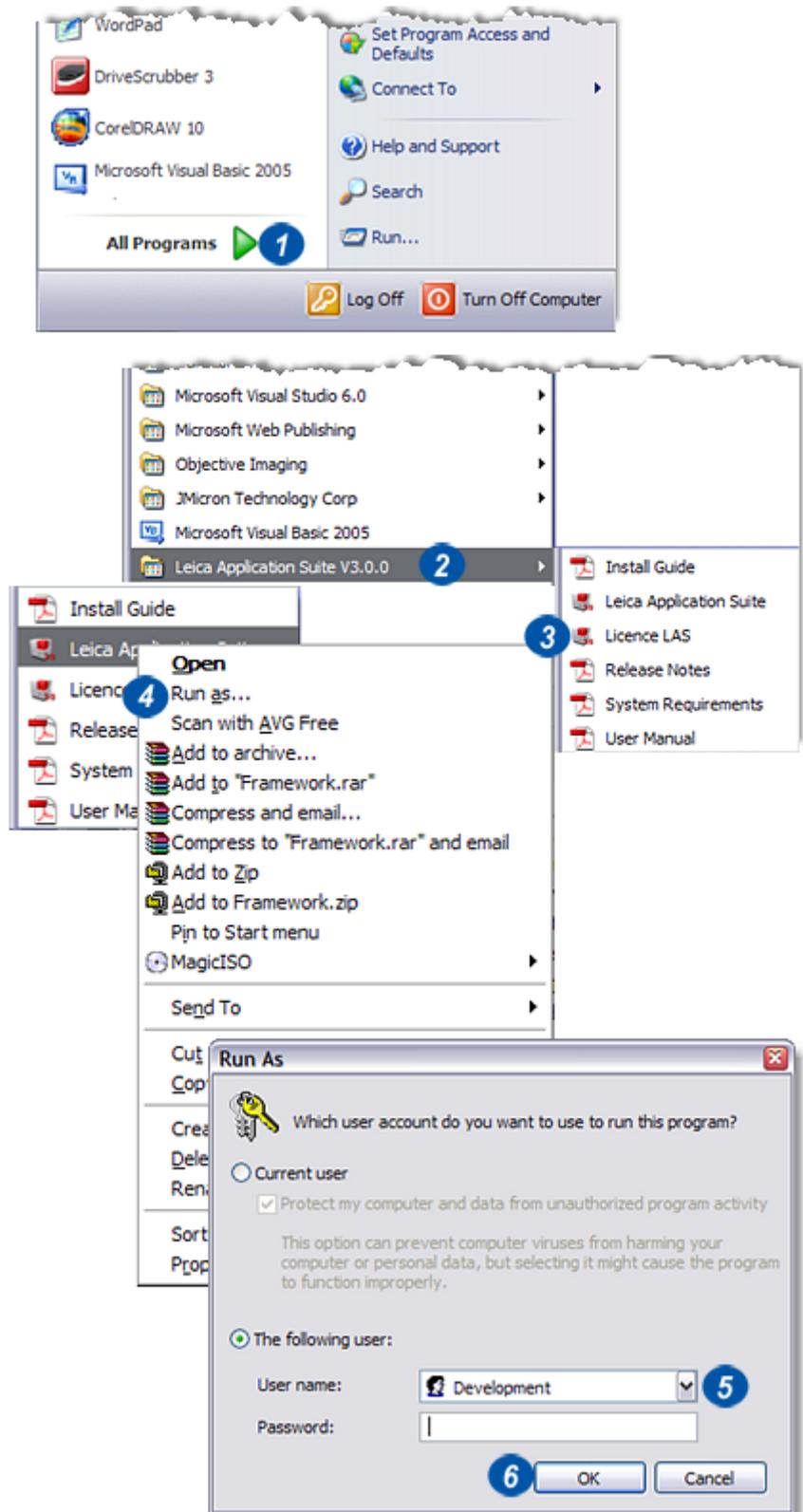


*Optional Modules* are purchased through local Leica Sales centres which will provide a Module Licence Number when the sale is complete. A single Module Licence Number can relate to one or several modules.

The user sends the Module Licence Number to the Leica Configuration Centre either by e-mail or by fax. They return a Licence file either as an e-mail attachment, or a CD. The Licence file provides a code which, when entered into the computer will allow *Optional Modules* to perform normally after the 60 day evaluation period.

- 1: Position the cursor over the *Start>All Programs* button.
- 2: Navigate to the *Leica Application Suite V3* entry and position the cursor over it. The *Leica menu* appears.
- 3: Locate the *Licence LAS* item and right click it.
- 4: From the menu click to select *Run as...*
- 5: Complete the dialog, selecting a user with Administrator privileges. Click **OK (6)**. The program will run.

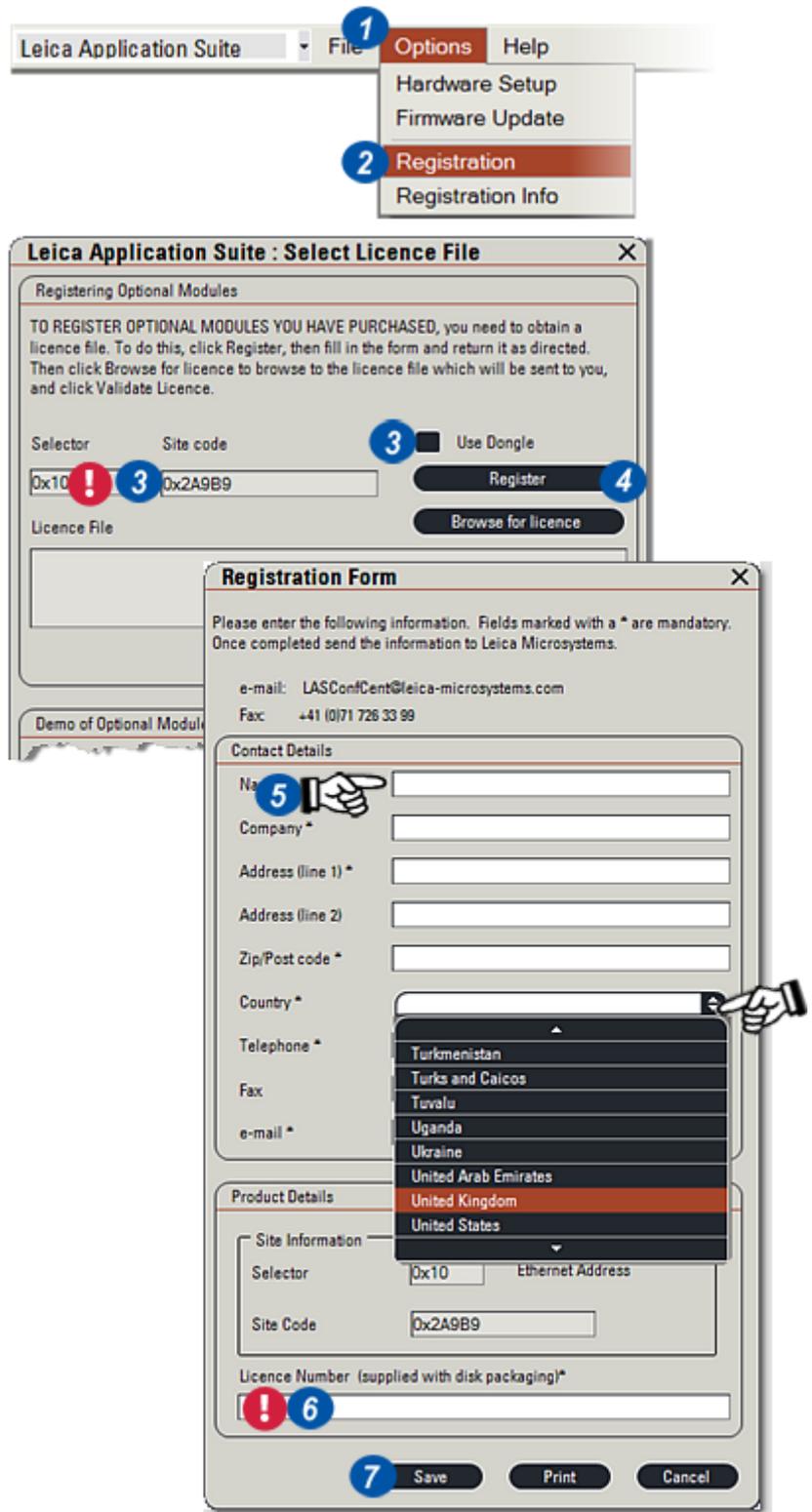
*Continued...*



To obtain a Licence file:

- 1: Click on *Options* on the main header.
  - 2: Select *Registration* from the drop down menu.
  - 3: On the *Select Licence File* dialog the Site Code is generated automatically either from a single user machine or from a network. If a coded Dongle has been purchased it will have to be in a USB port every time LAS is running. Fit the Dongle and click the Use Dongle check box (3). The site code is different for Dongle users.
  - 4: Click the *Register* button and...
  - 5: ...on the Registration Form complete the *Contact Details*. There is a drop down menu from which to select a country name.
  - 6: Enter the number printed on the software packing.  
! Keep the packaging in a safe place.
- Dongle users go to the next page item (7).
- 7: Click on the *Save* button.

*Continued...*



With the Registration Form complete and the Save button clicked, the form details have to be saved prior to either e-mailing or faxing to Leica.

- 1: The Windows Save As dialog appears. Navigate to a folder in which to save the Registration Form.
- 2: Type a name for the form and...
- 3: ...click *Open*.

Send the Registration Form as an attachment to an e-mail or as a fax. The e-mail address and fax number are shown on the top of the Registration Form (4).

Leica will respond with either an e-mail or CD containing the Licence file.

Start the licensing procedure (please see *Running the Framework* etc.) and select *Registration* from Options:

*E-mail users:*

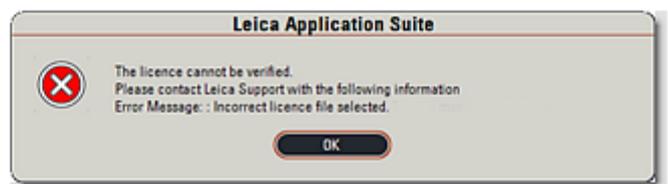
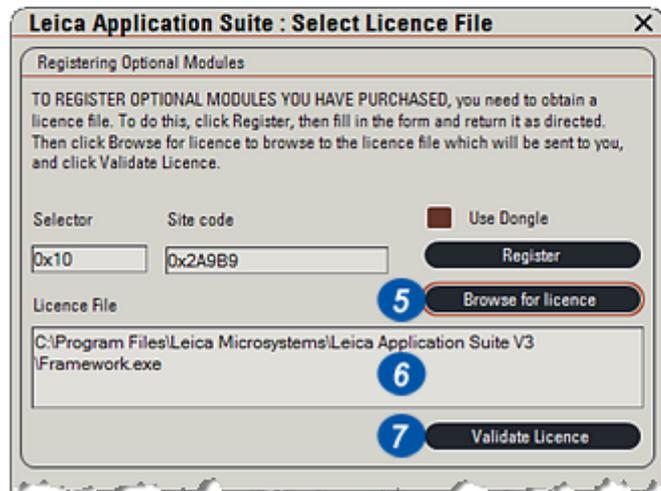
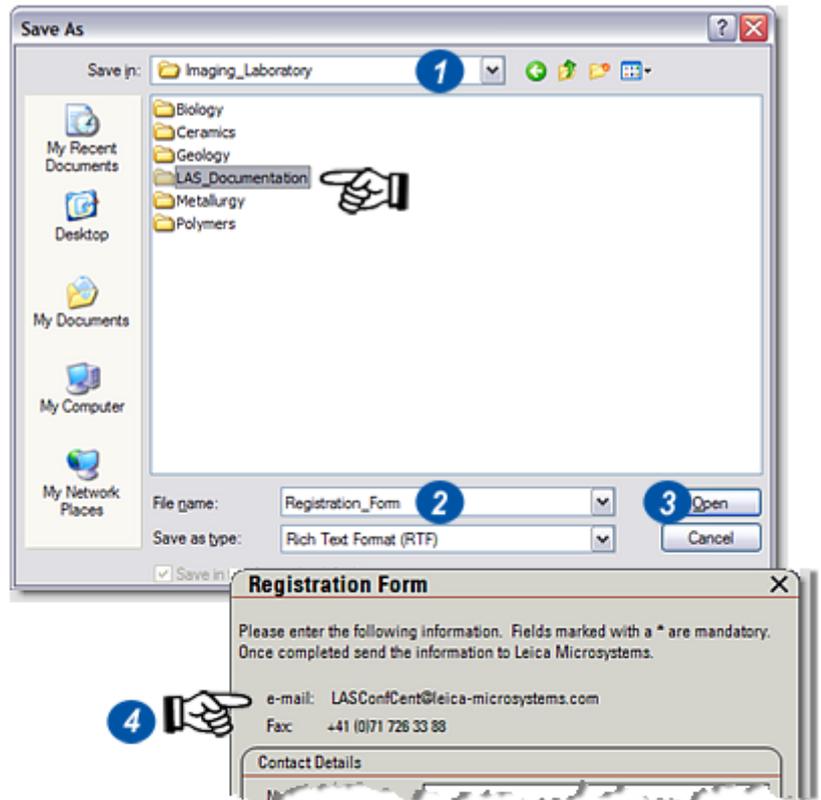
On the returned e-mail, click on the licensing attachment and save it to an appropriate location on the hard drive. The location is unimportant but the licence file name must not be altered.

*All users:*

Back on the Select Licence File dialog, click the *Browse for Licence* button (5) and on the Windows Navigator locate the *Licence Key* file and click to select it. CD users should navigate to the CD, and select *Explore* to locate the file. The file name and location (path) will appear in the Licence File widow (6).

7: Click the *Validate Licence* button. If the file is valid the appropriate optional modules will usable and free from any restrictions. An invalid key file will result in an error message. Contact Leica for further assistance.

Dongle users do not have to apply for a file - it is supplied on the CD that came with the dongle.



LAS Power Mosaic requires an **Oasis-blue Stage Controller board (12 730 193)** and the cables supplied with the board. For details see *System Requirements.pdf* on the *LAS Installation DVD*.

*Oasis-blue* is a universal PCI board designed to directly control and drive stage and focus stepper motors of the two or four phase variety, which are suitable for micro-stepping. The board does not require additional power supply or amplifiers.

After the board is installed, Leica Application Suite controls all of the Oasis functions.

For use with an IsoPro stage, please refer to the additional notes that are in the root folder of the LAS DVD.

### Computer Requirements:

- The computer must conform to the specification detailed in System Requirements and:
- Have one half-length PCI or PCI-X slot available that is not obstructed by an adjacent board.
- Windows operating system compatible with LAS.
- One free power connector (4 pin hard drive) with 2A at 12V available.
- Cross-head screwdriver.
- LAS software disk.

### Hardware Installation Procedure

- Switch off the microscope and unplug the electrical supply.
- Switch off the PC and unplug the electrical supply to disable any standby power.
- If the microscope has a CtrMic box, connect the microscope Z-breakout cable between the 'Microscope' connector on the rear of the CtrMic box and the equivalent connector on the microscope.
- Remove the computer casing cover or side panel. Select a PCI slot with no obstructions (preferably one with adequate air-flow from the auxiliary fan), and remove the rear blanking panel.

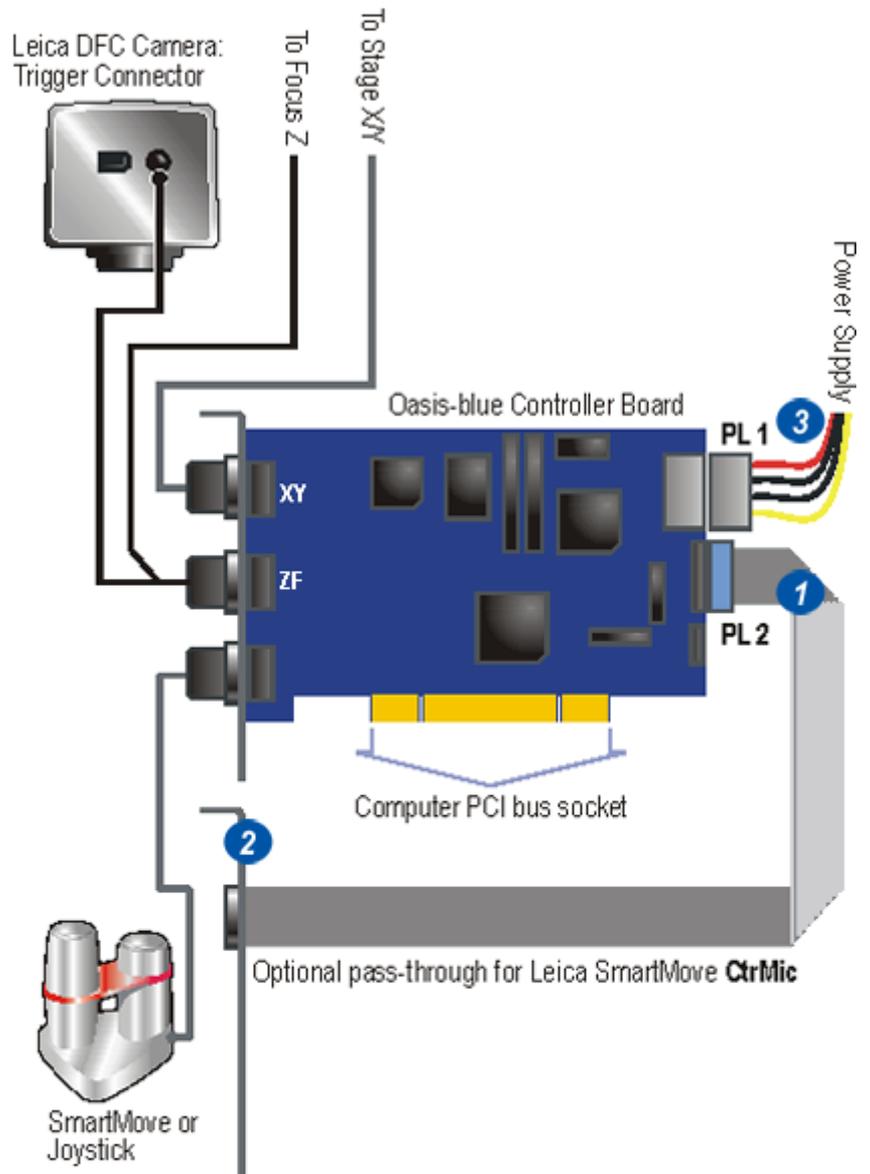
NOTE: The Oasis drive software must be installed from the DVD and configured before starting LAS and using Power Mosaic.

**Important: For safety reasons always use an antistatic mat or other grounded source to discharge static electricity before handling the board.**

Pick up the board (still in its anti-static sleeve), by grasping the metal edge bracket with one hand, and remove the sleeve.

If the microscope has a CtrMic box:

- 1: Connect the pass-through ribbon cable to PL2 on the rear of the Oasis-blue board.
- 2: Fit the MIC Pass-through plate holding the 15-way D-type ribbon cable at other end of this ribbon cable into a free access slot on the rear of the PC. Holding the edges of the board *only*, position it over the PCI slot and locate the tip of the metal bracket in the access slot of the PC chassis, before pushing the board firmly but gently home with a slight rocking action. Secure the bracket with a retaining screw or clip as necessary.
- 3: Connect the spare power connector from the PC power supply to PL1 at the rear of the board. The Oasis-blue must be the only device drawing power from this lead. The on-board motor drive components get their power via the +12V from this connector. There is an extension cable provided with the Oasis-blue in case the power cable is too short. Refit the computer cover.



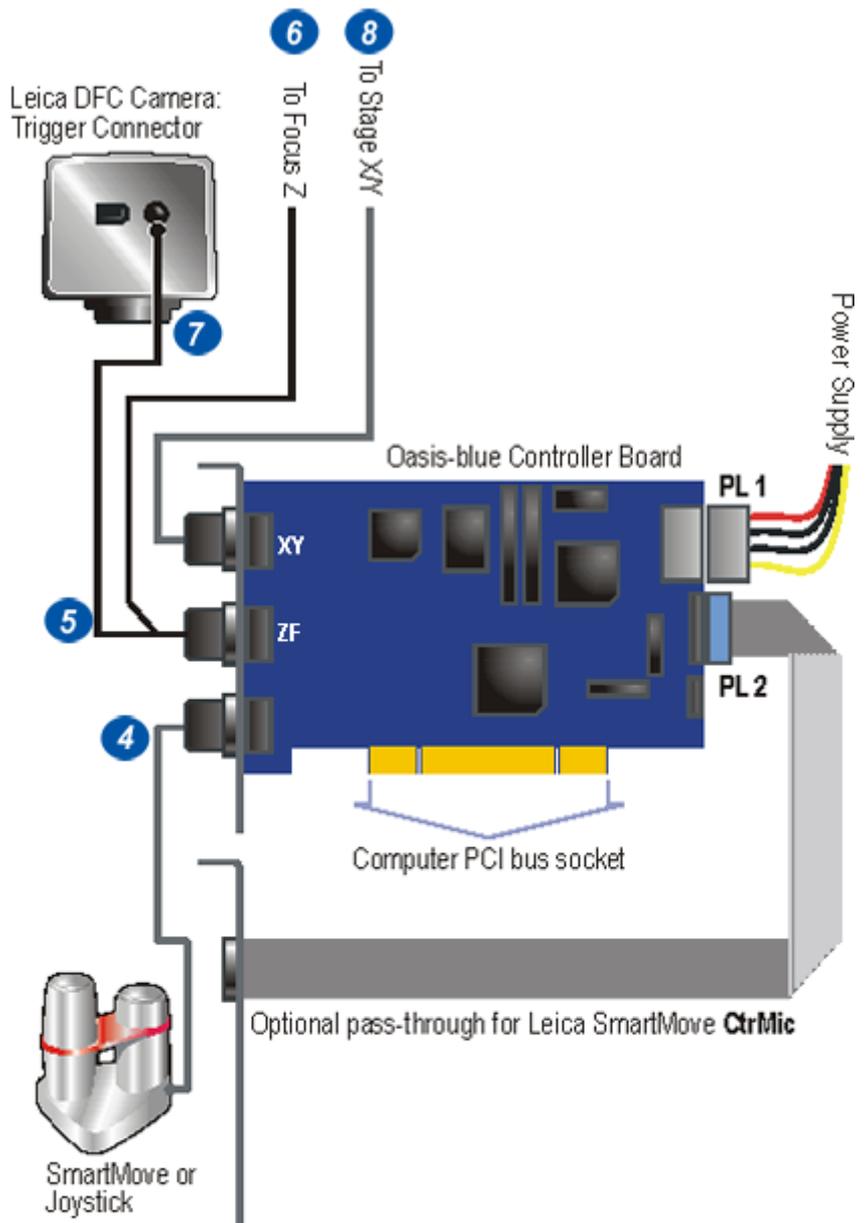
*Continued...*

All three connectors on the Oasis-blue are identical and are not *keyed*, so care must be taken to fit the cables correctly. If they are not, the Oasis-blue software will not work at all.

- 4: Connect a *Leica SmartMove* or joystick or other compatible control device to SK1 (marked I/O on front panel) as required.
- 5: Connect the *Focus/Trigger* cable to SK2 (marked Z/F).
- 6: Connect the Focus cable to the focus motor connector. If the microscope uses a *Leica CtrMic* box, the focus connector is on the *CtrMic* microscope Z-breakout cable. Otherwise it is on the external focus motor.
- 7: Connect the trigger cable to the *Leica DFC 4-pin trigger port* on the rear of the camera. This cable is required only for DFC FX cameras or DFC400 and must not be connected for DFC290 or DFC420.
- 8: Connect the *XY stage cable* to SK3 (marked **X/Y** on front panel) and to the connectors on the stepper motor stage.

If a *CtrMic* box is being used, connect the *SmartMove* pass through cable to the D-type connector and the other end to the *CtrMic* where the *SmartMove* would normally be connected.

Switch on the PC and microscope to proceed with the driver installation for your operating system.



If the Oasis drivers have not been installed during the LAS installation, please follow this procedure to install them.

- Switch on PC and boot into *Windows XP*.
- The *Add New Hardware Wizard* should appear.
- Insert the LAS disk and select *Search automatically for best driver for your device* and click *Next*
- The installation wizard should detect the Oasis-blue controller and install the relevant files.
- After drivers and files have been copied to the relevant directories, click *Finish*.
- Run the program `\\Oasis\\Setup.exe` on the LAS disk.
- Click on the *Install Oasis Controller Device Driver* option. A message will indicate the drivers were installed and registered correctly.
- Click on the *Install Utilities* option to install the Configuration Wizard, the Flash Configuration program and the Oasis.exe utility.
- Run the Oasis.exe utility program to check the Oasis-blue is functioning properly

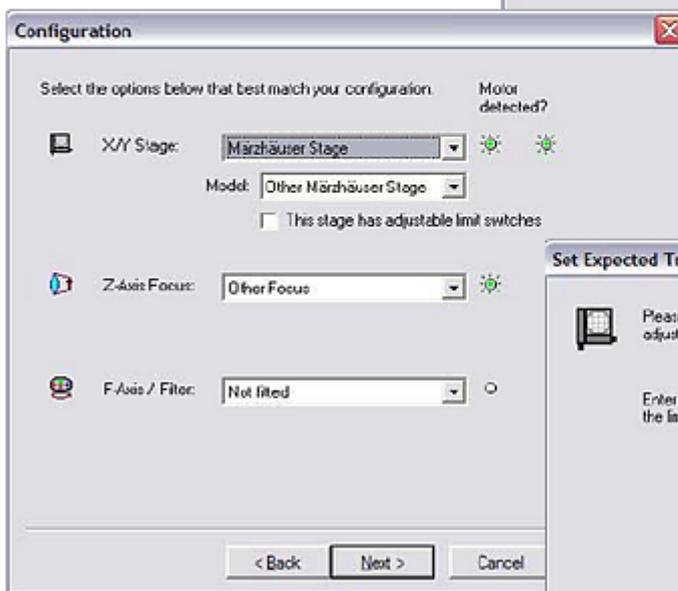
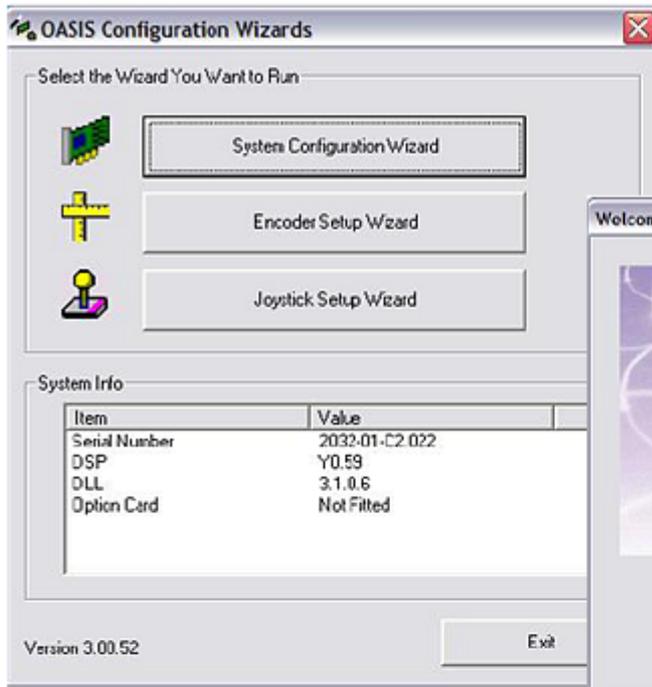
Run the *Oasis Configuration Wizard* from its icon and follow the on-screen instructions. Some parts of the process take a few seconds, so please be patient after clicking the *Next* button; otherwise you may skip past an important dialog.

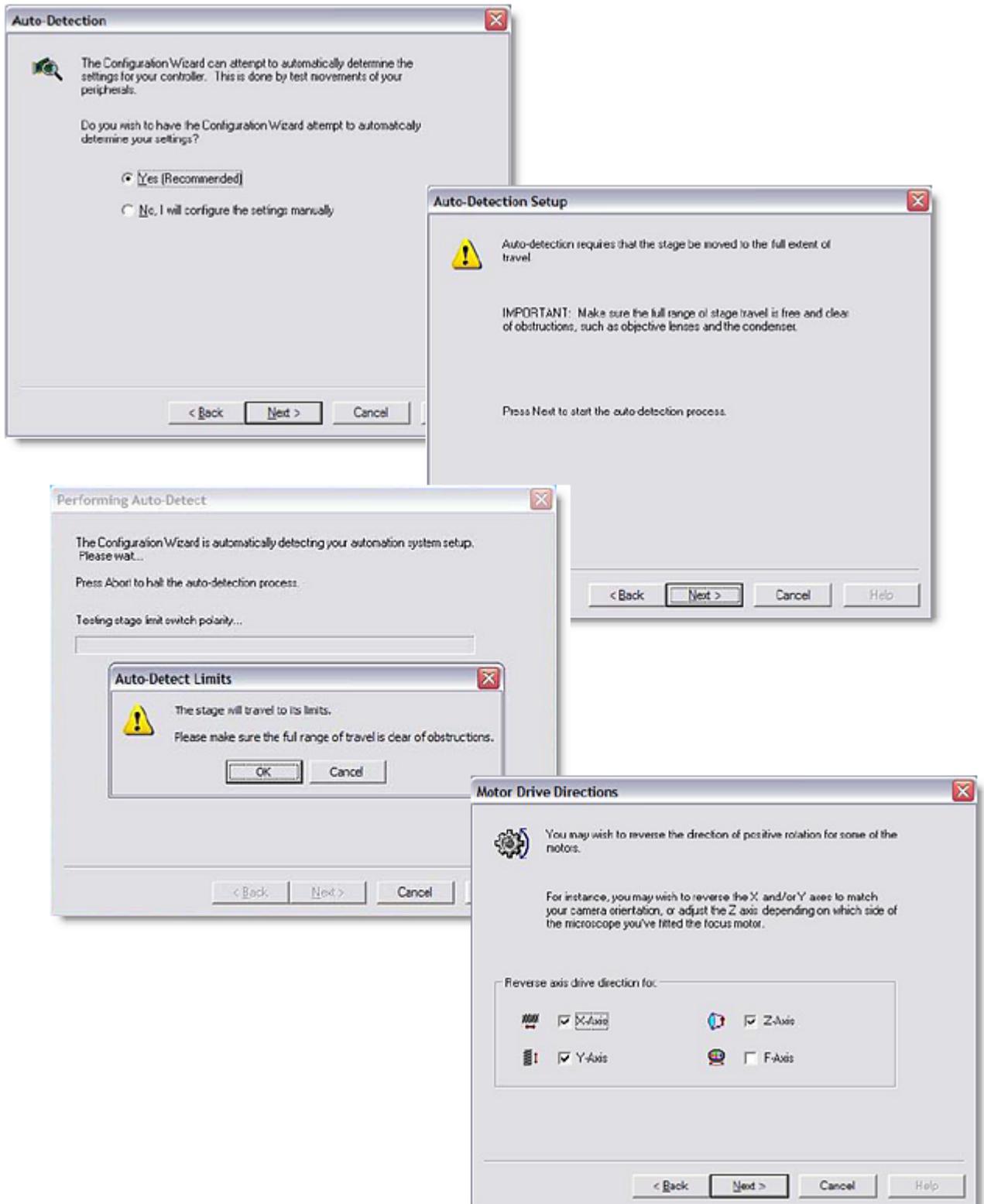
*The Wizard screens showing typical settings are shown on the following pages.*

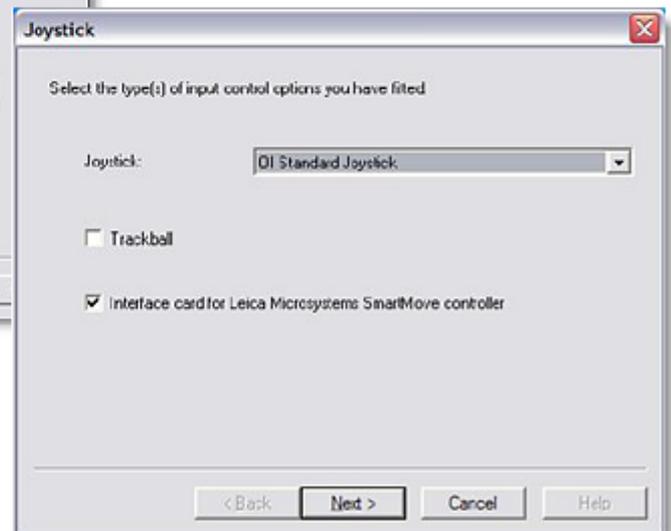
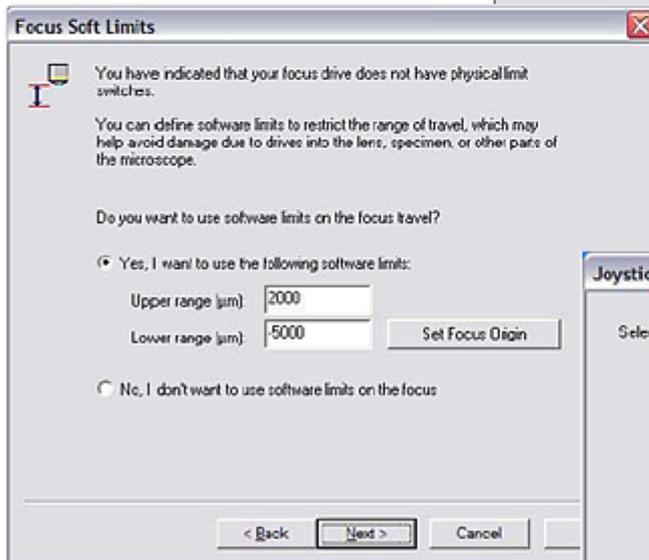
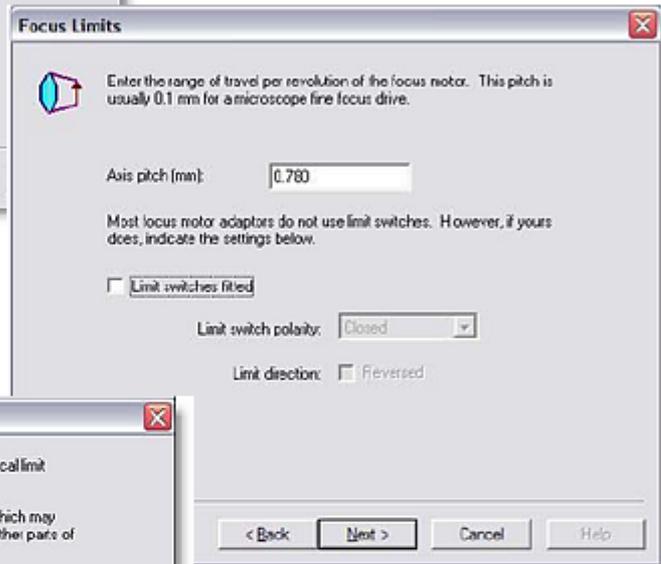
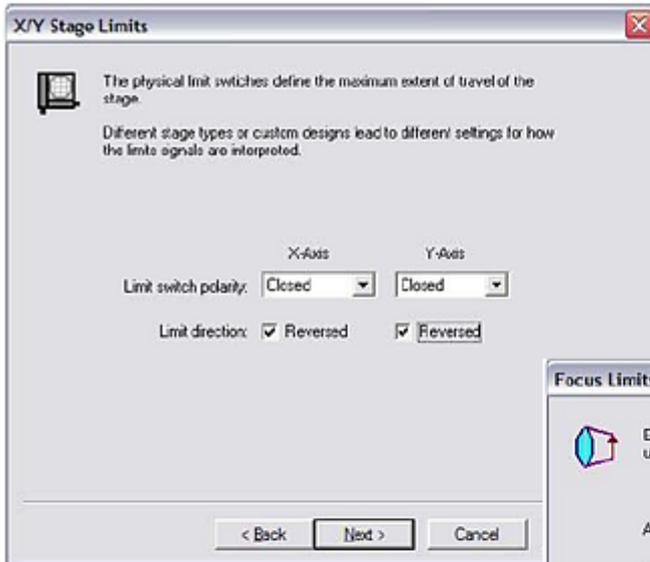
Check that lenses and cables are well clear of the stage because the *Auto-detect XY* section will move it to its limit switches.

- Selecting an XY stage type indicates the size of the stage and calculates the lead-screw pitch - how far the stage moves for one turn of an axis motor. If the stage type is not properly specified, or is not present in the list, the lead-screw pitch may be calculated incorrectly. In this case it will be necessary to key in a value. Consult the information provided by the stage manufacturer.
- The stage limit switch polarity and orientation will be automatically noted and programmed into the Oasis-blue Flash memory, so that it is not necessary to repeat this process unless the stage type is changed.
- The preferred direction of travel for each axis can be set using the wizard, to suit the hardware configuration. The defaults generally suit a microscope with the camera oriented in such a way that the view on the monitor is the same as the view through the eyepieces, and with a motorised focus adapter mounted on the left hand side.
- The *Axis pitch* setting in the focus dialog should be set to the distance Z is raised or lowered for one turn of the motor. This is usually one turn of the microscope fine focus knob normally calibrated in microns (typically 100 microns per revolution) so enter 0.1mm. For a Leica DM microscope with internal focus motor enter 0.78 mm.

*Continued...*







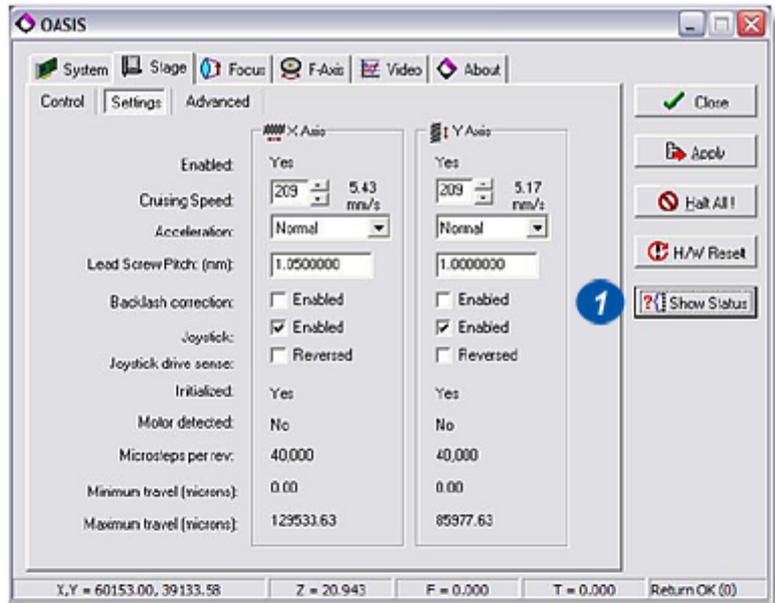
The Oasis utility software can check if the board is working properly. The most useful screens are illustrated here:

**1: Stage X/Y Settings.**

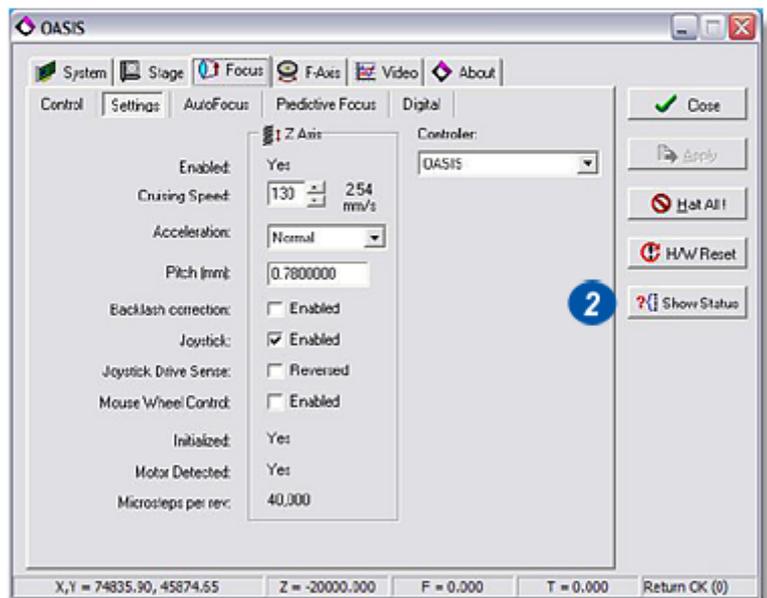
**2: Focus (Z) Drive Settings.**

If the focus (Z) drive limit switches on a DM microscope are configured incorrectly, when a limit is reached, it will not be possible to move away from it. It will appear as though the focus drive is stuck despite the 'clicking' as the from the limit switch as the motor presses against it.

The solution is to reverse the limits by opening the Oasis Status dialog by clicking on *Show Status* button (1 and 2).



*Continued...*



**3:** Set the *User Neg Set* and *User Pos Set* to the values shown in the Z column.

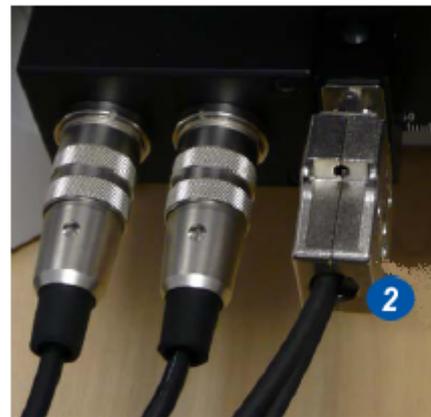
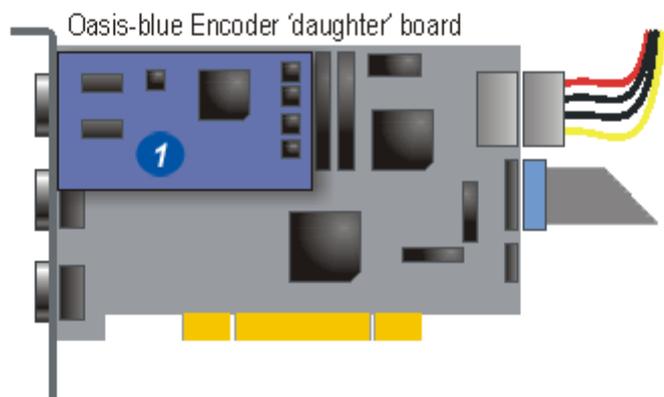
If an inverted microscope is used, these values will need to be inverted due to the direction of the stage Z movement.

OASIS Status [System: 0x3FC000D]				
	X	Y	Z <b>3</b>	F
Status	0x8070	0x8070	0x8040	0x70
Moving	No	No	No	No
At Neg PHY Limit	No	No	No	No
At Neg USR Limit	No	No	No	No
At Pos PHY Limit	No	No	No	No
At Pos USR Limit	No	No	No	No
User Neg Set	Yes	Yes 	No	Yes
User Pos Set	Yes	Yes	No 	Yes
Init?	Yes	Yes	Yes	Yes
Direction	No	No	No	No
Motor Det?	Yes	Yes	Yes	No
Motor Counter	1075063430	1074493300	1073730494	-
Encoder Counter	215012686	214898660	536865197	-

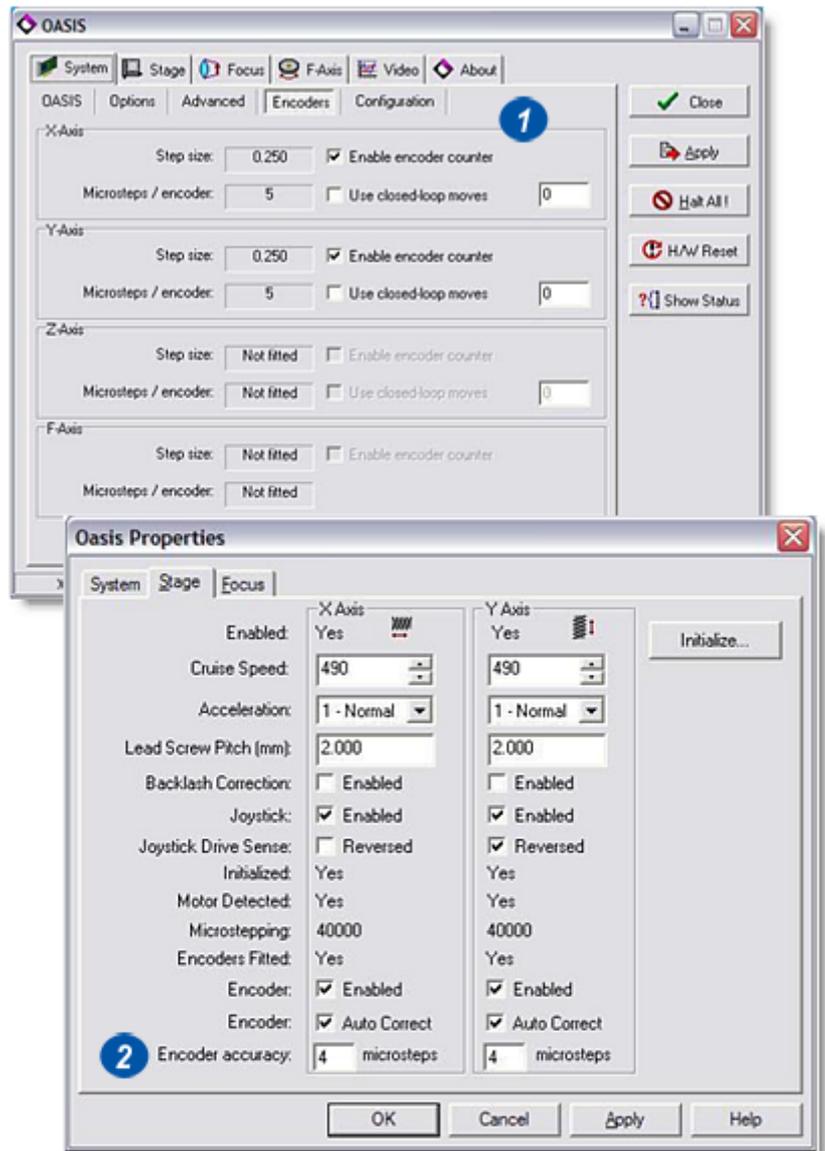
The 12 730 196 Märzhäuser Scanning Stage, 100x80mm, 2mm with Encoders, requires the 12 730 195 Oasis-blue Encoder kit for Power Mosaic to be fitted to the Oasis-blue board.

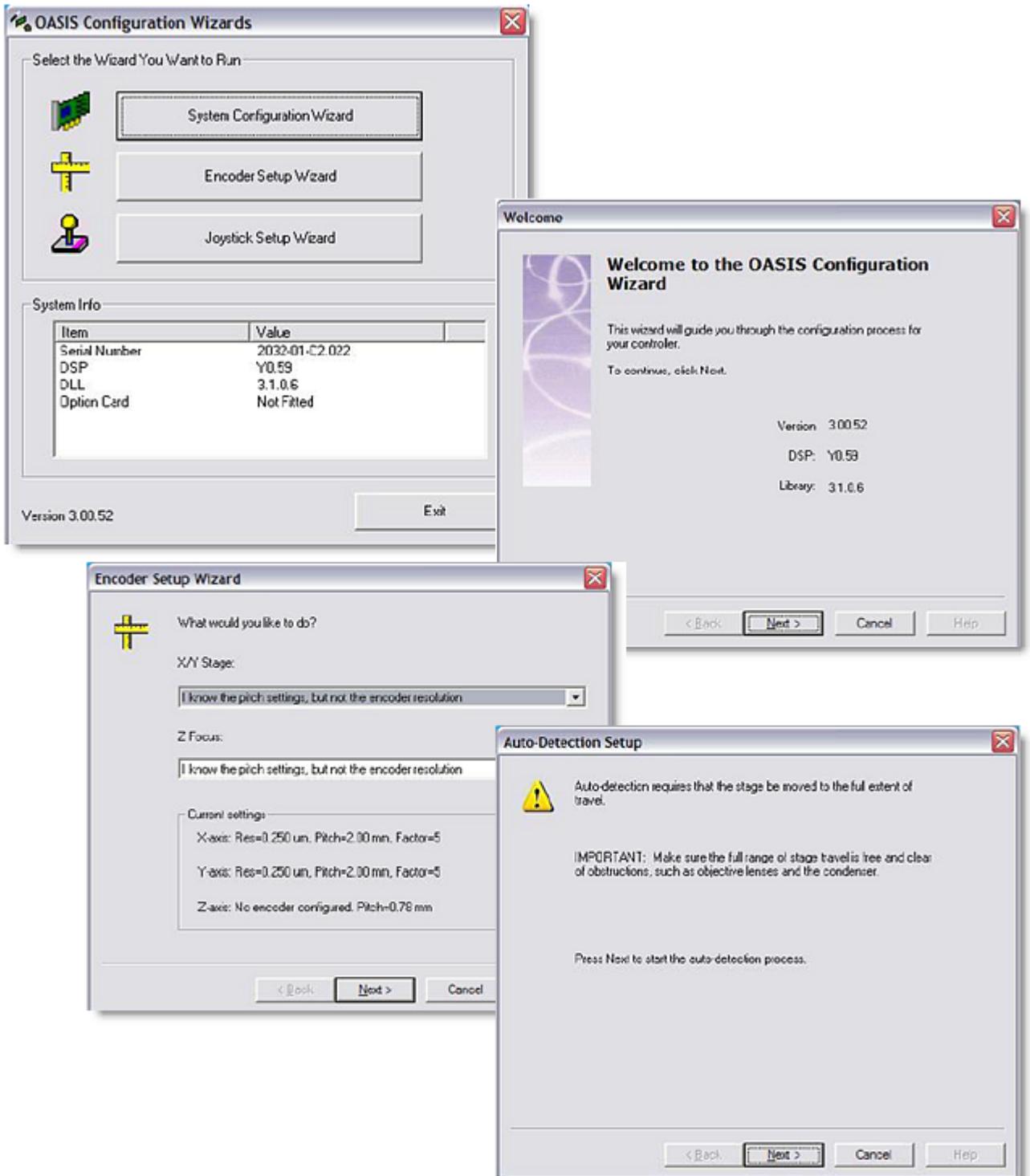
- 1: The Oasis-blue Encoder is a daughter board that fits on the Oasis-Blue board as shown in the illustration:
- 2: A modified XY Cable, that carries the Encoder signals, is connected between the XY connector on the Oasis-blue board and the stage. Run the *Oasis Configuration Wizard* from its icon, select the *Encoder Setup Wizard* and follow the steps shown on the following pages.

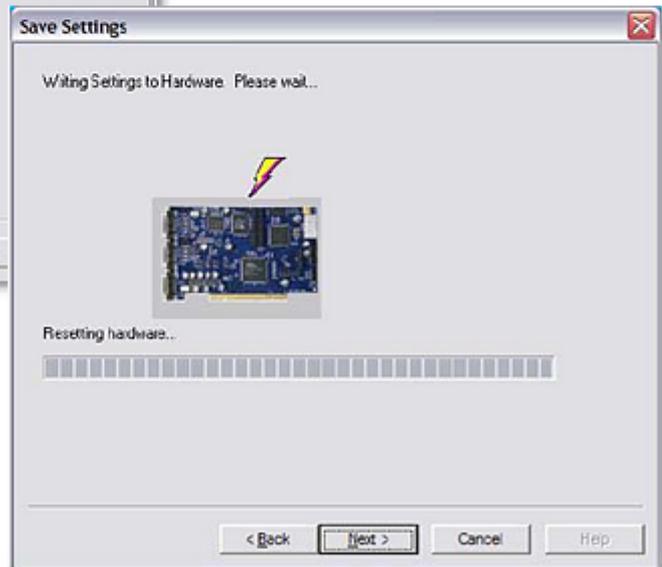
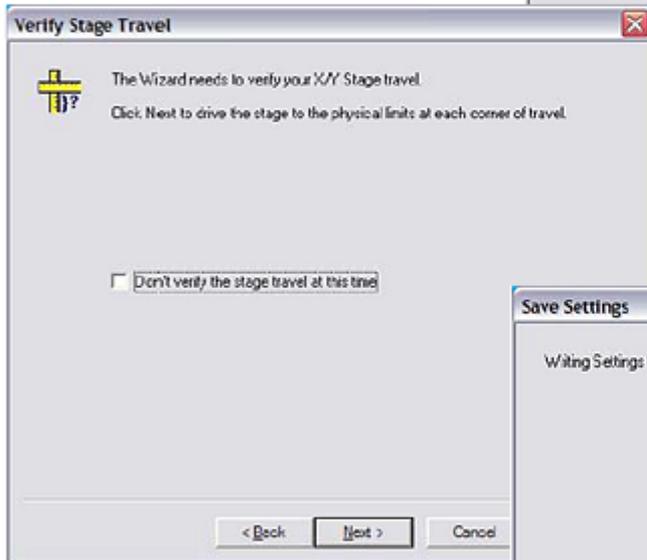
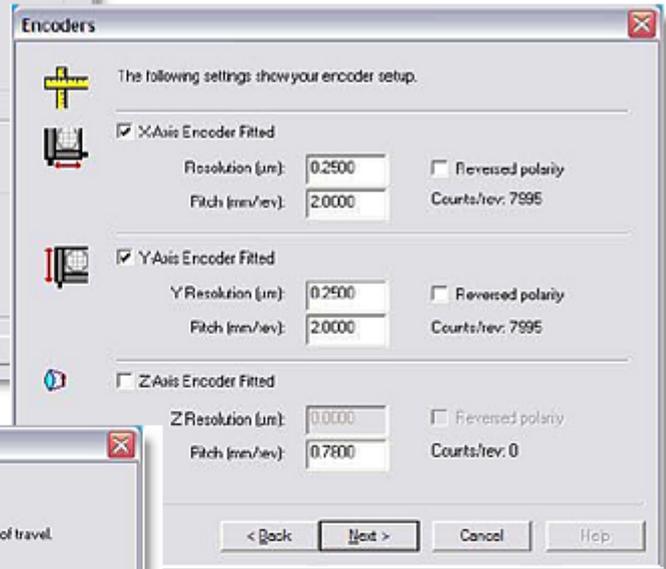
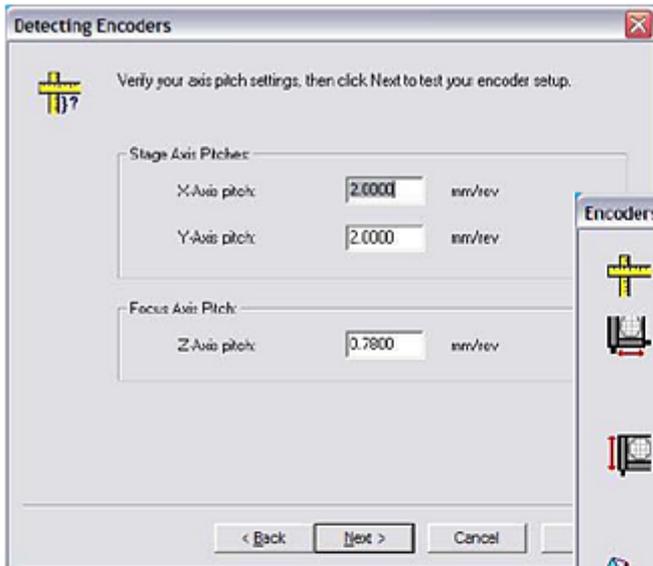
*Continued...*



- 1: The Oasis Application will show the Encoder settings as illustrated:
- 2: For LAS Power Mosaic these properties will appear as shown. Note the setting for Encoder accuracy. If narrow white lines appear between mosaic tiles when the encoders are enabled, use the Auto Correct facility to adjust the stage position. The number of microsteps to enter depends on the accuracy of the stage, but an initial value of 4 can be subsequently adjusted to suit the target system







Your purchase also gives you access to the Leica Application Suite e-mail Hotline in case of technical questions:

[DI.support@leica-microsystems.com](mailto:DI.support@leica-microsystems.com)

or

[MQM-Hotline@leica-microsystems.com](mailto:MQM-Hotline@leica-microsystems.com)

When using the Hotline please mention the exact configuration you are working with and your software version/release. You will find this information by selecting the *About* command from the Help menu. This will facilitate the analysis of your query and accelerate our response time.

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