



INTEGRATING
PRIOR XY-SCANNING STAGE
INTO THE
CARL ZEISS MICROTOOLBOX

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Refer to the safety notes and instructions in the manuals of all necessary devices (e.g. microscope peripherals, cameras, computers, computer additional, etc.) before installing and using the software .

INTRODUCTION

GENERAL DESCRIPTION

The MTB2004 configuration software is used to generate and manage microscope and stereomicroscope configurations.

Any information regarding microscope components (nosepieces, reflector turrets, shutters etc.) and, if necessary, additional external units (motorized XY stages, external light sources etc.), is stored in the MTB configuration. Furthermore, the MTB2004 configuration tool can also be used to enter information about microscope components, such as objectives, fluorescence filter cubes etc. (depending on the type of microscope in question). In this case, the information is saved directly in the microscope, allowing it to be displayed on the microscope's TFT screen, for example.

Various configurations can be created, of which only one is activated at any time. The active configuration is used by control and imaging software such as AxioVision from Carl Zeiss to provide graphic control dialogs for the configured microscope units.

SUPPORTED MICROSCOPES

The following microscopes are supported with Version 1.4.0.x of MTB2004 Configuration.

Axio Observer.Z1

Axio Observer.D1

Axio Imager.Z1

Axio Imager.M1

Axio Imager.D1

Axio Imager.A1

Axio Examiner

Axiovert 200 M

Axiovert 200 man

Manual microscopes of indefinite type

MICRO TOOLBOX 2004 (MTB2004)

Software Technology

MTB2004 Configuration is the graphic user interface for configuring the MicroToolBox 2004 (MTB2004). MTB2004 is a server application which, underlying the imaging software, enables communication between the control software for the microscope (e.g. AxioVision) and the microscope itself.

MTB2004 Configuration is the graphic user interface for configuring the server application.

MTB2004 Configuration can be installed on the following operating systems:

Microsoft® Windows XP Professional

Microsoft® Windows 2000 Professional

Microsoft® Windows Vista Professional

Microsoft® Windows Vista Professional

To run a PRIOR ProScanIII(TM) with the MTB2004 a version of V8.1.1 or higher is essential.

CONFIGURING MOTORIZED XY-STAGES IN MTB2004

External components are not always recognized automatically by the AutoConfiguration function; some of the components need subsequently to be configured manually.

PRIOR PROSCANIII^(TM) CONTROLLER

For the use with MTB2004 a PRIOR ProScanIII Controller with a special firmware is required. Before starting to use the ProScanIII controller with MTB2004 take care that the correct firmware is installed on the controller. To check the firmware version hold down the menu button for approximately one second.

For the use of a PRIOR ProScanIII Controller with the MTB2004 Controller Firmware-Version v0.03 or higher is required.

The Software for the firmware programming can be downloaded from the PRIOR website

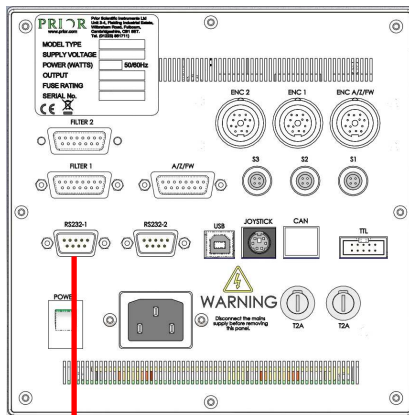
http://www.prior-scientific.de/downloadcentre/dc_software.html

Please unzip the File in a separate folder.

FIRMWARE INSTALLATION

Requires the PRIOR software to be installed. This software is also available at the PRIOR website.

Before firmware installation ensure that the PS3 Controller is connected to the PC via RS232-1.



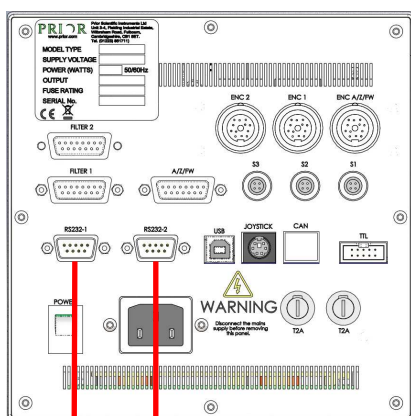
PS3 Controller connection to the PC
via RS232-1

RS232 connection to PC
firmware update

The *PS3_UpgradeTool.exe* program automatically detects the correct COM Port the controller is connected with, checks the installed software version and performs the firmware upgrade.

CONNECTING PRIOR CONTROLLER WITH MICROSCOPE AND PC VIA RS232

The Controller is connected via RS232 interface to the Control-PC. RS232-2 only must be used for this operation. It is not possible to use RS232-1.



Connection of the PS3 Controller with control-PC
via RS232-2 interface.

RS232 connection to PC
RS232 connection to ICC
(interactive communication center)

SOFTWARE

REQUIREMENTS

AXIOVISION

the version is not important

MICROTOOLBOX (MTB)

Version 1.8.1. or higher, release 20/12/2010)

CONFIGURATION FILE FOR PRIOR STAGES

The software to implement the PRIOR XY-stages can be downloaded from the Prior Scientific website.

http://www.prior-scientific.de/downloadcentre/dc_software.html

Please unzip and copy the XML file to the following folder. Please note that the MTB2004 must be installed on the PC prior to this installation.

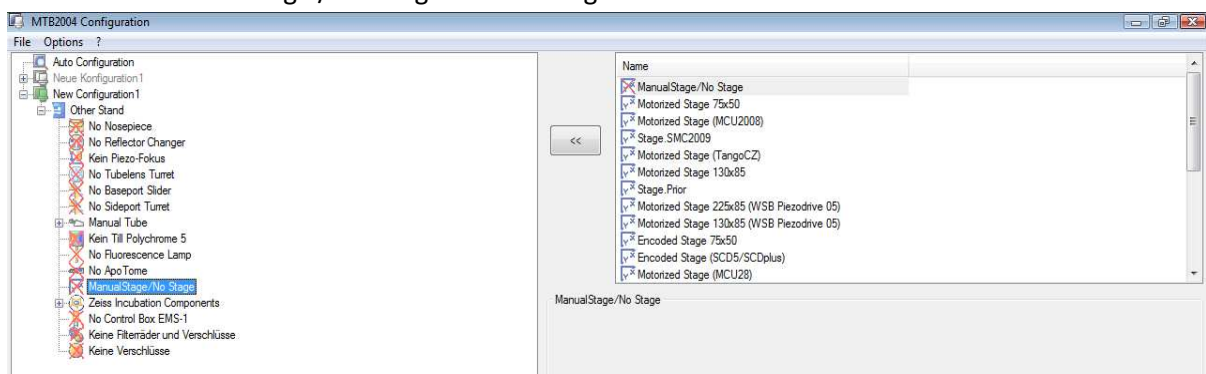
C:\Dokumente und Einstellungen\All Users\Anwendungsdaten\Carl Zeiss\MTB2004\1.8.1

or (for English language operating systems)

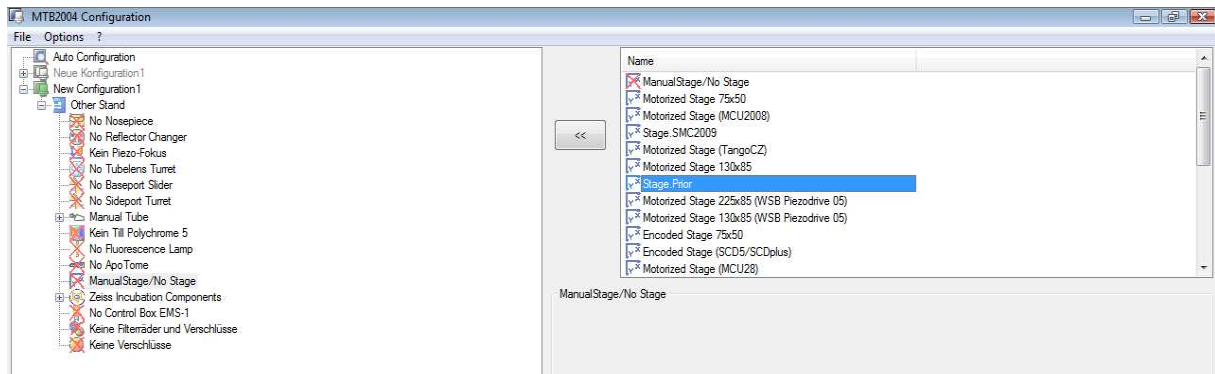
C:\documents and settings\all users\application data\Carl Zeiss\MTB2004\1.8.1

INTEGRATING PRIOR MOTORISED XY-STAGES

- Make sure that the control boxes for the motorized XY stages are connected to the PC and are switched on
- Start the MTB software
- Click on the Manual Stage / No Stage in the configuration tree.

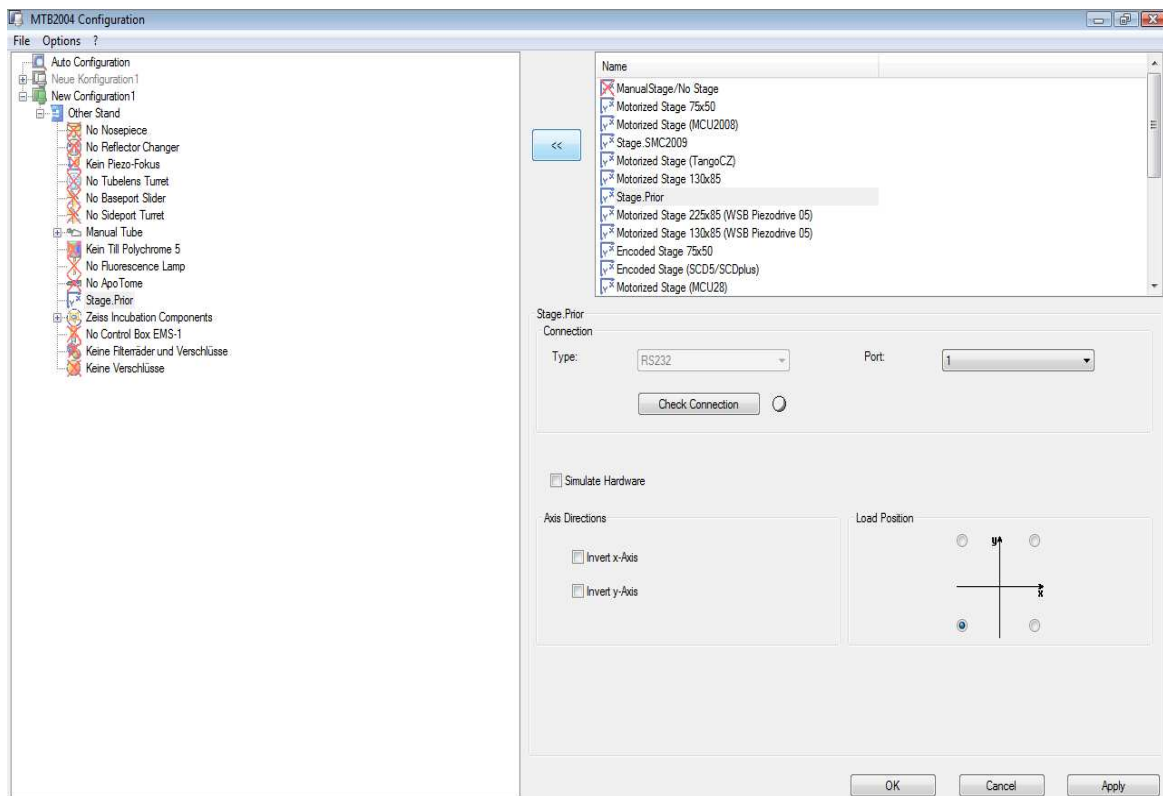


- Select the required XY stage by clicking on a stage name in the selection area on the right-hand side of the user interface and assign it.



If the stage option PRIOR is not available in the menu the XML configuration file must be copied into the MTB2004 directory as described in section SOFTWARE on page 6 of this document.

- Depending on the stage selected, further optional settings are available in the information area. You can use these to set the connection of the stage to the PC as well as the orientation of the axes.
- Select the COM-Port, where the controller is connected to the PC.

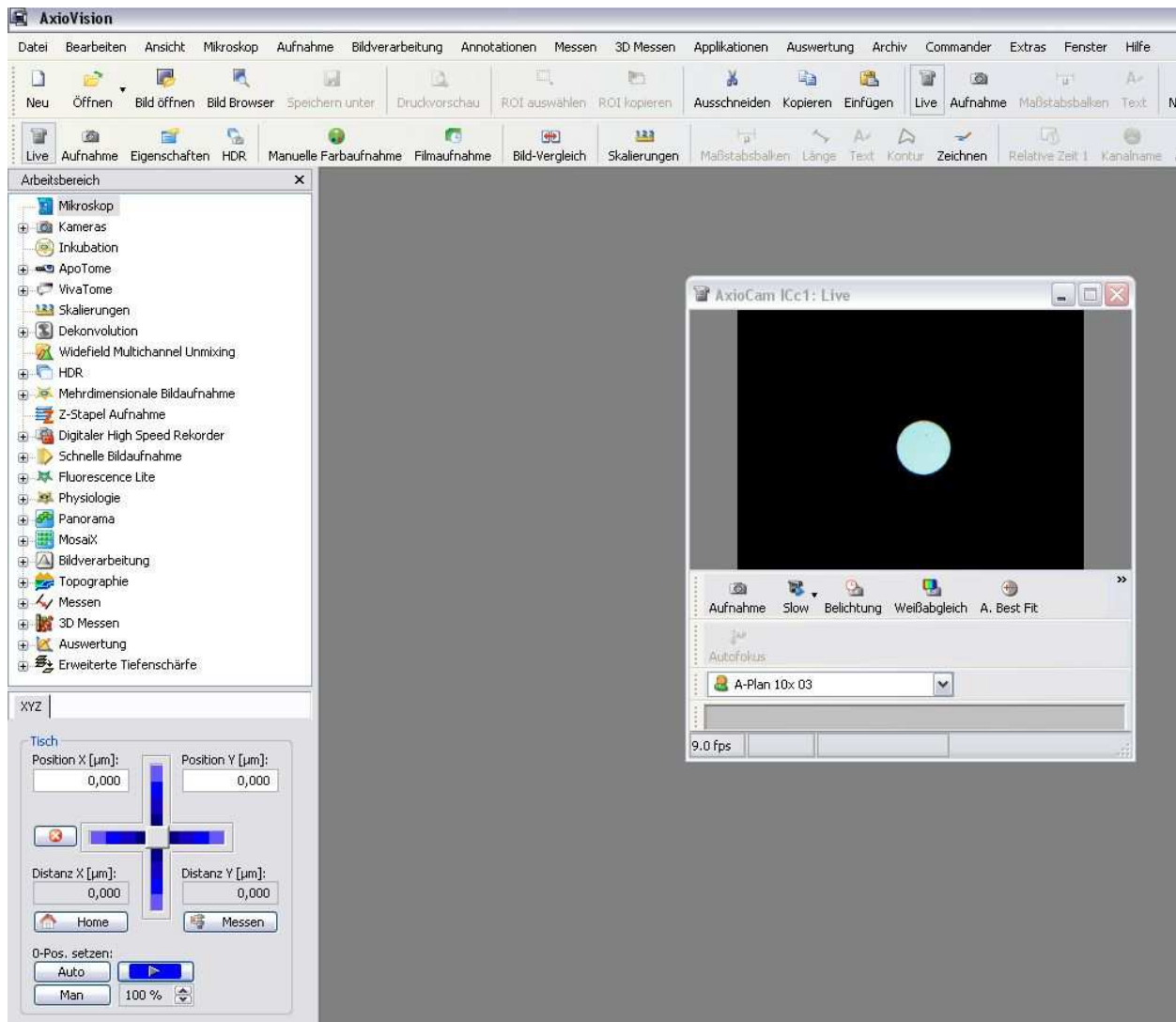


Note:

- If the check box ☒ **Simulate Hardware** is activated the settings of the motorized stage can be adjusted virtually in the AxioVision microscope control and imaging software (simulation mode).

USING THE PRIOR XY-STAGE WITH THE AXIOVISION SOFTWARE

The Controller must be switched on and connected to the XY-stage before starting AxioVision.



In the work area select the microscope. The XY stage position is now displayed.

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