

Manual for Micro-Manager with voltage amplifier NV40/1CLE



Content

1	Installation.....	3
2	Hardware-Configuration	3
3	Edit configuration file in text editor.....	8
4	Create personal Setting.....	8
5	Control with Plugins.....	10

1 Installation

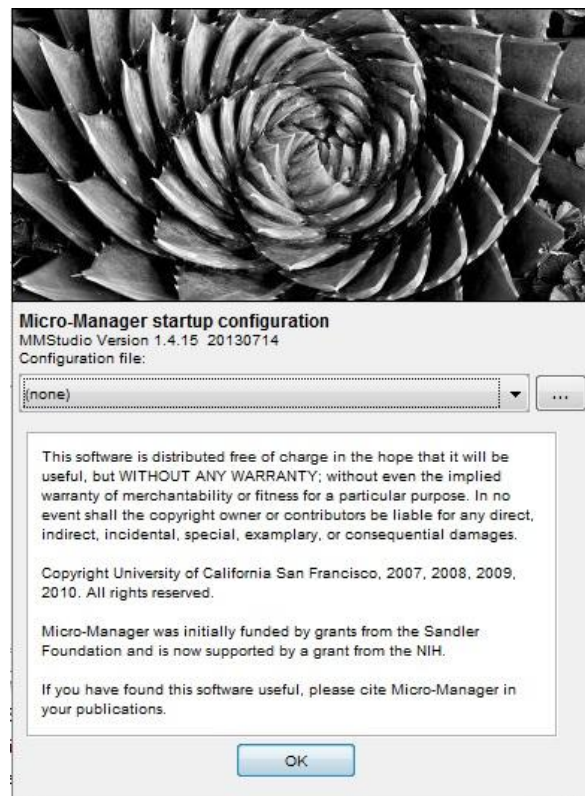
To use the Micro-Manager, a download of the software from the [homepage](#) is required. In this download-package are all needed libraries of the NV40/1CLE included. Please follow the instructions to install it.

If an older version (before 1.4.15) of Micro-Manager is installed, a download of the library of the digital system from [piezosystem jena](#) is required.

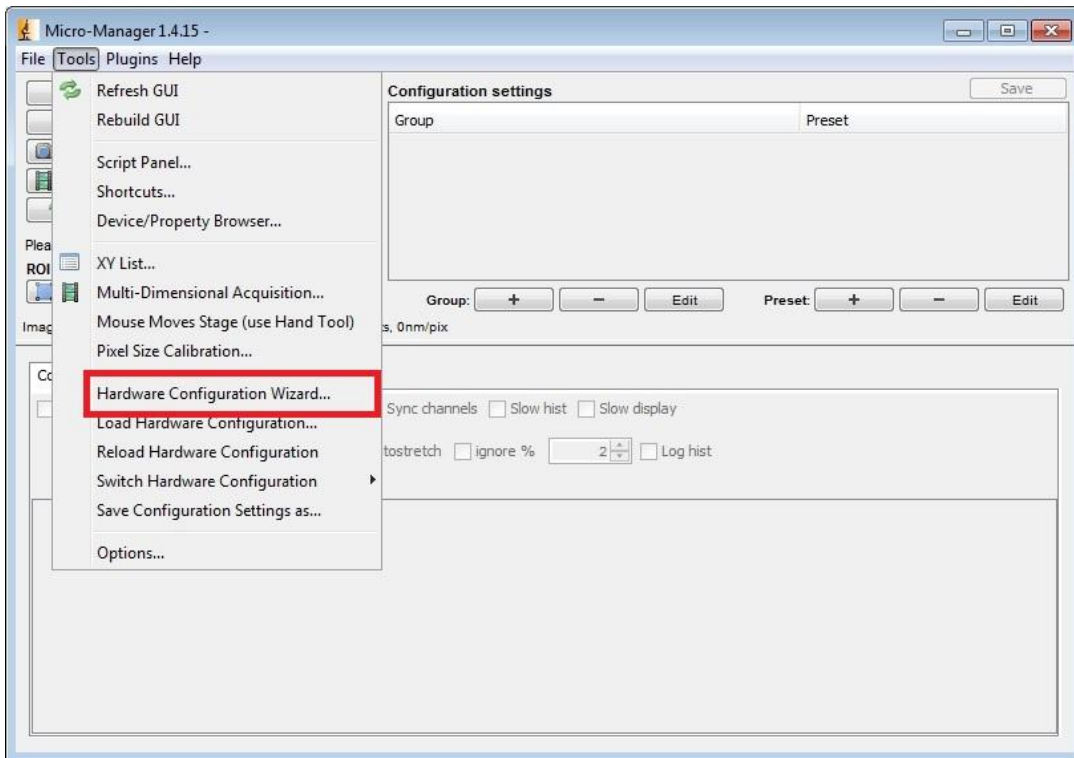
Afterwards the file „mmgr_dal_Piezosystem_NV40_1.dll“ must be extracted in the main directory of the program. Now you are able to access in program.

2 Hardware configuration

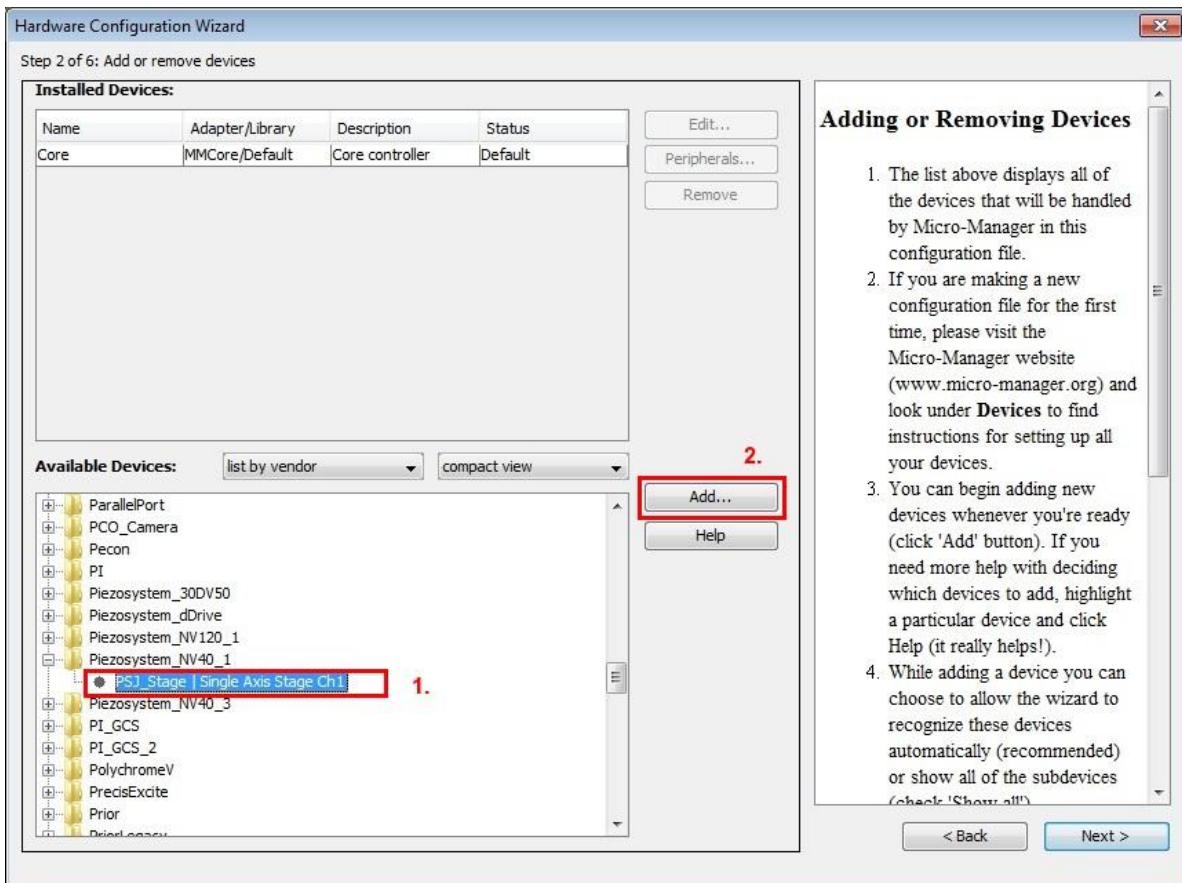
The Micro-Manager should be started without configuration („none“). Close the Window with “OK”.



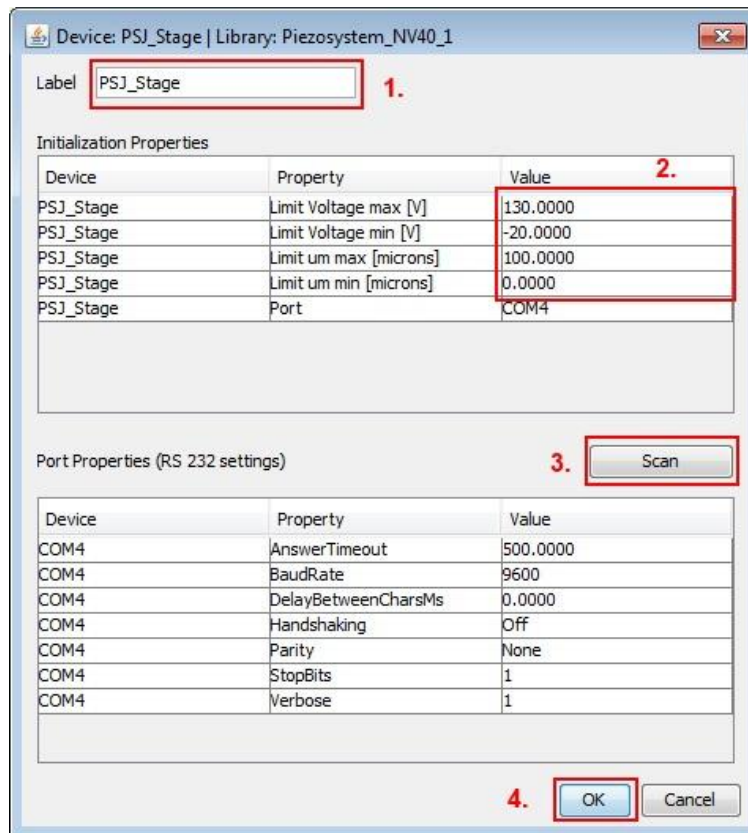
To use the NV40/1CLE, a configuration file must be created. It must be switched on. For the configuration please click in Menu **Tools→Hardware Configuration Wizard**



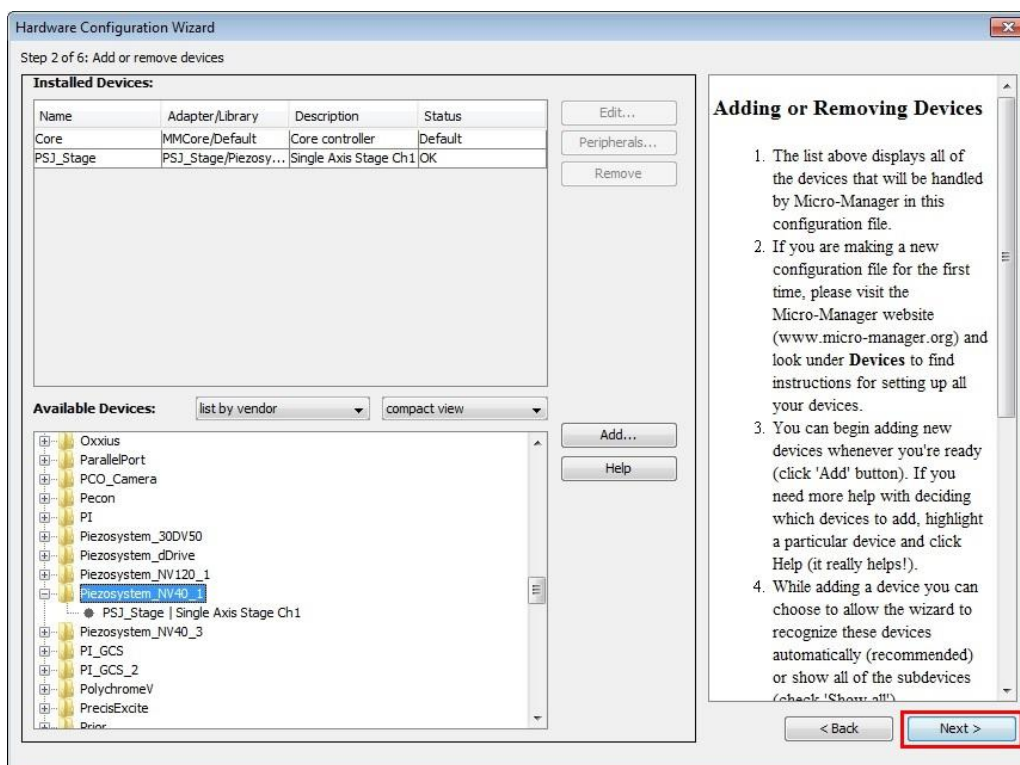
A new window will open. Please go to the second step with button „Next“ and look for Piezosystem_NV40_1 and add it to the list with a double click or push button „Add...“.



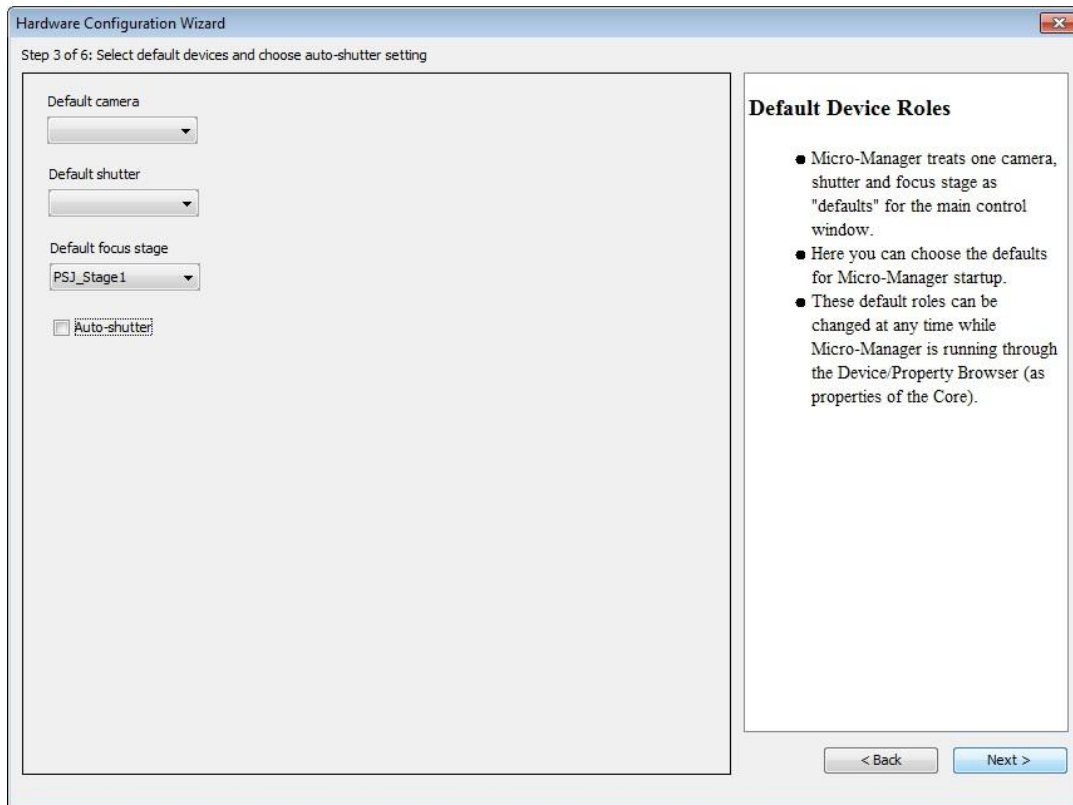
Now a new window is opening for the port setting. Click on the button „Scan“ and let the program search the device. At “Label” you could give the device an own name. Accept the settings with "OK".



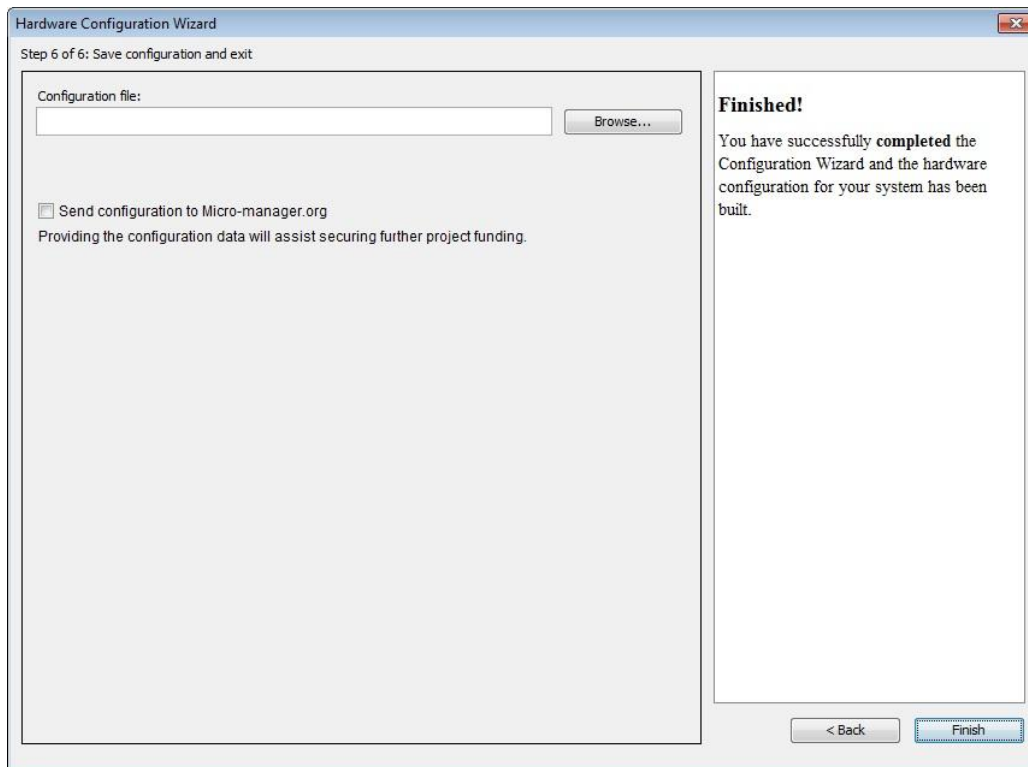
You will return to configure window. Accept by button „Next >“.



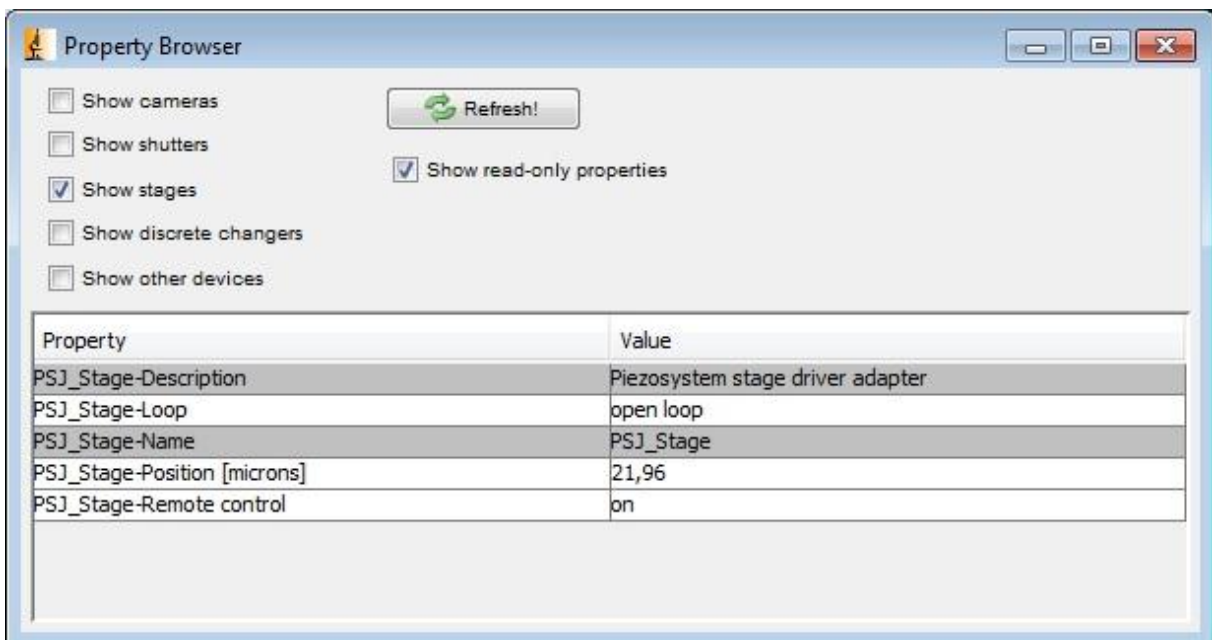
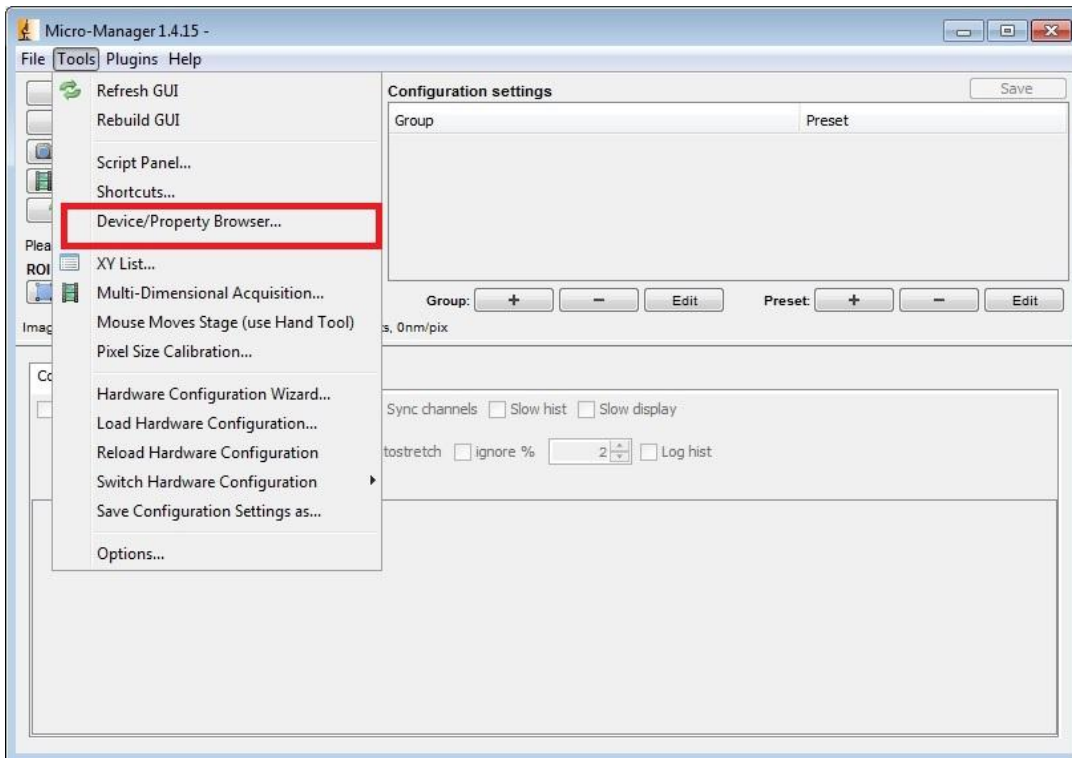
In the subsequent window you could choose default device. This can be changed later again.



Skip step 4 and 5 with “next” and save the configuration in a file. This can be loaded at the next program start. Please close the Wizard with „Finish“.



After the successful configuration the NV40 can be loaded and handled by the “Property Browser”. It is located at **Tools→Device/Property Browser**



The settings are sorted alphabetically. The grey filled fields can only be read and are for information.

3 Edit configuration file in text editor

The configuration file can be edited with any text editor. The following points can be changed:

- label
- COM-Port

Here is a simple example for a configuration.

```
# Reset
Property,Core,Initialize,0

# Devices
Device,COM4,SerialManager,COM4
Device,PSJ_Stage,Piezosystem_NV40_1,PSJ_Stage

# Pre-init settings for devices
Property,PSJ_Stage,Limit Voltage max [V],130.0000
Property,PSJ_Stage,Limit Voltage min [V],-20.0000
Property,PSJ_Stage,Limit um max [microns],100.0000
Property,PSJ_Stage,Limit um min [microns],0.0000
Property,PSJ_Stage,Port,COM4

# Pre-init settings for COM ports
Property,COM4,AnswerTimeout,500.0000
Property,COM4,BaudRate,9600
Property,COM4,DelayBetweenCharsMs,0.0000
Property,COM4,Handshaking,Off
Property,COM4,Parity,None
Property,COM4,StopBits,1
Property,COM4,Verbose,1

# Hub (parent) references

# Initialize
Property,Core,Initialize,1

# Delays

# Roles
Property,Core,Focus,PSJ_Stage
Property,Core,AutoShutter,1

# Camera-synchronized devices

# Labels

# Configuration presets
# Group: Channel

# Group: System
# Preset: Startup

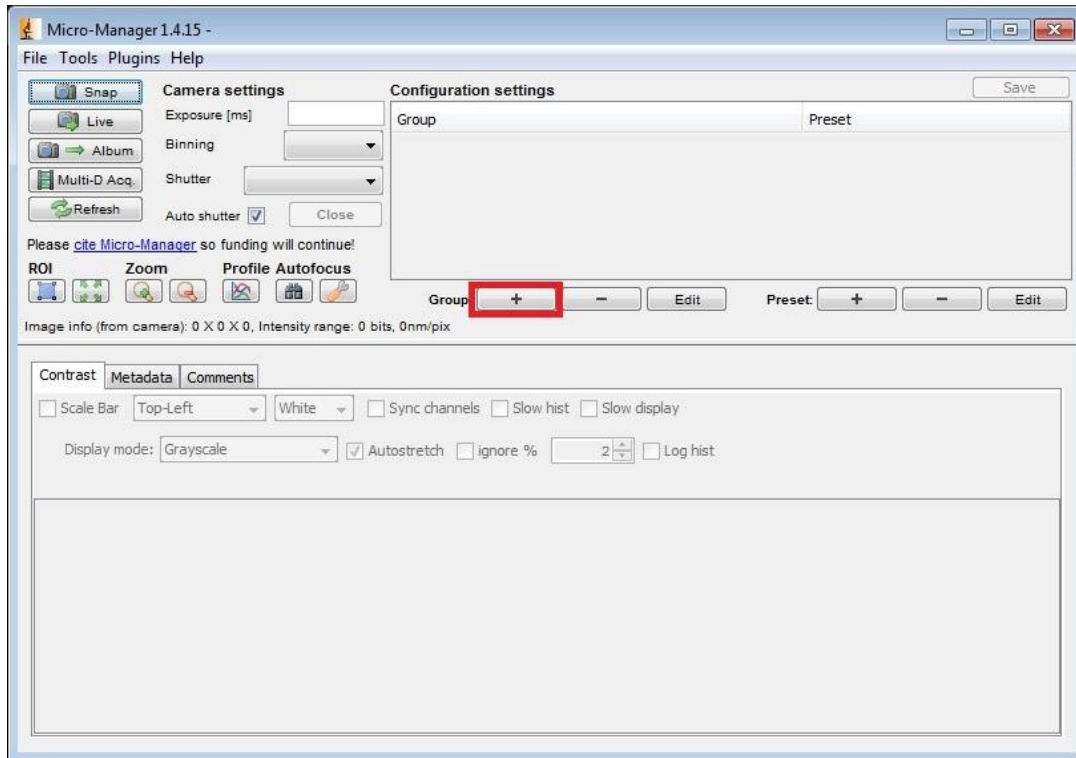
# PixelSize settings
```

Please ensure that the name is only used once and don't use a comma in the name.

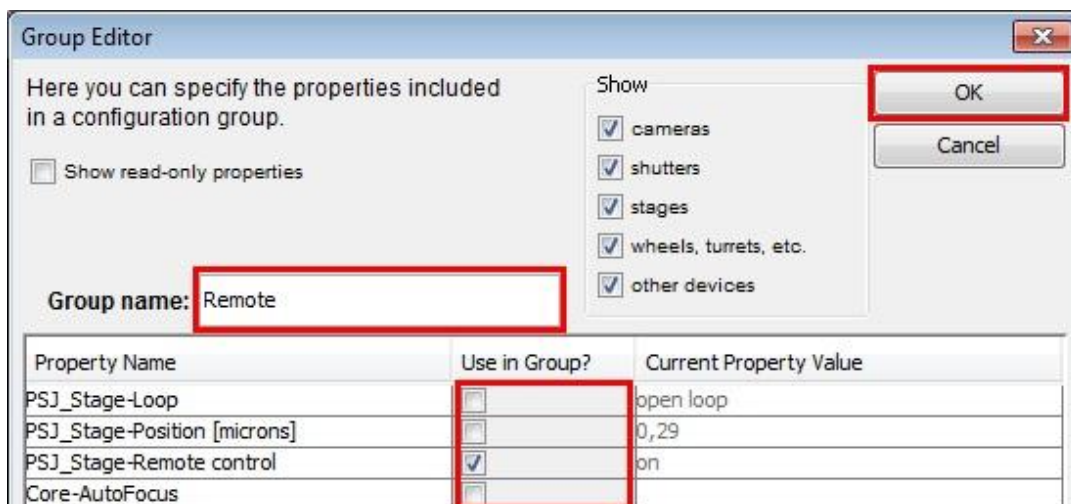
4 Create personal settings

Settings should be done in „Configuration settings“. The Property Browser is very slow and should only give an overview. Personal settings are stored in the configuration file, which was created earlier.

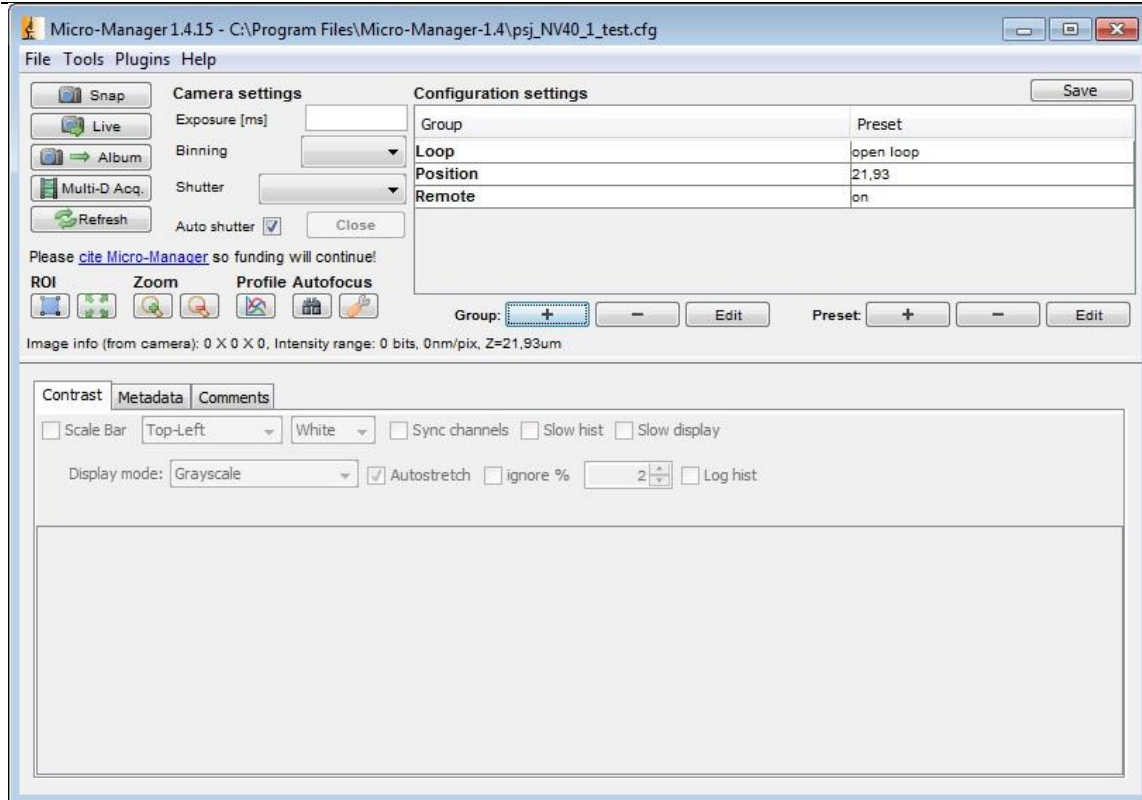
First create a group for setting. Please push the button „+“ at „Group“.



In the “Group Editor” a name for a group can be chosen and the properties be selected. Accept with „OK“.

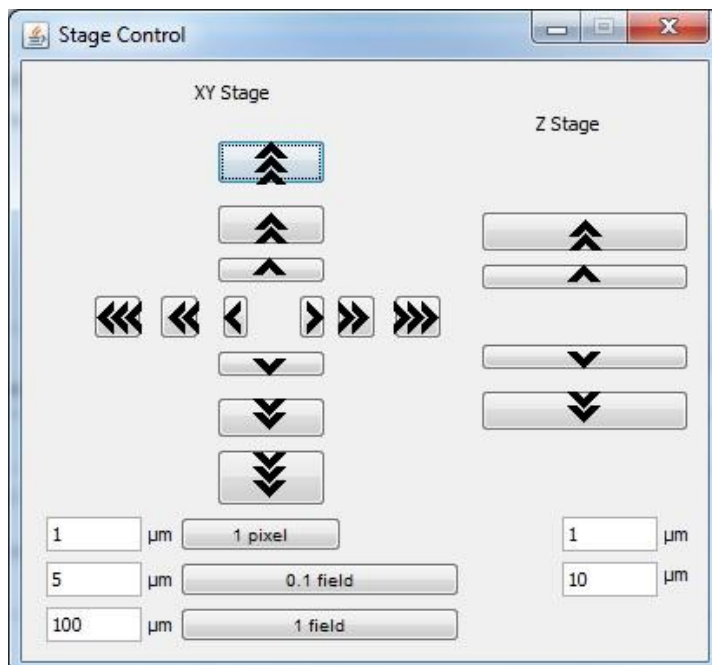


In the next window the settings must be named and the values set.



5 Control with Plug-ins

The position can also be controlled by the plug-in „Stage Control“. For this you need a XY Stage and a Stage for the Z-axis.



It is possible to write own plug-ins in Java or create own GUIs with Netbean.