QUICK START GUIDE

USE OF MICRO-MANAGER WITH THE NANOSCAN SP RANGE OF SAMPLE SCANNERS AND THE NANOSCAN OP OBJECTIVE POSITIONER



Open Source Microscopy Software

Micro-Manager supports the NanoScan SP series sample scanners and the NanoScan OP400 objective positioner in the 2.0.0-gamma1 nightly builds from 08 Jan 2020 onwards. The download is available from the link below:

https://valelab4.ucsf.edu/~MM/nightlyBuilds/2.0.0-gamma/Windows/

The installer files from MMSetup_64bit_2.0.0-gamma1_20200323.exe or more recent version onwards can be used.

CONNECTING YOUR SYSTEM - BACK OF UNIT



PWR connector Provides power to controller electronics 4 pin mini-DIN with screen input +24V DC ±0.75V @ 5A Only connect an approve power supply SYNC IN/OUT connector Provides RS-232 connection with connected computer using supplied gender changer adaptor Also used to synchronise multiple 6000 controllers 9-pin D-type socket DIGITAL I/O connector Provides digital inputs and outputs for interfacing controller to external equipment TRIG inputs and outputs IN POS outputs Stepped inputs and outputs 25-pin D-type socket, 5V TTL inputs/outputs **MUST use shielded cable**

CONNECTING THE CONTROLLER TO THE COMPUTER

Connect the NPC-D-6110 controller to the computer using an RS232C cable from the serial port on the computer to the SYNC IN/OUT port on the NPC-D-6110.

A gender changer adapter is required to the RS232C cable to the sync port. The adapter required is a 9-pin male to male adapter as shown and is included with the shipping kit with your device.

On power-up, the controller will always move the stage across its range to carry out autocalibration. It is important to ensure that there is sufficient clearance between the lens, sample and illumination to allow this to take place. If the temperature or load changes significantly the stage can 'clip' at one end of the travel. Should this happen restart your system to allow auto-calibration.



9 pin male to male adapter

MICROMANAGER HARDWARE WIZARD

Once installed navigate to the Micromanager Hardware Wizard which is an option under **Devices**.

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MICROMANAGER HARDWARE WIZARD

Select 'Create a New Configuration' and click on NEXT at the bottom of the page. This takes you to a list of options, select Prior and then select NanoScan Z.



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ep 2 of 6: Ad	a or remove devices				
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MICROMANAGER HARDWARE WIZARD

The port properties are set up by default and do not need to be changed. Hit "OK" to continue.

Device name: Nano	ScanZ	
nitialization Properti	es	
Device	Property	Value
NanoScanZ	Port	COM3
		COM3
		TCP/IP serial port adapter (1)
Port Properties (RS2	32 Settings)	Scan Ports
Port Properties (RS2	32 Settings)	Scan Ports
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Note: The Micro-Manager serial port device has a known issue which occasionally produces errors, especially during first connection of a device. If this error appears, just click on "OK" and ignore it.



MICROMANAGER HARDWARE WIZARD

Add any other devices to the Hardware Wizard and click on "OK". When prompted for the default focus stage to use, select "NanoScanZ".

For configurations where a longer-ranged Z motor with relatively coarse resolution is used in combination with the NanoScanOP-400 it is important to select NanoScanZ as this ensures the correct focusing mechanism is used.

Hardware Configuration Wizard	×
Step 3 of 6: Select default devices and choose auto-shutter setting	
Select the default device, where available, to use for certain important roles.	
Default Camera:	
Default Shutter: 💛	
Default Focus Stage: NanoScanZ 🗸	
☑ Use Autoshutter By Default	
<u></u>	
Stage focus directions (advanced)	
NanoScanZ: Unknown	
	k Next >
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Further installation and operational advice is available from the Micro-Manager users guide: https://micro-manager.org/wiki/Micro-Manager_User%27s_Guide