SHUTTERCONTROLLER/6

Set up guide

The Cairn Shutter Controller 6 is a small compact device for controlling up to 6 TTL devices in the MicroManager software.

To use the controller device, a running version of MicroManager will be required, we recommend using 2.0.0 which will be on the supplied memory stick or can be obtained from here :
https://download.micro-manager.org/release/2.0/Windows/MMSetup_64bit_2.0.0.exe

Download/run and install with the default options enabled, in the last step, uncheck the box for opening MicroManager and click finish.

Once MicroManager is installed, if the computer is connected to the internet, nothing else needs to be installed*.

If the computer is offline, a secondary driver needs to be installed which will be on the memory stick, or downloadable from here :
https://www.arduino.cc/en/software

Install this software with default options enabled and click finish at the end.

This product uses an Arduino device and opensource code written by Nico Stuurman.
Details and the source code can be obtained from here: https://micro-manager.org/Arduino#project-tutorials

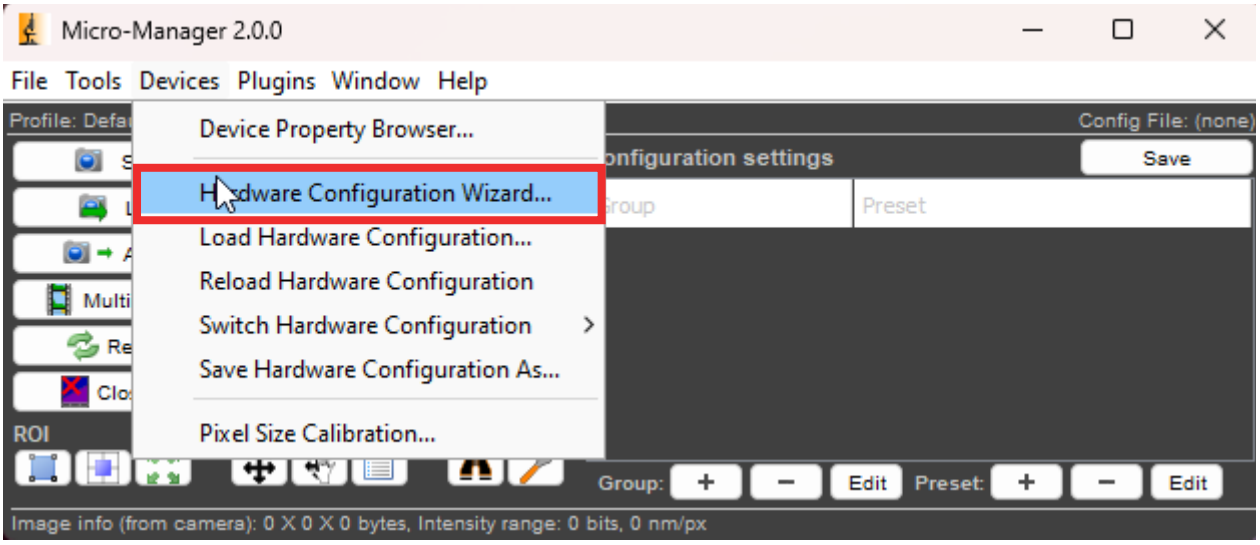
CAIRN RESEARCH

email: sales@cairn-research.co.uk tech@cairn-research.co.uk
+44(0)1795 590140 www.cairn-research.co.uk

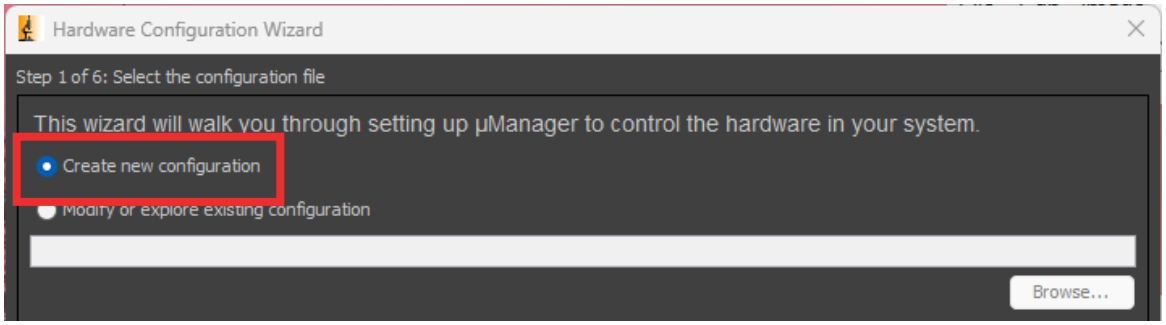
Setting up the Shutter Controller in MicroManager

The next step is to plug the device in with the USB cable provided into an available USB port and run MicroManager.

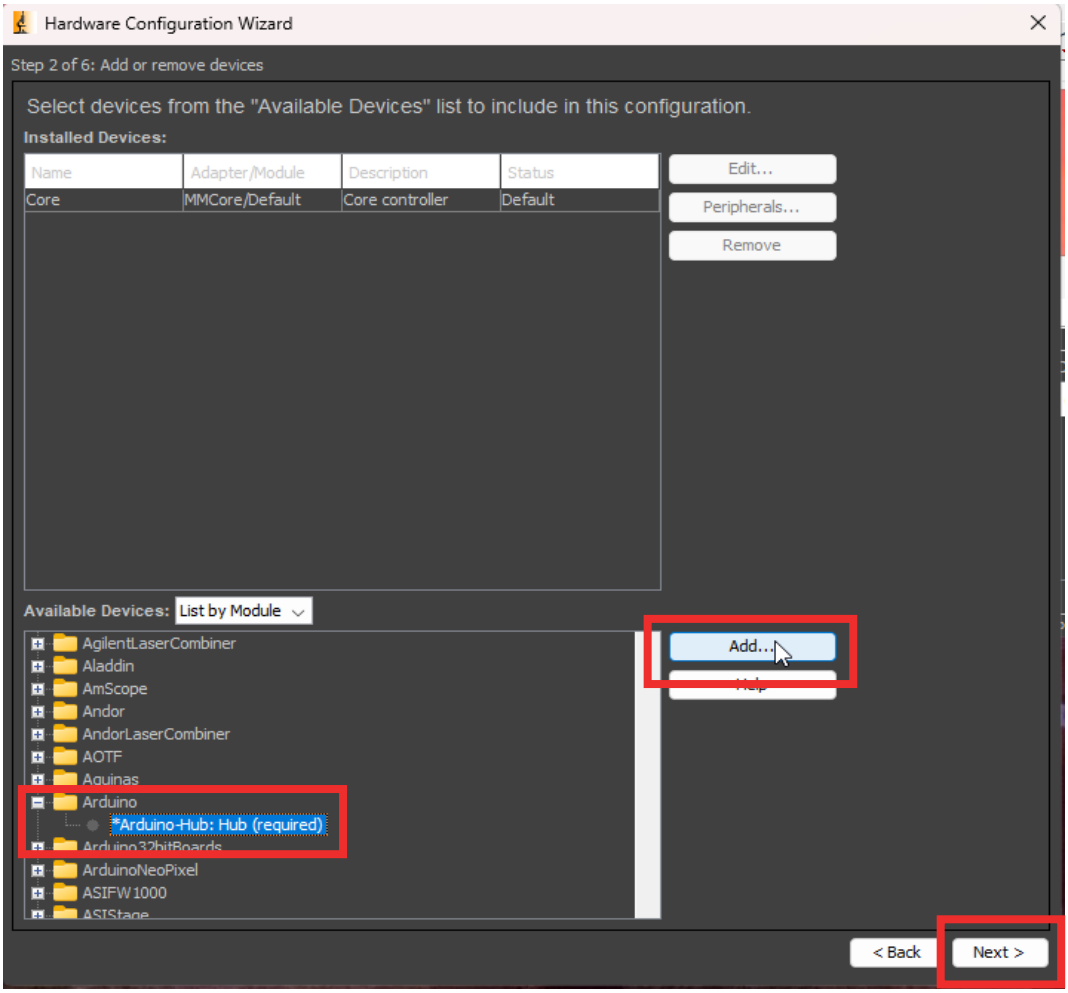
If the shutter controller is being added to an existing configuration, start MicroManager with the correct file, if MicroManager has just been installed, a configuration file will not be available, so on the dropdown, select None and Ok.



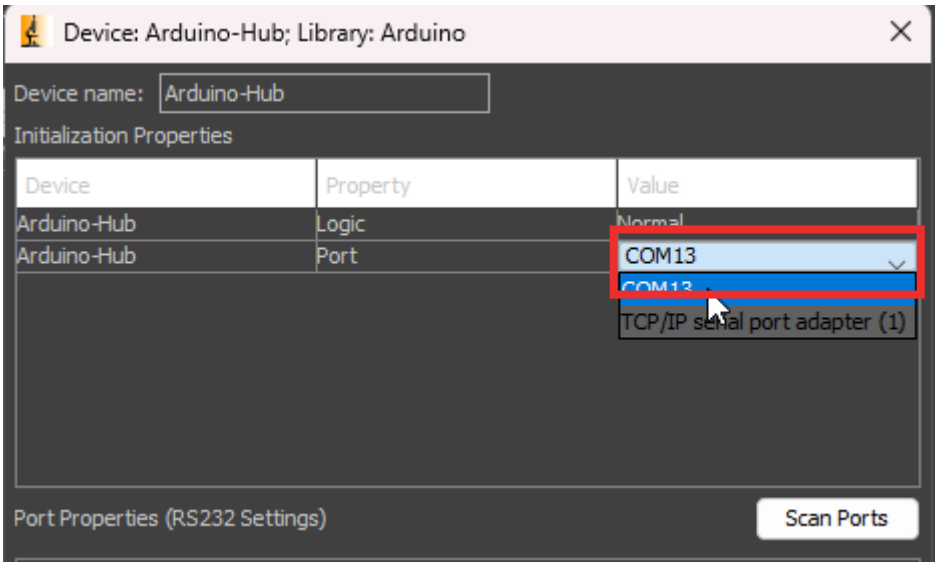
Under Devices, select Hardware Configuration Wizard.



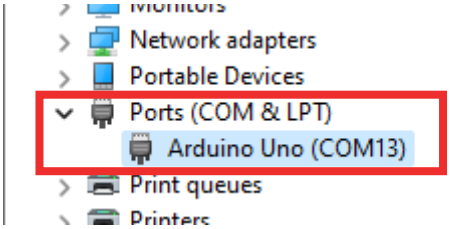
Create or modify an existing configuration and select next.

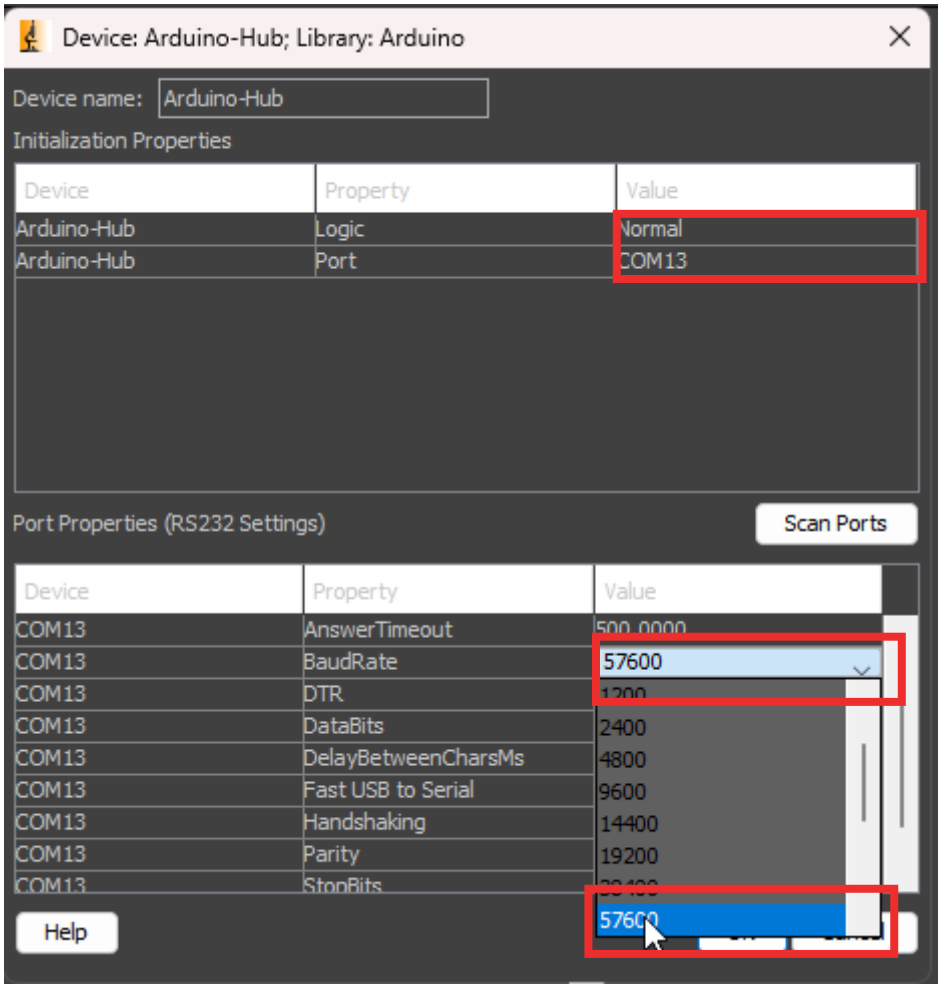


In the lost, locate Arduino and expand this and select Arduino Hub and click Add, when prompted, select the devices COM port.



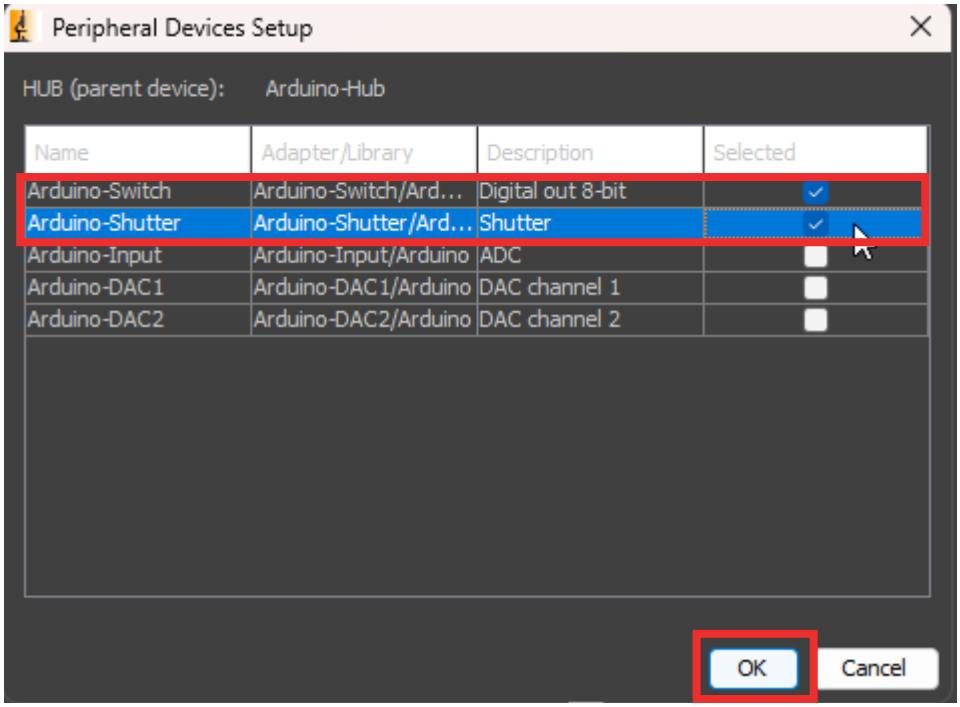
If you are unsure of the COM device number, you can find this under ports in Windows Device Manager



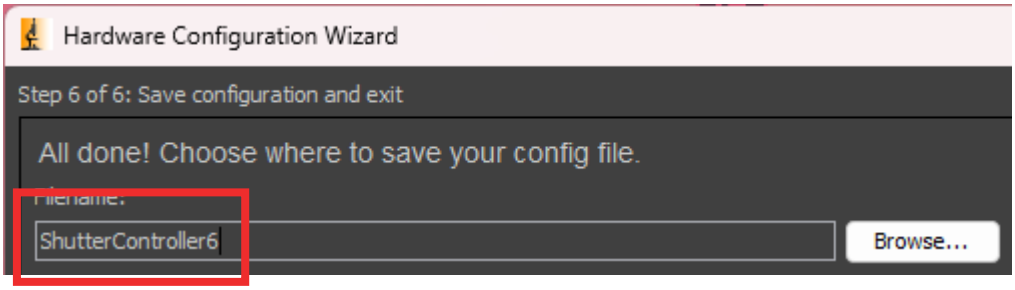


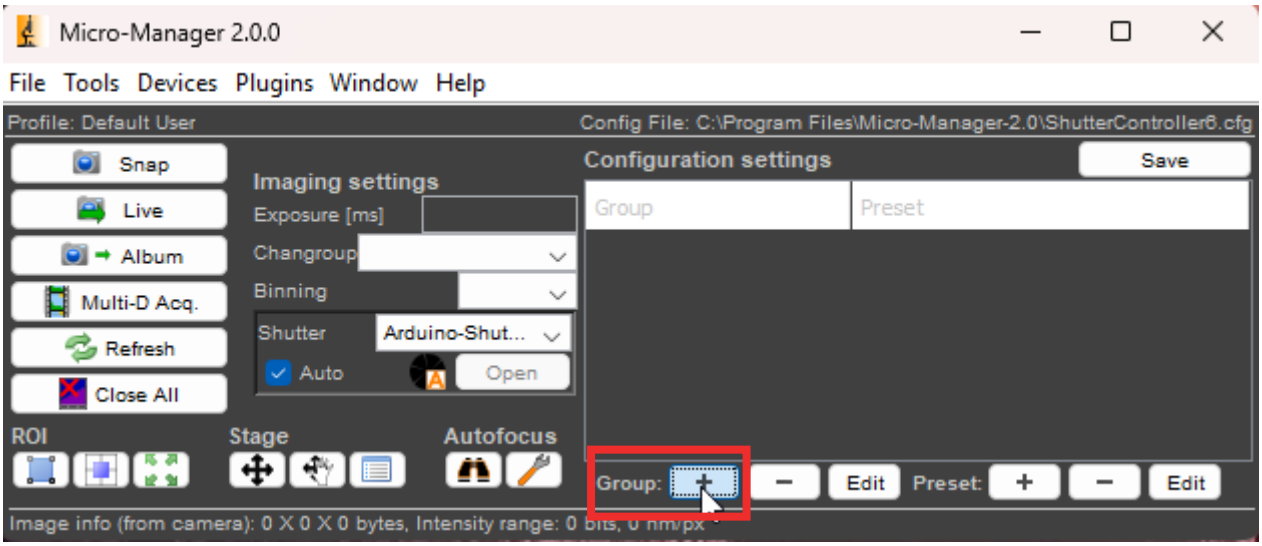
Once the COM port has been selected, some advances settings will show, the only setting that needs to be changed is the Baud Rate - set this to 57600 and press Ok.

An additional window will pop up, select the box for the top two boxes and select ok.

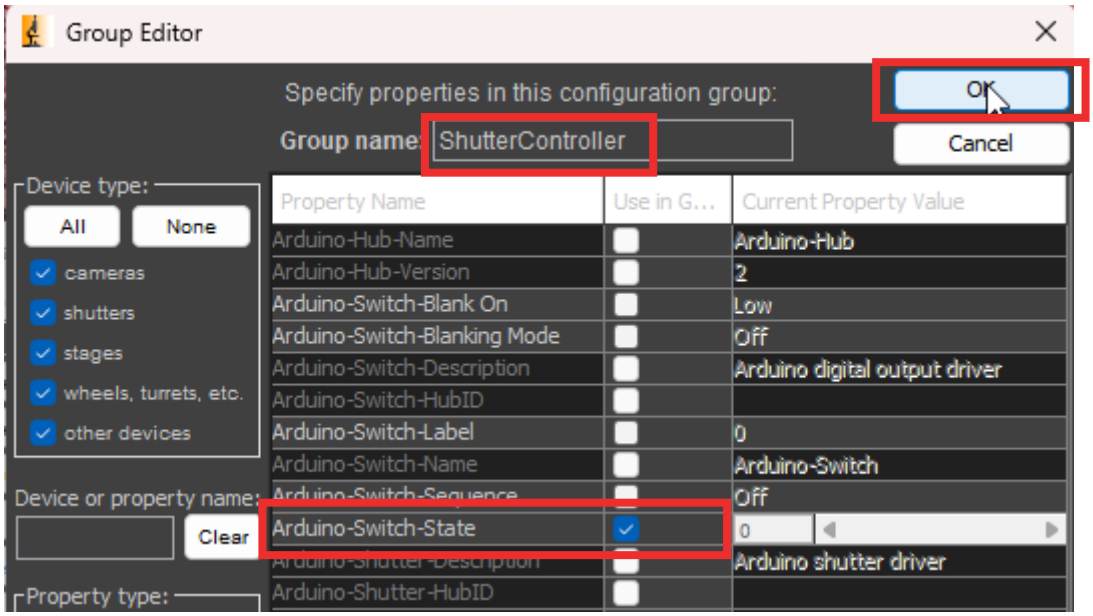


That's the setup complete, click next thorough the steps and give the configuration a new name, or save to your existing config.

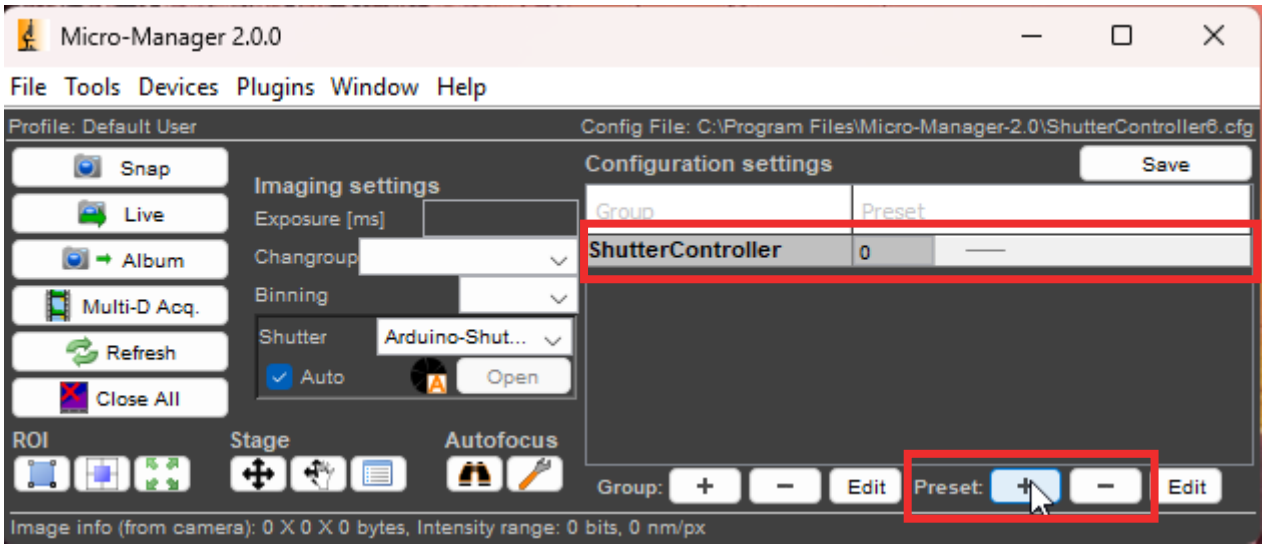




Find the Group options and select the plus icon +.

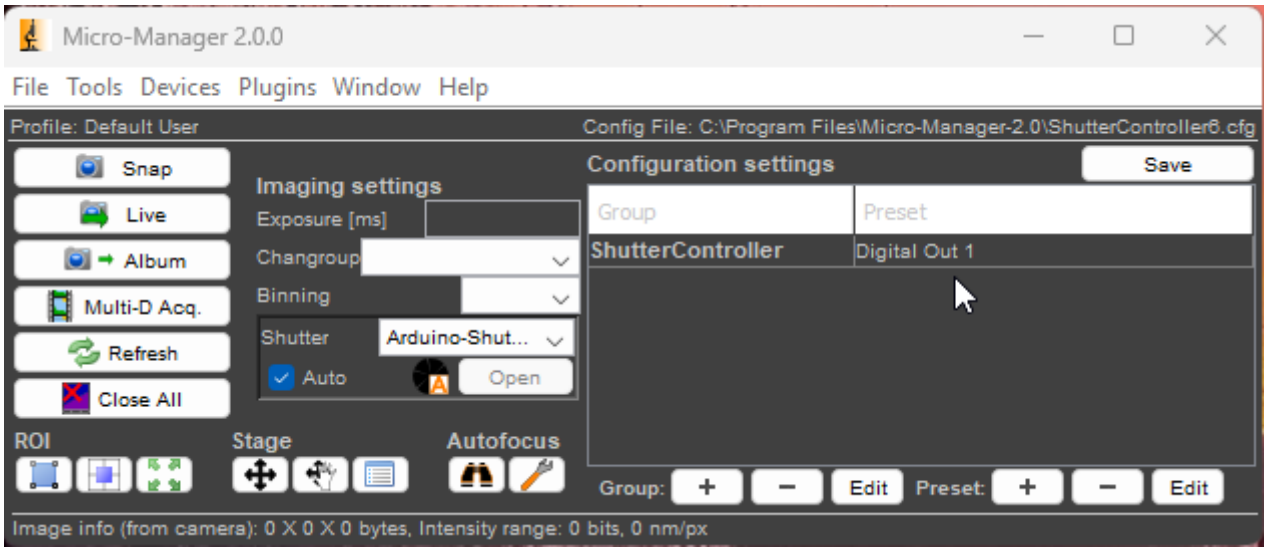


Give the group a name and tick the box for "Arduino-Switch-State" and press Ok.



A new group will be added, and from this presets can be added, this is where each channel can be labelled and the "On Value" added. Refer to the table below, you will need to repeat these steps for each digital line.

Shutter Channel BNC	Arduino-Switch-State Preset Value
Digital Out 1	1
Digital Out 2	2
Digital Out 3	4
Digital Out 4	8
Digital Out 5	16
Digital Out 6	32
All ON	63
All OFF	0



email: sales@cairn-research.co.uk tech@cairn-research.co.uk
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