

Things you need to know before using the SP5_604

Argon laser

The argon laser is a standard laser and not a high power laser. The laser control is done by the software. Switch on the laser as you switch on the other lasers and put the output control at 20%. **When you are the last user of the microscope, switch off the argon laser by turning the key on the switch panel, wait till the fan stops and switch off the other three red buttons.**

Galvo stage

The microscope has both a galvo stage (high speed Z-stage) and a standard Z-movement (moves the lens up and down). The separate XYZ controller moves the lens, the control panel moves the galvo-Z. By default the software uses the galvo-Z for imaging Z-stacks and not the lens Z (called Z-wide), so you need to use the control panel to mark Top and Bottom of your Z-stack.

For living cells there is a special holder to put your dish on the galvo stage.

HyD detector

The third detector is not a standard detector, but a more sensitive HyD (hybrid) detector. The detector has a lower background noise and is especially useful for low signals. There is no offset and the gain is a percentage and mainly a software multiplication value. The standard value is 100. The detector can run in mode:

- Standard, method of choice if you want to quantify signals
- BrightR, changes the linear behavior, results in a higher dynamic range, better looking images, but is not usable for quantification.
- Photon counting, give the number of photons per pixel, only used for very dim samples.

AFC – Automatic focus control

AFC is a hardware auto focus utility that makes it possible to keep your sample in focus during time lapse experiments and if you move through your sample. You can activate AFC by pressing the lower left button of the XY/focus controller.

XY/focus controller

The buttons of the XY/focus controller on this microscope work slightly different. The buttons on the right side for fine and coarse focus are the same, but the top left button switches both the XY and Z between coarse and fine. The lower left button activates the AFC to hold the focus. Adjusting the lens Z deactivates the focus control. When you use the galvo Z with AFC activated the system will compensate for the galvo Z movement.

