

# Zeiss Confocal Microscope: Quick User Guide

## Switch on

Turn remote control box on (power to everything)  
Turn PC on if necessary; user administrator, password dalton

Start LSM 5 software  
Chose *scan new images, expert mode*

Acquire tab → Lasers  
Select laser required:  
Ar laser (458, 477, 488 and 514 nm) needs to be warmed up (> 20 minutes) before use  
Click *standby* and set to 45 % power; reads *warming up*  
When reading *ready*, click *on*.  
HeNe laser (543 nm) click *on*

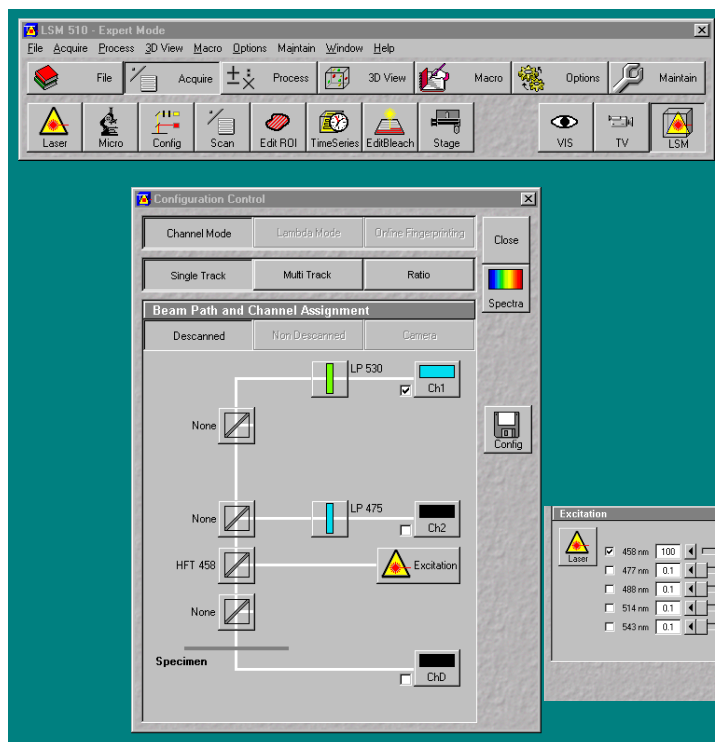
## Set up

Acquire tab → Configuration

LP xxx: Long pass filter;  
allows  $\lambda > xxx$  nm to pass  
through.  
BP yyy – zzz: band pass  
filter; allows light  $yyy < \lambda < zzz$   
to pass through.

NFT vvv:  $\lambda < vvv$  nm is  
deflected,  $\lambda > vvv$  nm  
passes through (NFT KP  
opposite way round)

HFT uuu: deflects *uuu* nm  
lines onto sample, allows  
emitted light back  
through



Select  
detector  
channel(s)

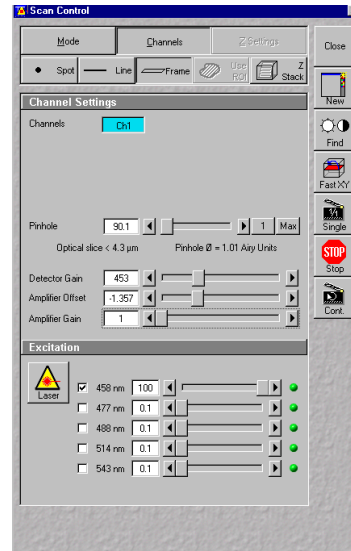
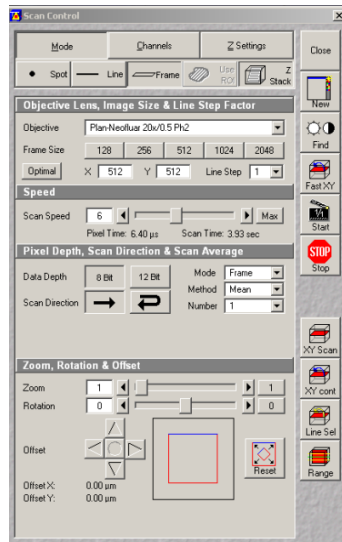
Select laser  
wavelength  
required

## Acquire image

Acquire tab → Scan

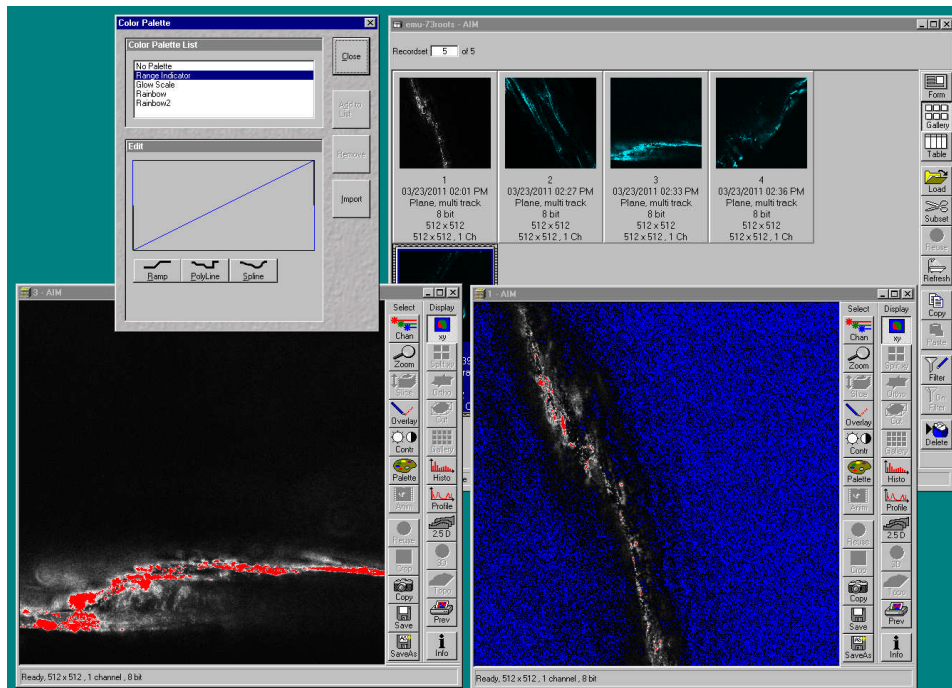
Main window for image control

Use *Mode* tab to set frame size, scan speed etc



Use *Channels* tab to set pinhole (start at ~ 1) and change gain and offset (see below)

Click on *XY scan* or *XY continuous* to scan and *Start*



Select range indicator from *Palette*

Set *detector gain* to minimise red areas, *amplifier offset* to minimise blue (use minimum *amplifier gain*)

## Switch off

Ar laser should be powered down but the power must be left on for at least 30 minutes for cooling. Then the computer can be shut down and the main power (remote control) switch turned off.