SYSTEM OVERVIEW

6 position control panel for scanning
User can define this box

High QE APD Detectors
Dickroic

Control touchpad for microscope

Integrated CCD Camera

Tunable Spectral Detectors
System has 2 SP detectors
range 400-800nm detection

MP laser attenuation box
contains 1/2 waveplate and EOM

EOM power supply

Deep See control knob

DAQ Box

EL6000 Power supply. Fluor Light

Deep See MP laser
Precomp control box

Dotd power supply

Dotd contrast control pad

System computer

"Mic control Box"

Pre compensated Multi Photon Laser
Spectra Physics Deep See
Femtosecond Laser

Tuning Range 690-1040 nm

Behind the computer table there are 3 Green power supply switches
and a key.
These are the major power supply switches and the primary laser safety key for the system.
Manual Z stage position control
Raise and lower the height of the stage to match the working distance you need for the sample. Total travel of the objective is 3 mm.

"Note as with all upright systems there is a risk of crashing into your sample"
TURNING ON SYSTEM
If using MP laser turn MP laser key
Turn on EOM
Turn on NDD power box
For using Just confocal or MP
Turn on EL6000
Turn on Dolid power supply
Main Power supply switches.
(Green Switches)
Start with switch on top power second switch
power third switch
turn key to ON position.

Turn on motorized power control unit for
stage.

Use he power of the machine to
set the computers.

Computer will power on when the green switches are
turned on. If you would like to gain access to the
computer and you do not want to start up the entire
machine -> Turn on the first Green power switch.
This will supply power to the unit.

EL6000 Metal Halide Bulb Turn on at any time.
Don't forget to turn it off. Bulb lasts ~ 2000 hours.

Microscope control touchpad.
Powers on when green switches are turned on.

Dot illumination power supply. Turn on at any time.

Touchpad to change contrast in image

3mm locknut that holds slider or
turret secure.

MP laser prep comp control pad.
Can alter prepcomp of laser here.
Load GVD curves here.

When changing between the
slider and 6 position turret the
microscope must be powered
off. It is best to make this
decision before you start the
system.

Position now occupied by the power
supply unit for the motorized stage.

Called the "Mic control Box"
This should not be turned on or off as
part of the start up seq. It should be left
in on position.
High power EOM
This device must be turned on to control the power of the MP laser. This also enables the user to do ROI scanning / bleaching with the MP laser.
This device can be turned on when needed but should be turned off when the MP laser is not being used since it uses very high voltage.

**Critical alignment mirror.
Don't bump or put anything near this component**

MP Laser Pre Comp control knob

APD Detectors physically located here. Dichroics have been included and BP of filters is listed on Dichroic. Empty Dichroic was included for custom filtersets.

Motorized Dott Contrast can be used with MP excitation. This gives you a contrast "brightfield" image. This device can be turned on at any time during the imaging process when needed.

NDD Box Turns on the following detectors:
NDD TL and NDD RL
This box must be turned on before

High QE APD Detectors. These detectors can be turned on when needed. There is no need to turn them on or off in a specific order.
The power switch in the front (shown) is the main power switch for the box.
In the back you have the ability to turn on either Ch 1 or Ch2 or both. These detectors are VERY sensitive so they are ideal for low signal conditions.

MP laser power key. If you are going to use the MP laser you must turn this key from Standby to the ON position.
**This will not power up the laser. The laser must be powered through the software due to safety interlock rules**

Power switch Black and Orange should not be turned off unless directed by SP or Leica.
Keep this switch in the PULSED mode. Only service should switch this mode to cal the EOM.

Power switch. Turn on at any time MP laser is being used. This does not need to be turned on or off in any specific order. System uses very high voltage so it should be left off if it is not being used.
Enables you to attenuate the power of your MP laser.
Also allows for ROI scanning.

Knobs will change calibration of unit. User should not change these values.

Just toggles between what value is displayed in the LCD Screen.
Not important to users.
NDD Detectors

NDD Power supply.
If you plan to use the NDD Detectors you must turn this power switch on before the scanner is powered on.

If you forget to turn this on and you need it:
- Close software
- Turn off Scanner Power -> Turn on NDD box -> Turn on Scanner supply green switch -> Start up software.

Individual Power Switches for APD Detectors.
Main power supply switch is on the back of the box. These detectors can be turned on at any time and should only be powered on when needed. They are very sensitive with a high QE.
DIC prisms are not included here so this silver ring will not do anything. Your system has been upgraded to include Motorized Diodt contrast instead which can be used with MP laser.

Condenser centering screws Used for proper Koehler Illumination.

Condenser positioning knobs. Raise or lower the entire unit. Please note on upright stages you must be careful to set this height correctly. Also key in setting Koehler illumination.

Put this manual slider in this position if you are using MP laser and you would like to detect fluorescence in the Transmitted direction. IR light will pass through the dichroic and can be detected in the Brightfield detector for simultaneous Fluorescent and Brightfield overlay.

Put the manual slider in this position if you are looking in the microscope eyepieces and want to see brightfield illumination.

Inner manual stage control. This stage can be removed and replaced with a flat plate.
APD Detector Dichroic.
BP is written on the cube. Cube can be removed. Empty Dichroic was also included in the config so that custom filter set could be made. Contact Chroma or Semrock for possible filter sets.