

SOP of Supercontinuum Laser

Cautions:

1. The supercontinuum laser source is **VERY dangerous** light source and can do major damage to human.
2. This source is also a very stable source and absolutely **no warm-up is needed**.
3. The source must be **turned-off immediately after use** both for safety reason and protect the laser source as it can only work for certain hours before it will fail and need to be replaced.
4. Don't move the cable because the light will be changed.

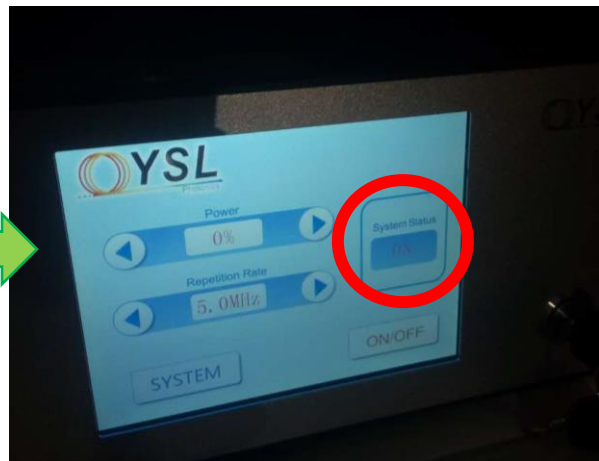
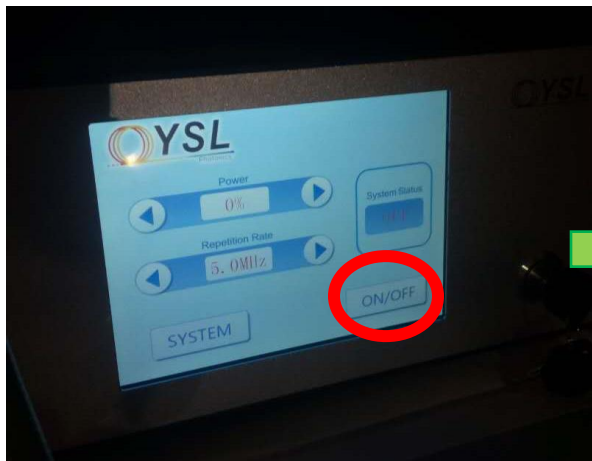
1. Find the key in the small box under the table.



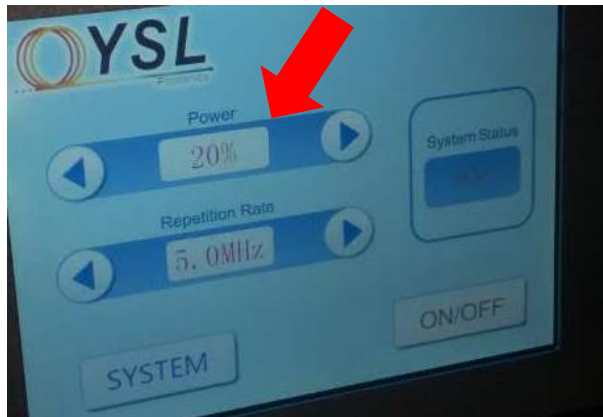
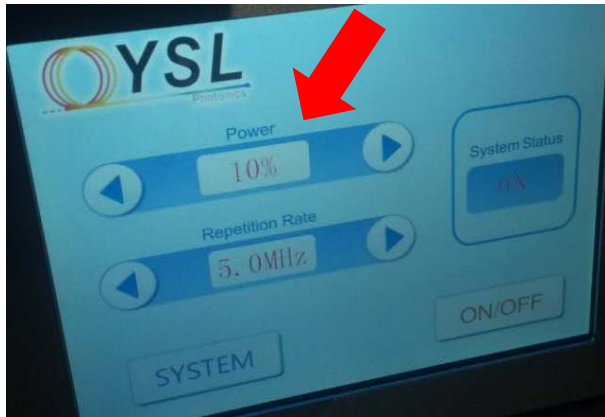
2. Use the key switch on laser source.



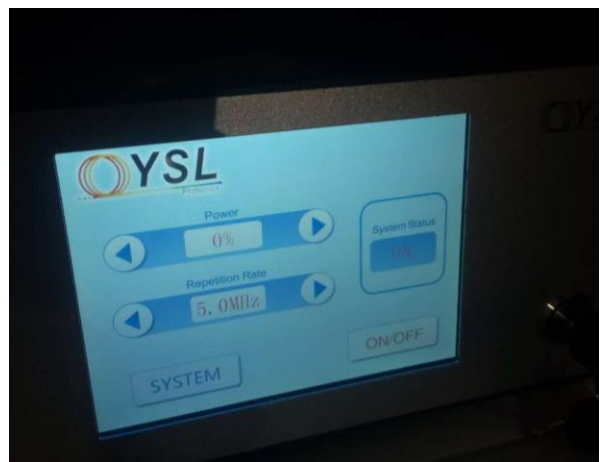
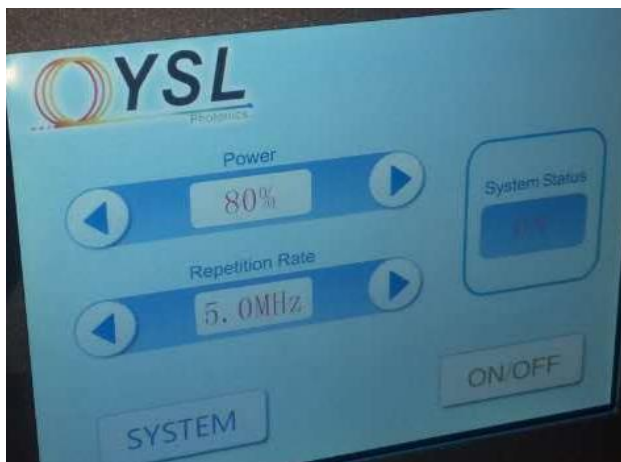
3. Press "ON/OFF", the system status will show "ON".



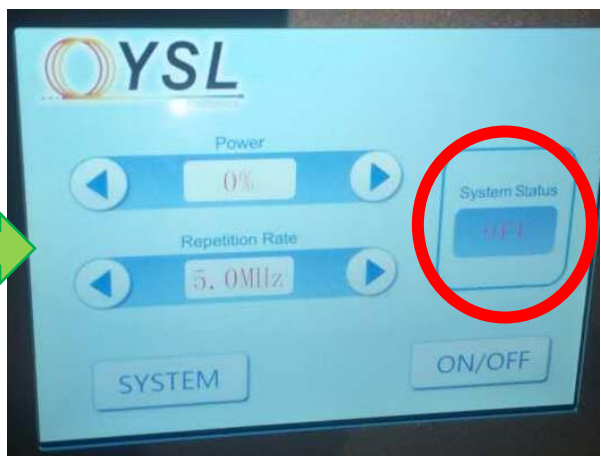
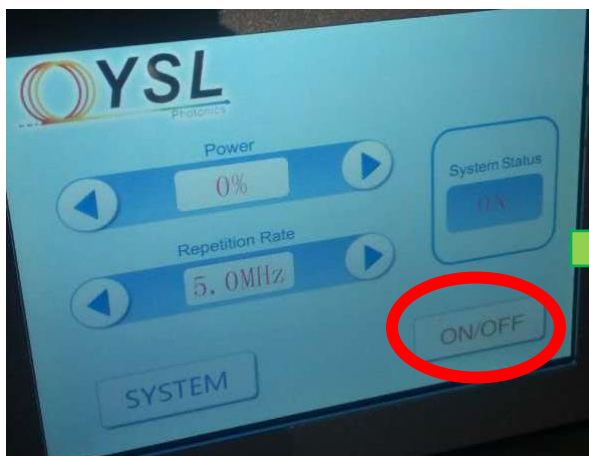
4. Set the "Repetition Rate" first. Then set the "Power", **you must gradually increase the power 10% by 10% to what you need. Never directly set it to high power. This is very important for protecting the Laser.**



5. Decrease the "Power" 10% by 10% to 0% when you finish. Never directly set to 0%.



6. Press "ON/OFF", the "System Status" will show "OFF". Then switch off the use the key.





7. Put the key back to the small box.



SOP for VLF

Now we can manual adjust the output wavelength through tuning the long pass (LP) and short pass (SP) of VLF.

If we need to control the VLP by the step motor, please following the SOP in the next page.

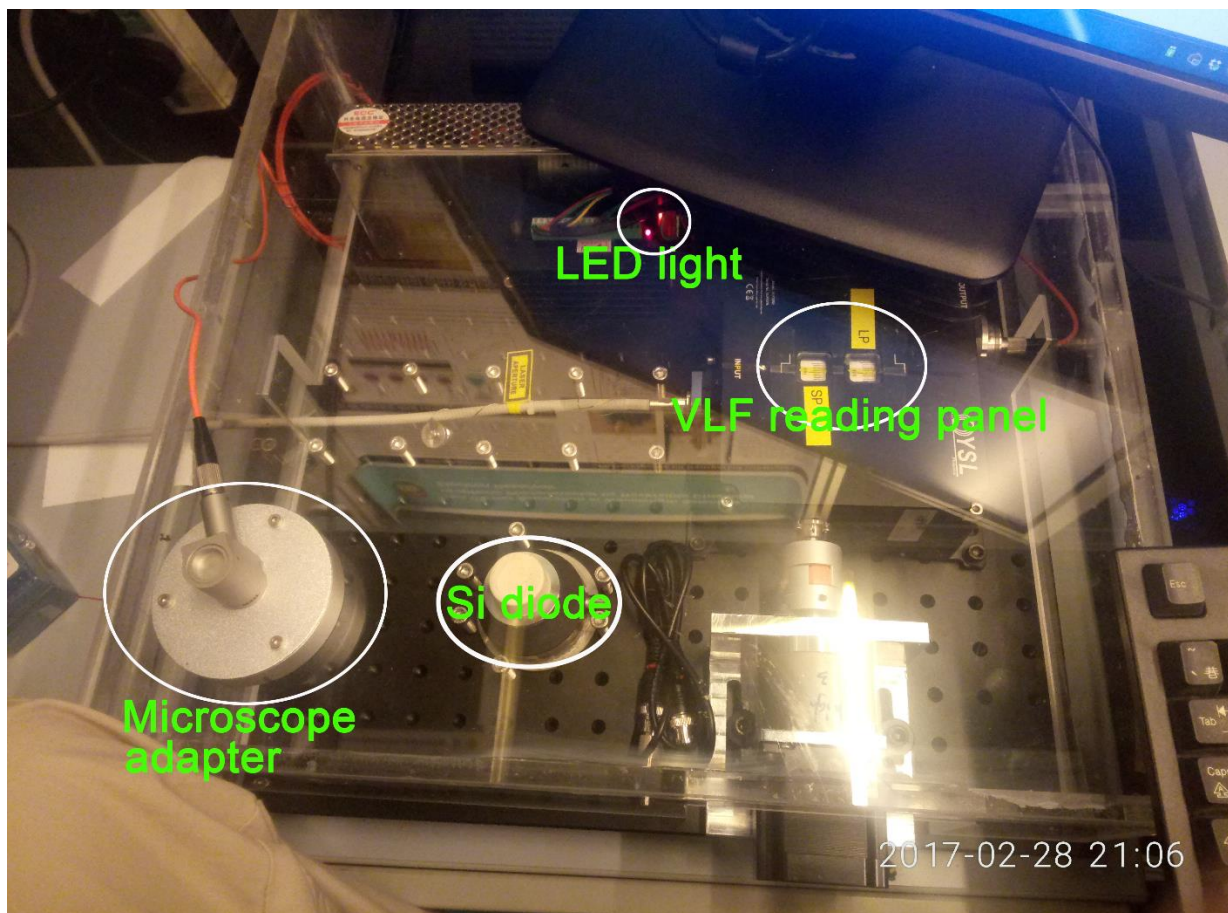
SOP for the step motor to control VLF

1. Switch on the laser. Set the frequency and percentage of power. Check the step motor power is on, the control board light (in the plastic box, a red and a green LED light) is on.

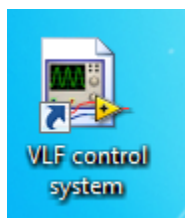
You can find microscope adapter on the plastic box, fix it on the back of microscope when you use it.

We can use Si diode and cable to calibrate the laser light intensity.

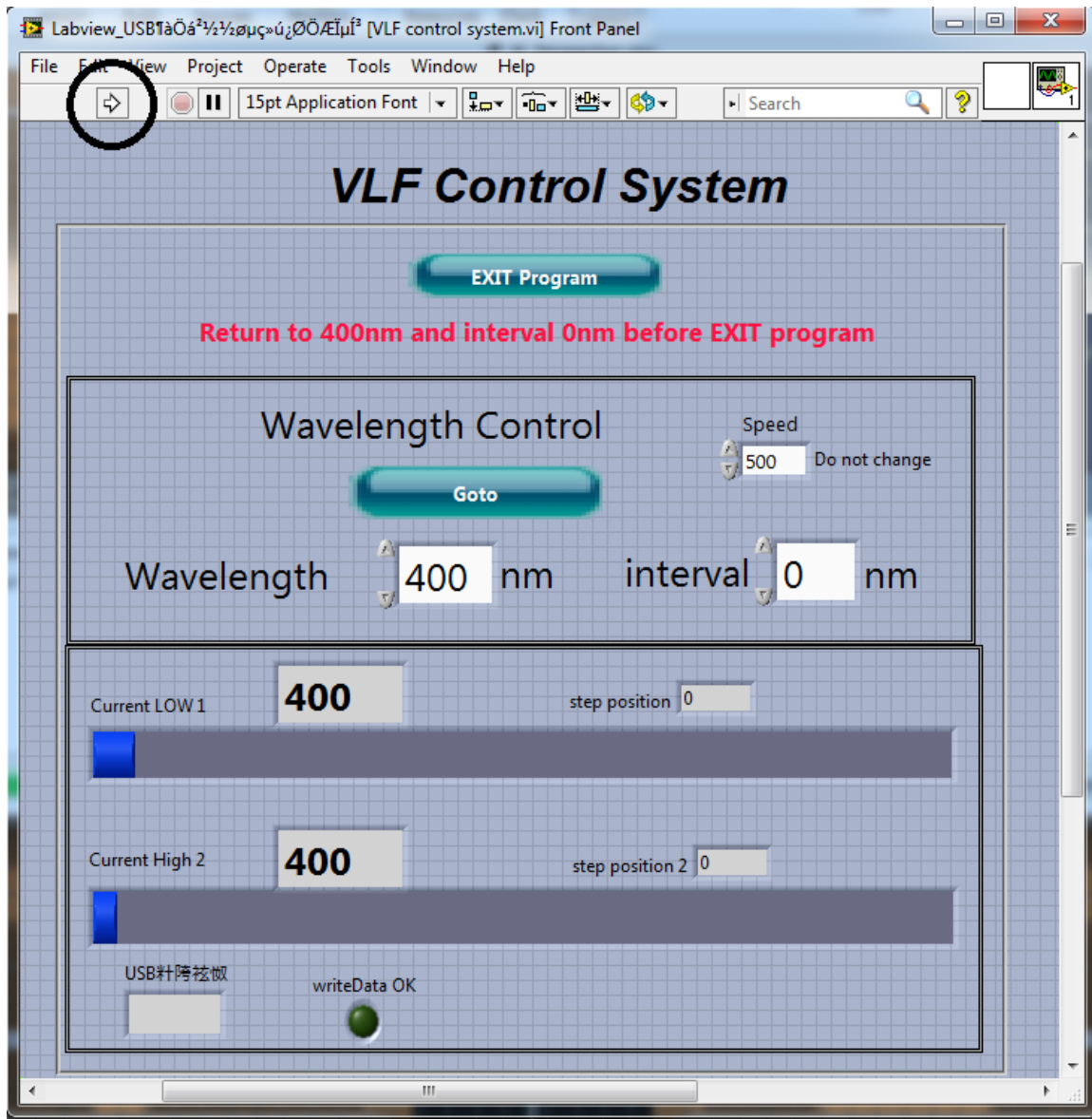
Remember to check the VLF reading panel periodically during the running of step motor to avoid possible potential error and deviation of step motor and software.



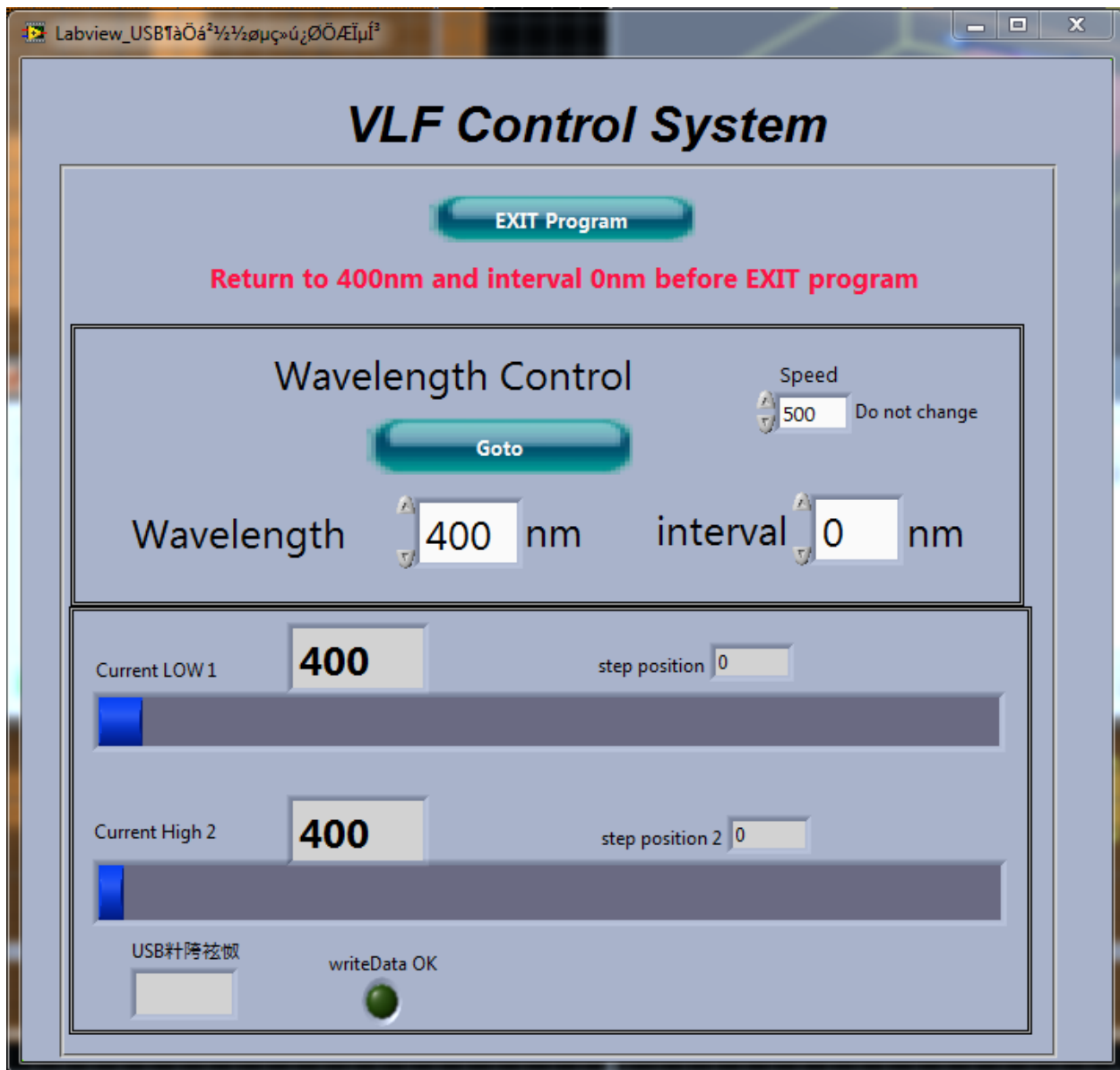
2. Find the icon at the desktop.



3. Press the arrow as show in the circle.



4. Then you can set the wavelength and interval. For example: wavelength 500nm, interval 20nm, means the input light is 490-510nm. **Never change the speed.**



5. When you want to exit program, **be sure to return to 400nm and interval 0nm.** If you don't do that the program can not recognize the real position when you open it again, it may go out of the range and damage the VLF.

Questions:

1. What should I do if I want to change the power from 20% to 100% power?
2. How to tune the output wavelength?
3. Do we need to warm up the machine?
4. Please describe the shutdown procedure.