

# Bio-Spherix In-vitro Hypoxia system

## Basic operation

### To turn on the system

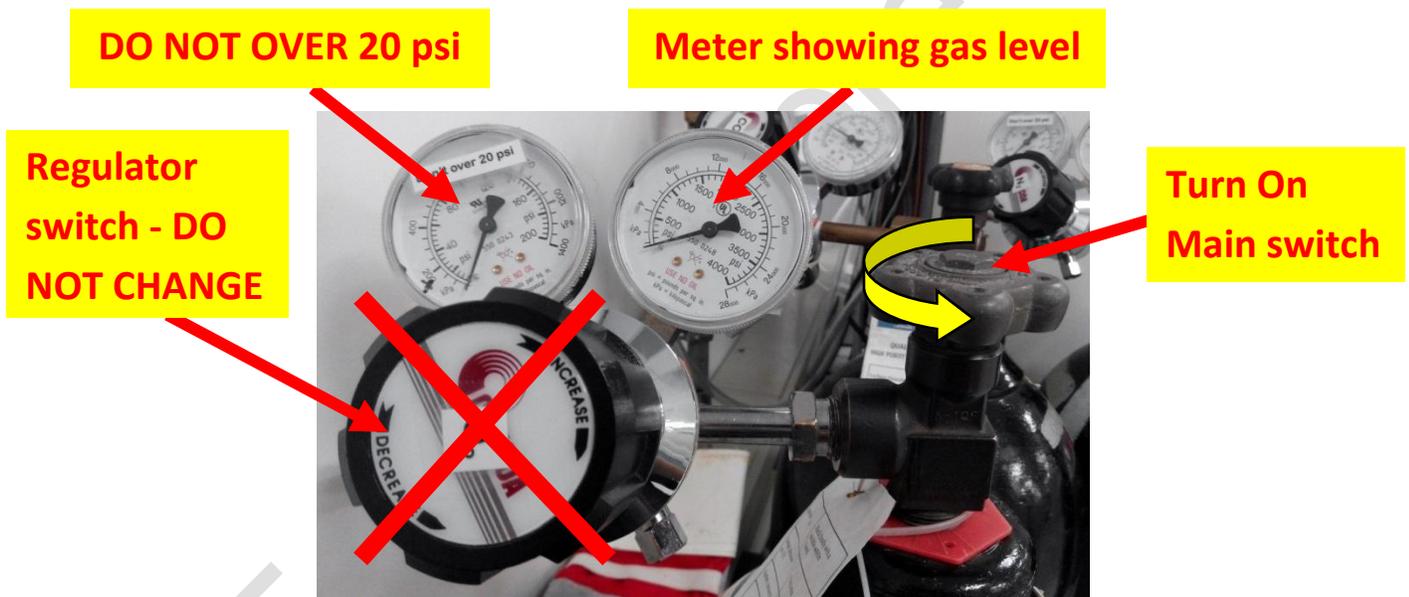
#### (For all users)

1. Turn on the N<sub>2</sub>, O<sub>2</sub>& CO<sub>2</sub> gas cylinders.

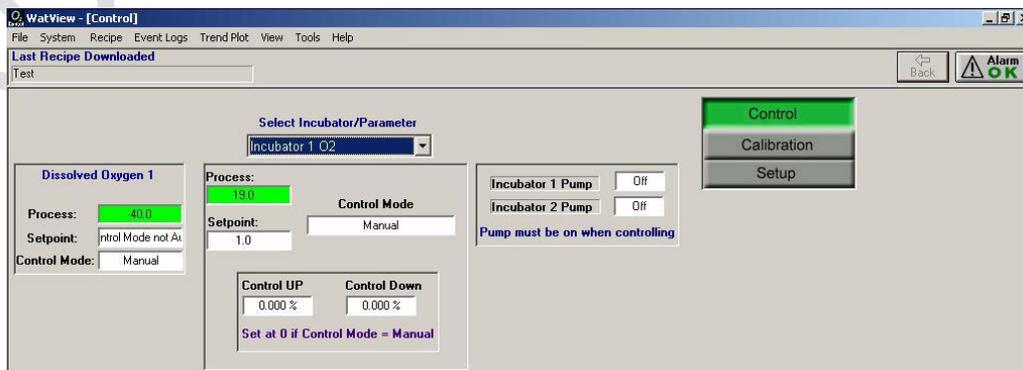
To turn on the gases, turn the **main switch** of the gas cylinder in **anti-clockwise** direction.

**Do not change the regulator setting (pressure not over 20 psi).**

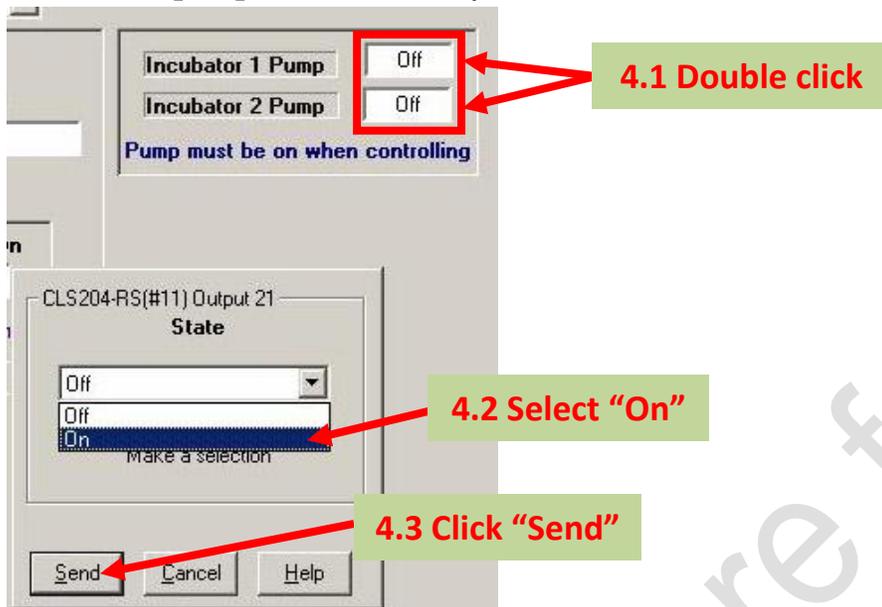
Please kindly inform the FCF staff if the regulator displays gas level **less than 300psi.**



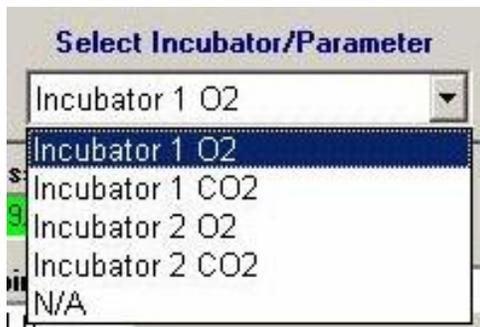
2. Put your culture plate/dish into the chamber. Refill chamber's water tank with autoclaved water when necessary.
3. Open the "Watview" in the computer.



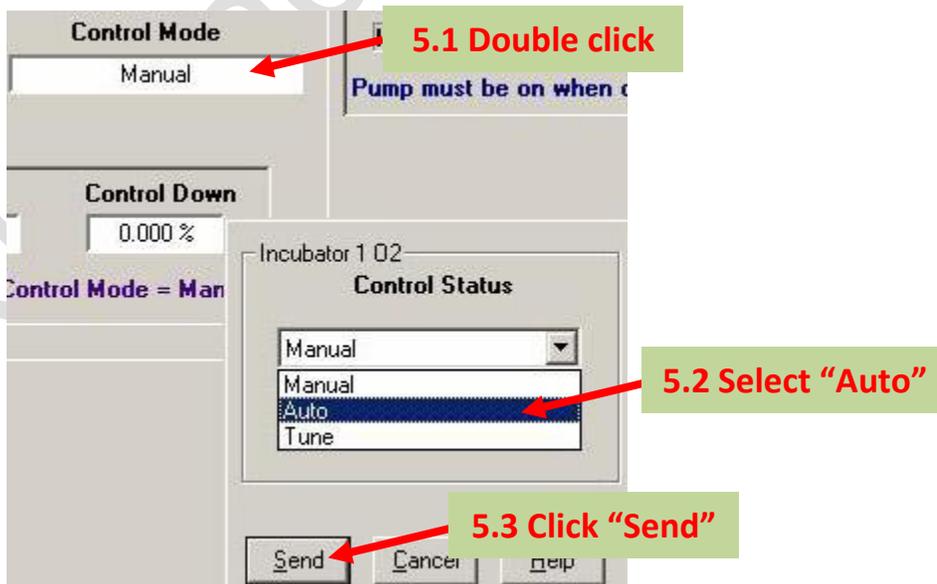
4. Turn on the pump of the incubator you need to use.



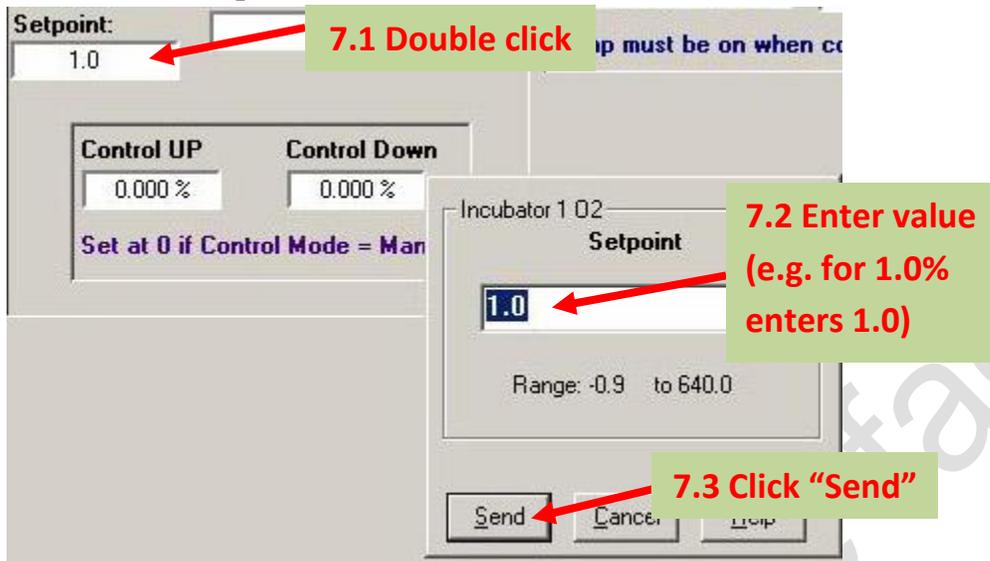
5. Select the "Incubator/Parameter" you need to use.



6. Select Control mode to "Auto".



7. Enter O<sub>2</sub>/CO<sub>2</sub> set point.



8. Repeat Step 4 to 6 for the “Incubator/Parameter” you need to use.

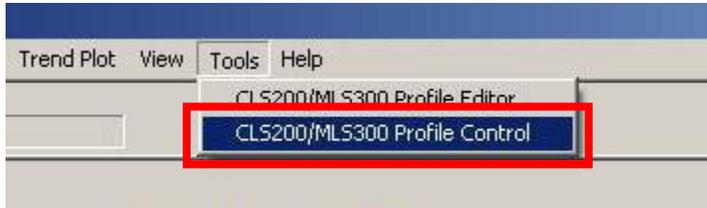
9. Check the process value to see the O<sub>2</sub> & CO<sub>2</sub> levels are reaching your set point.



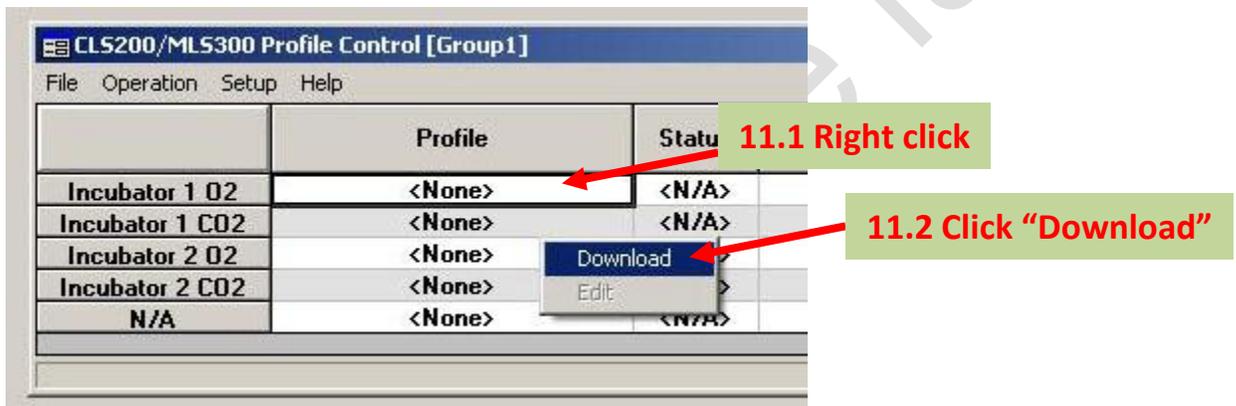
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**(Step 10 to 14 for users need to use the profile control for intermittent hypoxia experiment only)**

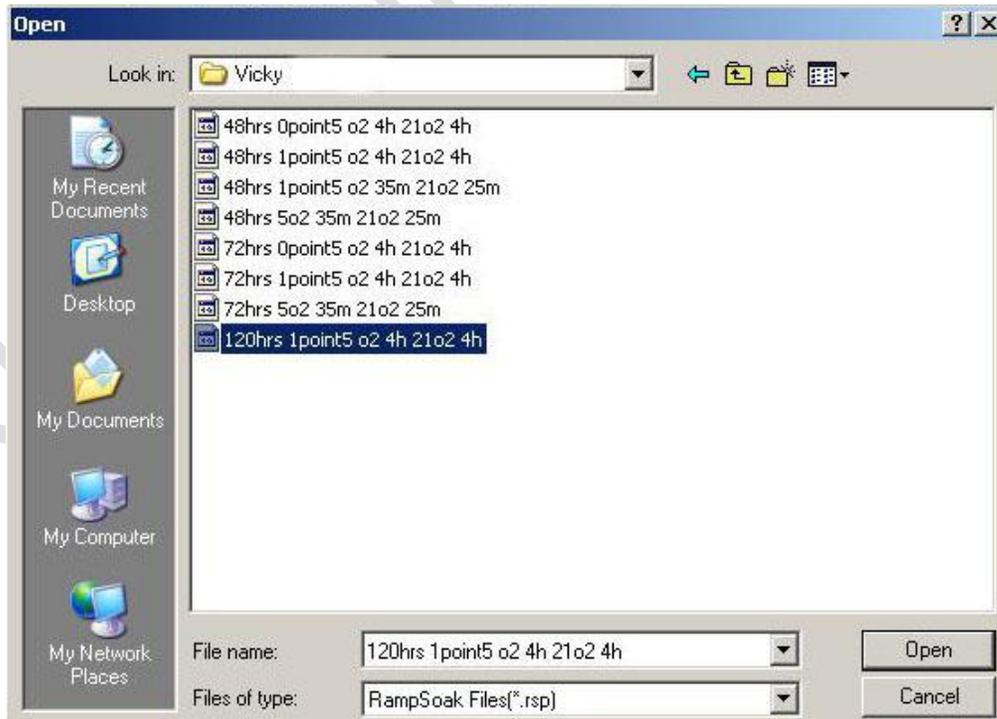
10. Select Tools → CLS200/MLS300 Profile Control



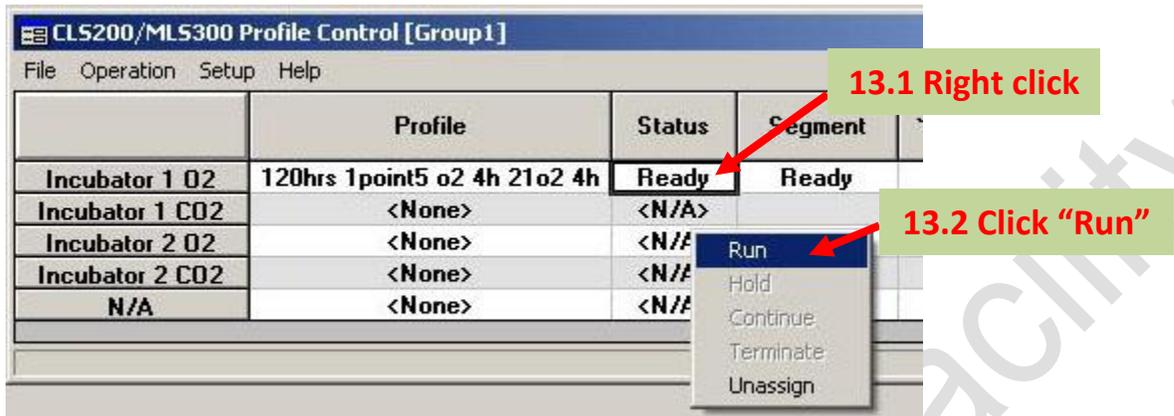
11. Download the profile for the “Incubator/Parameter” you need to control.  
(If you do not have the profile, please contact FCF staff.)



12. Open the profile need to be used. (In the “Oxycycler Profiles” folder on the desktop)

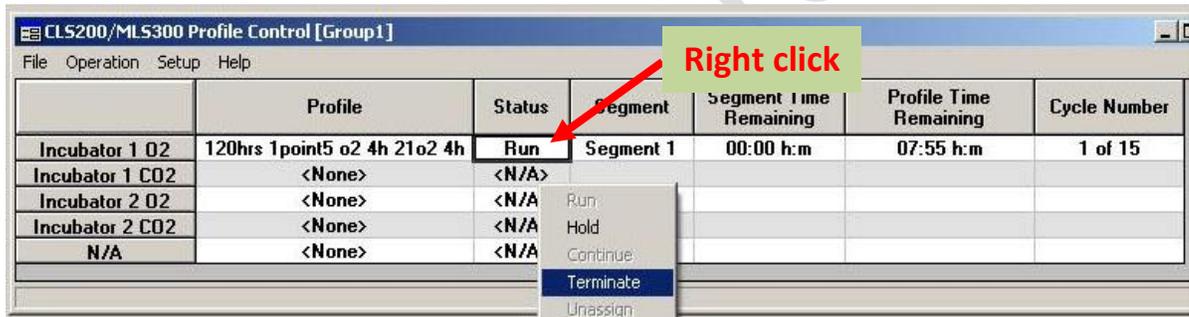


13. When the profile is loaded and the status is “Ready”, start the profile by select “Run”.



14. When the profile is running, the program will show the “Profile Time Remaining” and “Cycle Number”.

The profile can be pause by selecting “Hold” or stop by selecting “Terminate”.

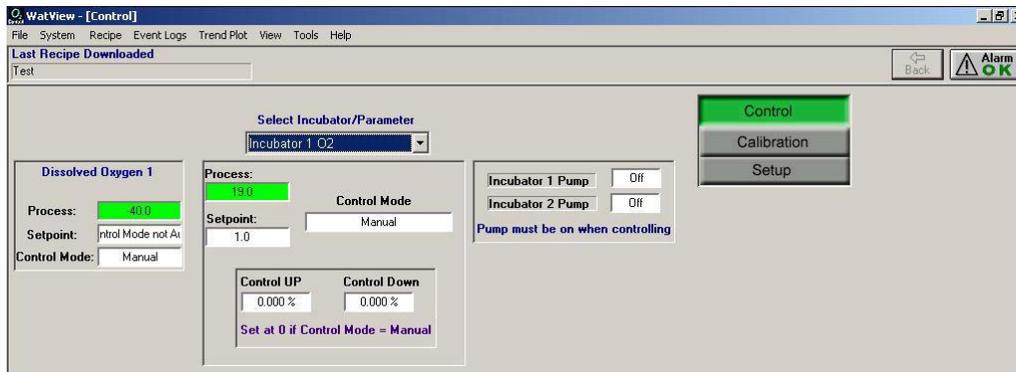


**End for turn on the system**

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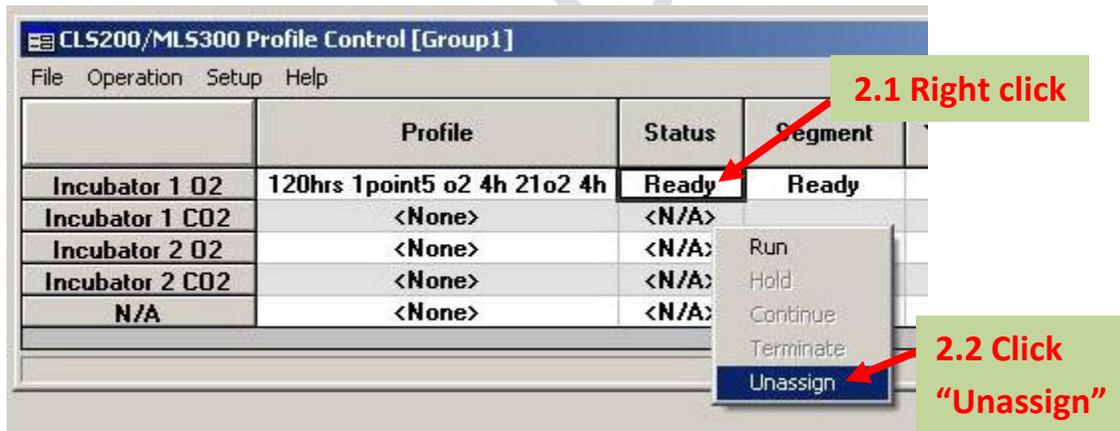
## To turn off the system

1. Open the “Watview” in the computer.



**(Step 2 & 3 for users used the profile control for intermittent hypoxia experiment only. For other users please skip to Step 4)**

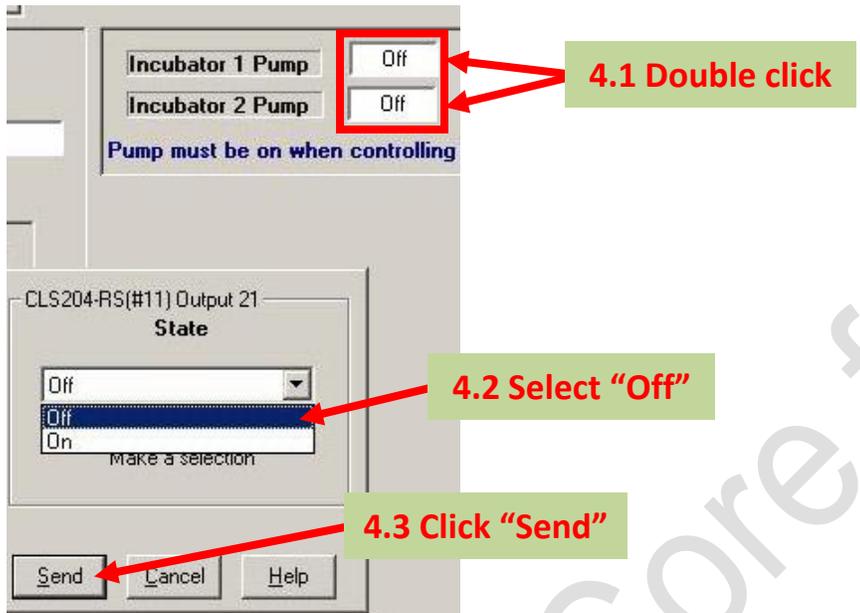
2. When the profile is ended, the status will show “Ready”. Unload the profile by selecting “Unassign”.



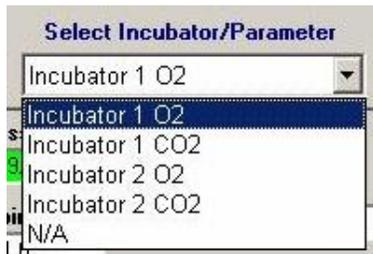
3. Close the “CLS200/MLS300 Profile Control” window.

**(For all users)**

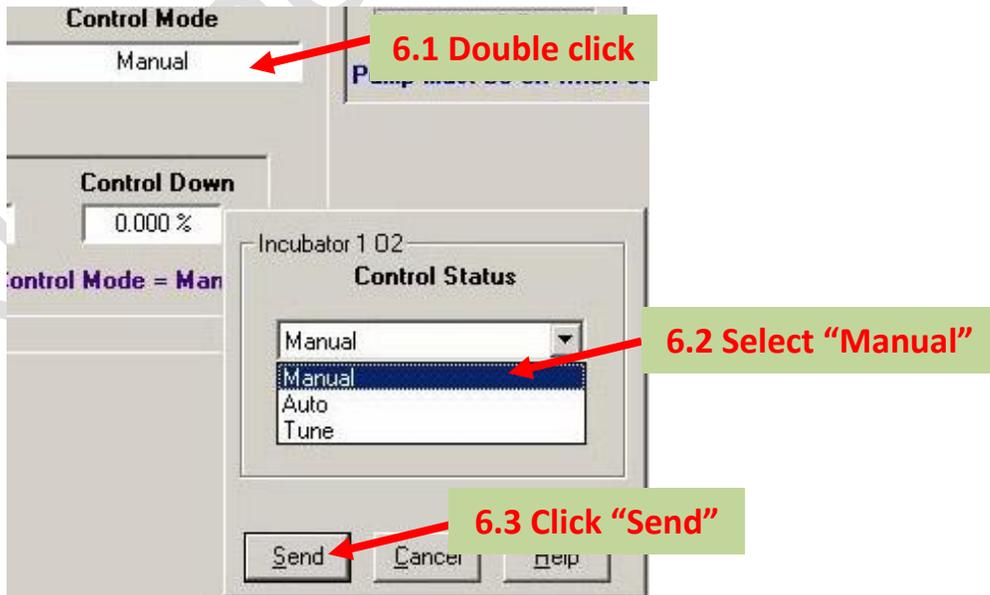
4. Turn off the pump of the incubator you have used.



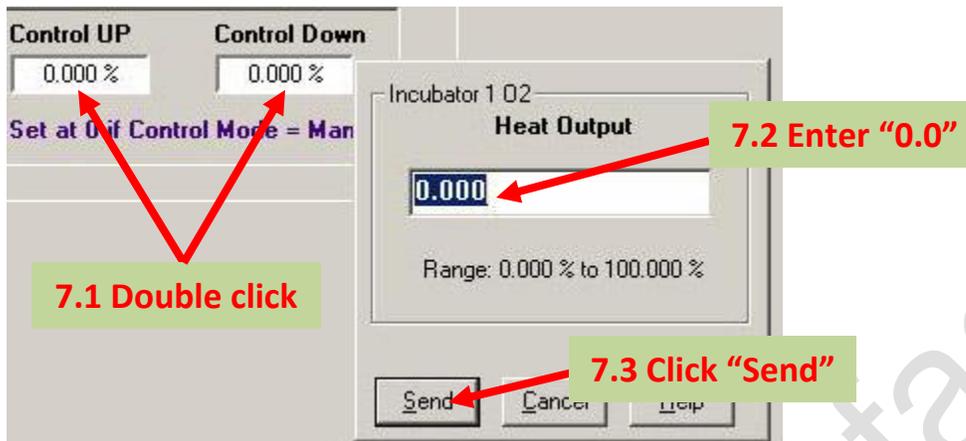
5. Select the "Incubator/Parameter" you have used.



6. Select Control mode to "Manual".



7. Set Control Up and Control Down to "0.0%". (**Important!**)

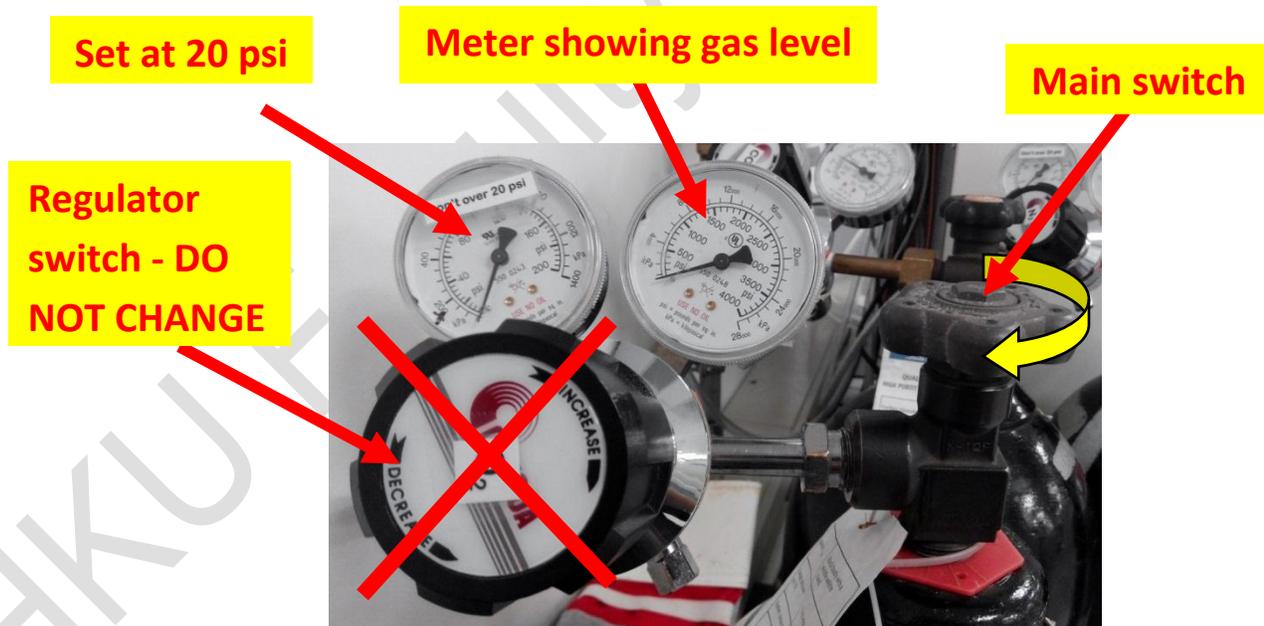


8. Repeat Step 4 to 7 for all the "Incubator/Parameter" you have used.
9. Remove your culture plate/dish from the chamber. **Clean the chamber** with 70% ethanol.
10. **If the chamber is not using by other user**, turn off all the gas cylinders.

To turn off the gases, turn the **main switch** of the gas cylinder in **clockwise** direction.

**Do not change the regulator switch setting.**

Please kindly inform the FCF staff if the regulators display gas level **less than 300psi**.



11. Please sign the **log sheet** before you leave.

**End for turn off the system**

**End**