

## Restarting the Oxford Cryostream after a Shutdown.

If the Oxford Cryostream shuts down, the cause of the shutdown is displayed on the STATUS LED.



Two errors can occur that will cause a shutdown that don't require changing parts. If the Dewar is empty, you will see a FLOW error. But filling the Dewar will sometimes cause some ice particles to be forced into the transfer line. If that happens, the Cryostream will shutdown in short order due to a low flow error. The flow is indicated on the front panel as shown above next to FLOW. Three green LEDs will be lit for normal operation. When there is an ice blockage, often only one LED will come on and the instrument will shut down.

If a flow error occurs, you have to remove the transfer line from the Dewar and allow the system to warm up. Usually, this will mean an overnight shutdown.

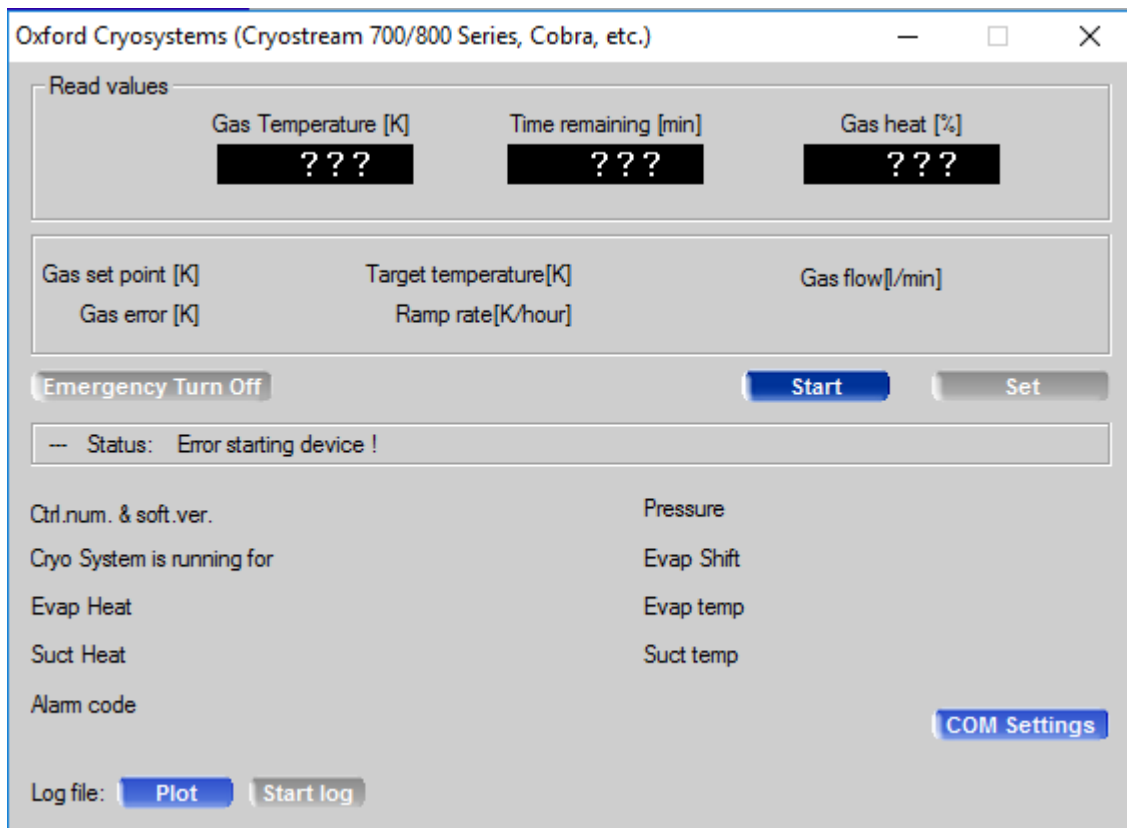
Fill the Dewar with liquid nitrogen using the 160 L tank in the X-ray lab. Pull the transfer line out of the Dewar only so far as it takes to fit the liquid nitrogen transfer hose into the Dewar. When full, there is approximately 50 cm of liquid nitrogen in the Dewar. Typically, I fill the tank until it overflows.

To restart the Cryostream, turn off the controller using the on/off button in the back of the controller. The controller will go through a checklist that will take about a minute. When ready, the temperature will be displayed on the LED (~295 K).

If you are using the Agilent, you must exit CrysAlisPro and restart CrysAlisPro before you can program the temperature.



Select the Cryo button. A menu like below will appear.



Select Set. The target temperature will be displayed. It should be 100 K. Select Start to begin the cool down. Gas flow should reach 5L/min after a few seconds. Time remaining display will show the approximate time to reach the target temperature.

If the flow rate doesn't approach 5L/min, there is an ice blockage. Occasionally, when filling a nearly empty Dewar, ice crystals on the bottom of the Dewar will be pushed up into the transfer line and cause a blockage. If a blockage occurs, turn off the controller. Take the transfer line completely out of the Dewar to warm up and dry out. This will take several hours. Typically, I allow it to dry out overnight.