

MEMSSTAR User Instructions and Logs

For Micro-Electronics Laboratory

At

University of Notre Dame

Department of Electrical Engineering

1. Sign into the Logbook and complete as much information as possible.
2. Turn "ON" both Nitrogen tanks and the Helium tank at the cylinders.
3. Turn "ON" the Helium output regulator valve.
4. Verify enough pressure in Helium tank and both Nitrogen tanks. If low replace tanks from dock on east end of building near personnel elevator.
5. Switch on the chiller unit, to the left of the pump rack, Power Switch (White switch) to the "ON" position.
6. On the pump control pad press enter to cycle thru the warnings on the pump system. Warning will flash the "Warning" light above the start and stop buttons. All errors will need to be acknowledged before proceeding.
7. Press the "diamond"(add picture) button on the left side of the pump control pad .
8. Press "Enter" to start the pumps.
9. Pumps should start up.
10. Press "Status" on the right side of the pump control pad.
11. Warning for low water flow should disappear from the unit shortly but could come on and off.
12. On the backside of the Memstar, twist the "EMO" button to reset the EMO.
13. Verify all "EMO" buttons are reset.
14. Depress the "Reset"(white button) once it lights up.
15. This should energize the "ON" (Green Button).
16. Depress the green "ON" Button.
17. Wait for the system to start up and computer to load to the login screen.
18. Depress the "Login" button on the computer and enter your user name and password. (User: icfab and PW: icfab for general operator status)
19. Press "OK" with the mouse.
20. On the left side of the computer screen, select the recipe "01 Sample load" recipe and press "Load".
21. Press "Run" on the lower center edge of the screen when samples are ready to be loaded.
22. Follow any on screen instructions as needed.
23. When recipe is completed and the system is "IDLE" again.
24. Remove the side panel (closest to FC 1800 #3) and place off to the side.
25. Open the stainless steel box on the bottom center of the machine.
26. On the right hand container, open both the left and the right valves.
27. Close the stainless steel box and replace the side panel.
28. On computer screen, click "Ok" for the Source Box Door Open Warning box
29. Open Lid and load samples into the chamber.
30. Turn "ON" camera light and set up camera to view your samples if needed.
31. Select your recipe from the list and press "Load".
32. Press "Run" on screen when ready to start processing.
33. System will take over and follow on screen prompts if needed. Step information is listed in the lower right side of the screen.
34. When Process is complete the chamber should be at atmosphere and ready to unload or change your samples.
35. Perform steps #29 - #35 for as many recipes as needed on your samples.
36. "Load" recipe "01 Chamber Pump Down"

37. "Run" this recipe.
38. After this recipe has completed and the machine is back in IDLE.
39. Press the "circle with a triangle"(add pic) button on the pump control pad.
40. Select "Auto shutdown" and press "Enter".
41. Remove the side panel and place off to the side.
42. Open the stainless steel box on the bottom center of the machine.
43. On the right hand container, close both the left and the right valves.
44. Close the stainless steel box and replace the side panel.
45. On computer screen, click "Ok" for the Source Box Door Open Warning box.
46. Turn "OFF" camera light as necessary.
47. Press "Logout" on the computer screen.
48. On the back side of the Memstar, depress the "EMO" switch.
49. After the pumps have shut down, turn off the water chiller by the white power switch. (10-20 minutes for pumps to shut off)
50. Turn "OFF" Helium output regulator valve.
51. Close both Nitrogen tanks and the Helium tank at the cylinders.
52. Change any Nitrogen tank that is empty or extremely low.
53. Sign out of the Logbook and verify all information in the logbook is complete and legible.