

SX-100

*Always wear lint and powder free clean room gloves when reaching into the specimen chamber to reduce leaving oils, dust, or other contaminants inside the chamber.

To Insert/Exchange Samples

- 1) Carbon coat your sample. (Thinfilm samples do not require carbon coating)
- 2) Make sure that your specimen is clean and dry (place your sample in the oven for about 1 minute).
- 3) Using the KVM switch (located under the monitors) make sure computer 1 (Cameca computer) is selected. (If the KVM switch is “stuck”, press the spacebar on the computer).
- 4) In the Sx Control window click the Vacuum tab.
- 5) Click the **Sample Exchange** button and then click **Yes** to confirm sample exchange.
- 6) In the Sx Control window it will give you a series of directions to follow:
 - a. *Turn gun valve to position 1:* Turn valve clockwise to position 1. (The gun valve is found on top of the instrument toward the back. You will need to pass position 3 to get to position 1). Wait until it says *Airlock Backup Completed*.
 - b. *Open airlock gate valve:* The handle is located just to the left of the viewing window. Push it in, lift it up, and release.
 - c. *Move in/out shuttle:* Make sure the correct direction is selected using the switch on the outside of the shuttle. Move shuttle all the way in and then all the way out. Depending on which direction is selected, it will either grab or release your sample.
 - d. *Close airlock gate valve:* Turn handle clockwise, push down, and release.
- 7) Click **Continue** when airlock gate valve is closed.
- 8) To remove your sample, open the airlock door by de-pressing the black button on the side latch.
- 9) After about 1 minute it will continue to prompt you with directions:
 - e. *Turn gun valve to position 2:* Turn valve counterclockwise to position 2 (You will need to pass position 3).
- 10) In the Sx Control window it will indicate that the vacuum is ready after about a minute or so.

To Start-up the System from Complete Shut-Down

- 1) Turn on the main power supply on the UPS.
- 2) Turn on the two computers (Cameca and ProbeX).
- 3) Log on to the ProbeX computer.
- 4) Log on to the Cameca computer. (To switch between the two computers use the KVM switch located under the monitors)
- 5) Turn on the Haskris water chiller.
- 6) Turn the key vertical (Off) then horizontal (On) on the small on/off box behind the monitors.
- 7) Wait 40 seconds.
- 8) On the Cameca computer, click the SX icon on the toolbar at the bottom of the screen.
- 9) Wait for the self-test to complete (~2 minutes).

To Shut-down the System Completely

- 1) Using the KVM switch (located under the monitors) make sure computer 1 is selected. (This is the Cameca computer).
- 2) Press **Off** in the SXControl Panel located to the left of the screen.
- 3) Wait 20 seconds.
- 4) Exit the software and close all windows.
- 5) Turn the key to the vertical position (off) on the small on/off box behind the monitors.
- 6) Wait 30 minutes to cool down the diffusion pump.
- 7) Turn off the Haskris water chiller.
- 8) Press the Start button on the desktop and select Shutdown.
- 9) Wait until you have a message to turn off the PC and then turn it off.
- 10) Using the KVM switch, go to computer 2 (ProbeX) and shutdown.