

## E-BEAM #3 OPERATING INSTRUCTIONS

1. Push VENT TO LOAD/ UNLOAD button on the load lock controller. If the load lock does not vent after 1 min. press the STOP button and then the RESET button on the IC/5 deposition controller.
2. Slide sample holder out of load lock. Clip your sample on the sample holder and slide back into the load lock. Push the PUMP TO DEPOSIT button on the load lock controller. The controller will pump and then lower your sample into the process chamber.
3. Press I/G [ion gauge] button on the vacuum gauge controller. Wait until the pressure is at  $3.00e-10$ -6mt.
4. Program the IC/5 deposition controller for the correct thickness and rate of the desired material. Press F6 PROGRAM, then F2 PROCESS DIRECTORY. Use the arrow keys to enter your final thickness and rate, press E too enter. Press F6 PROCESS DIRECTORY, next press F6 PROGRAM, next press F6 OPERATE and then F1 ZERO THICKNESS. The IC/5 should show READY and the chosen program on the screen.
5. Rotate the hearth to your chosen source with the Turret Source Selector thumb wheel. When it is in the correct position, the indicator number will light.
6. Verify that the Shutter Controller is in the AUTO position.
7. Energize the gun filament by switching the main breaker switch on the CV-6SXL power supply. Turn the key switch to ON. Press the HV CONTROL white ON button. If the yellow fault light is " on "press the green OFF button then the white ON button. [Should show 9.98 or 10.0 KV]. Press the GUN CONTROL white ON button [Should show 00.0 at idle].
8. Press START button on the IC/5. As the power ramps up use the shuttered port on the front of the tool for Gun #1 or the camera for Gun #2 to verify that the beam is hitting the source. Use the beam sweep controller to focus the beam if needed. Once the shutter opens [The shutter light will come on] you can see the Gun#1 source thru the front viewport and the Gun #2 source with the camera. If you need to adjust the beam during the deposition do it slowly. If "pits" or "holes" are melted into the source, slowly move the beam around the edges of the hole, and let the melt flow back in and fill it.
9. The shutter will close and the gun will shut down automatically when your final thickness is reached.
10. Press the GUN CONTROL OFF button. Press the HV CONTROL OFF button. Turn the HV key OFF. Switch the main breaker on the CV-6SXL power supply OFF.
11. Push VENT TO LOAD/UNLOAD button on the load lock controller. The sample holder will return to the load lock and vent the load lock. Remove your sample.
12. Push PUMP TO STANDBY on the load lock controller.
13. Fill out the tool log.