EB#1 operation instructions

1) Turn off the ion gauge.
2) Verify the circuit breaker on the high voltage power supply is off.
3) Press the Red "Vent/Open" button. (Once button is pressed, do not press either button until cycle is complete)
4) Verify the mirror is reflective and the shutter is not flaking. Replace or clean shutter if flaking.
5) Load your sample. Ensure the fixture is not blocking the quartz crystal.
6) Open shutter by selecting "Manual" on the IC5. If it fails to open, press stop reset on the IC5.
7) Switch EBC mode to manual. Select pocket desired by pressing change then pocket and then enter 1 - 8 based on pocket/material assignment chart.
8) Load source material into the hearth pockets 1-8. **The Au source requires a graphite disk between the crucible and the pocket.
9) Verify crystal life by selecting "Sensors" on the IC5. Change crystal if life is >15. Press Operate to go back to the main screen.
10) Press stop and reset to close shutter.
11) Press the green "Close/Pump" button. (Once button is pressed, do not press either button until cycle is complete)

- If roughing the chamber exceeds the set point time, the pump down step will be aborted and the "Pumpdown Time Out" alarm will activate.
- If the "Pumpdown Time Out" alarm is activated, firmly press the "Reset" button and wait for 5 sec.
- Press the Red "Vent/Open" button, and once the chamber is open inspect for obstructions or any reason that would cause the pump down to fail.
- Once obstructions are cleared, Press the green "Close/Pump" button and continue to step 12.
- Should the "Pumpdown Time Out" alarm activate a second time, report a problem in Sign Up Monkey.

12) Turn on the circuit breaker on the high voltage power supply. Temescal CV-65LX
13) Switch EBC controller mode to operate. Press Manual, Mode, Operate.
14) From the main Operate screen on the IC5 Select "Program" then select "Process Directory". Using arrow keys, scroll to desired material/stack and select "Process".
15) Enter desired rate, and final thickness for each material. Thickness limit must match final thickness.
16) IMPORTANT: Enter 1-8 for crucible. This is where the source material is located. (Crucible on the IC5 is the same as pocket on the EBC)
17) Select "Process Directory" then select "Select Active Process".
18) Select "Program", select "Operate".
19) Verify process # 1-50 is the correct process that you want to run. (Bottom left hand corner of IC5 screen)
20) After process pressure is reached, (<3.0X10-6) press Stop, Reset and then Start to start the process run.
21). Touch the screen where Prog is, to turn on the sweep. (White = on)
22) Sweep will change automatically depending on the material selected.

- Once the program has started, YOU MUST stay with the machine until the program is complete.

23) When process is complete and IC5 displays "Idle" (not idle ramp) wait a minimum of 10 minutes before venting. Wait a minimum of 20 – 30 minutes for Pt, W, Ta & Mo.
24) Touch the screen where Prog is to turn off the sweep.
25) After the IC5 displays Idle (not idle ramp), turn the high voltage power supply circuit breaker to off.
26) Follow steps 1 – 8 to vent/remove sample and source material. (Replenish Au to 95 grams.)
27) Clean up any flakes that may have occurred by using a clean room vacuum.
28) Press the green "Close/Pump" button. Verify chamber goes into hivac before leaving the system.
29) Fill out the logbook.