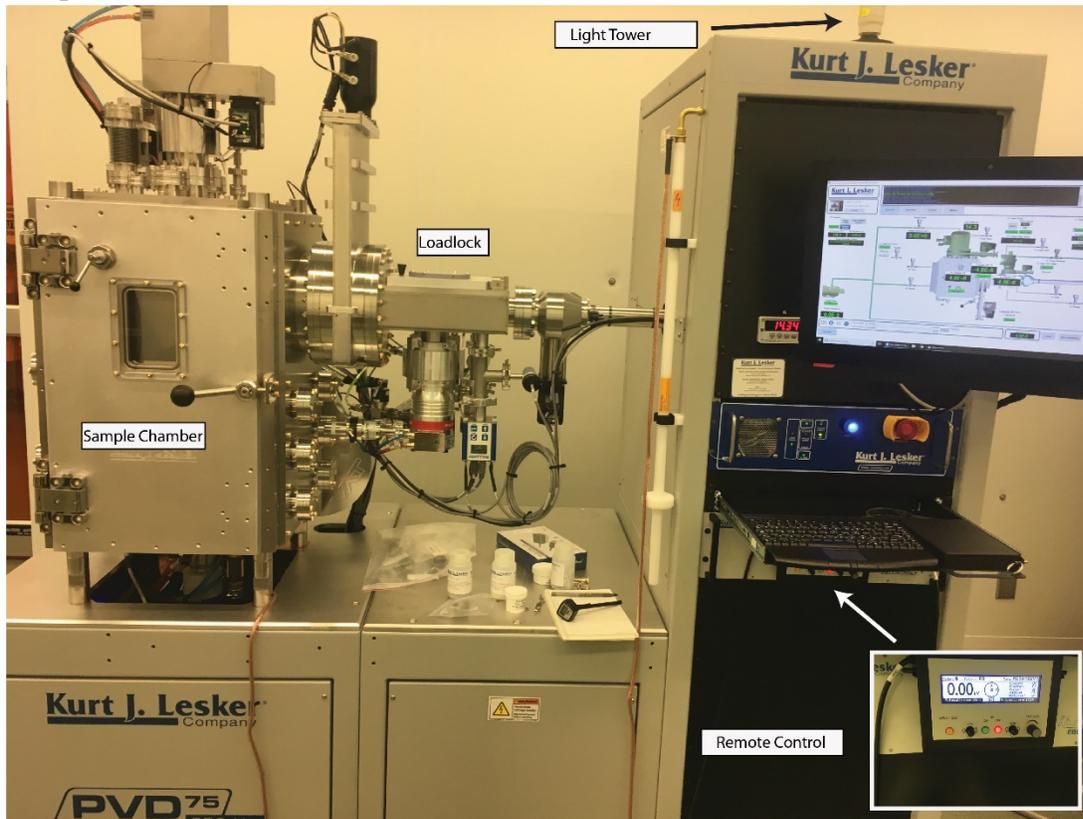


KJL PVD 75 Proline Evaporator Instructions

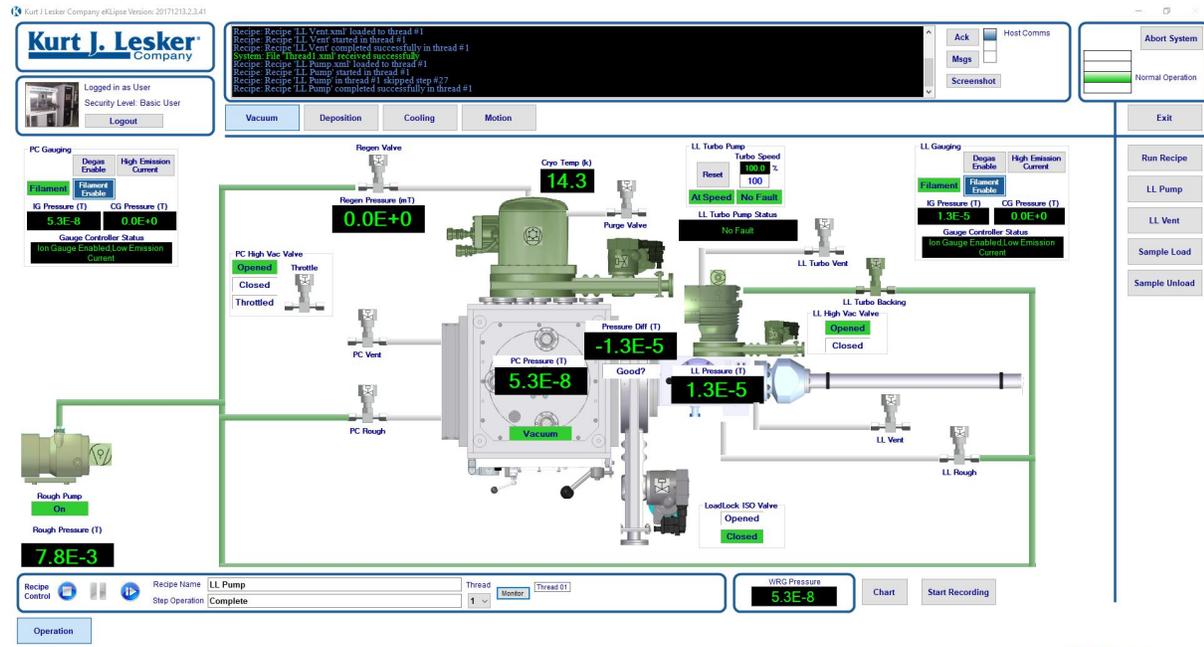
Things to check before use:

- Green light is illuminated on light tower
 - Blue means recipe in progress, Yellow means interlock tripped, Red means an aborted process or error
- Evaporation software (KJL Eclipse) is open and logged in
 - Username = User; Password = User
- Power Supply box is switched to “on”

Evaporator Overview:

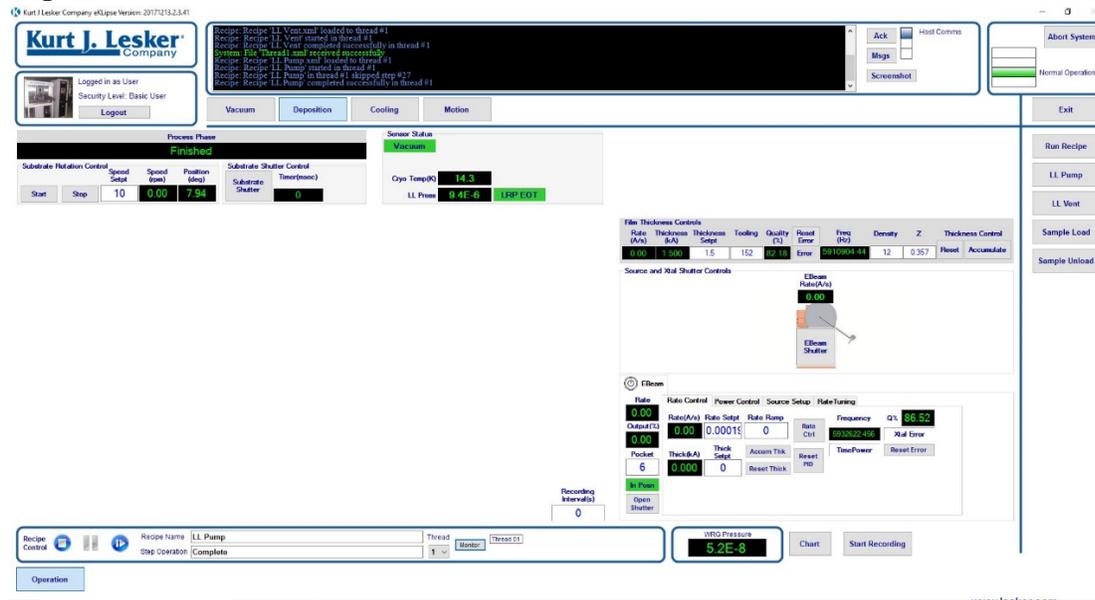


Eclipse Program—(be careful when selecting with the touch screen) Vacuum Screen



Allows you to see the pressures of the chambers and see which valves are open/closed/throttled. (Green means open/on; gray means off/closed)

Deposition Screen



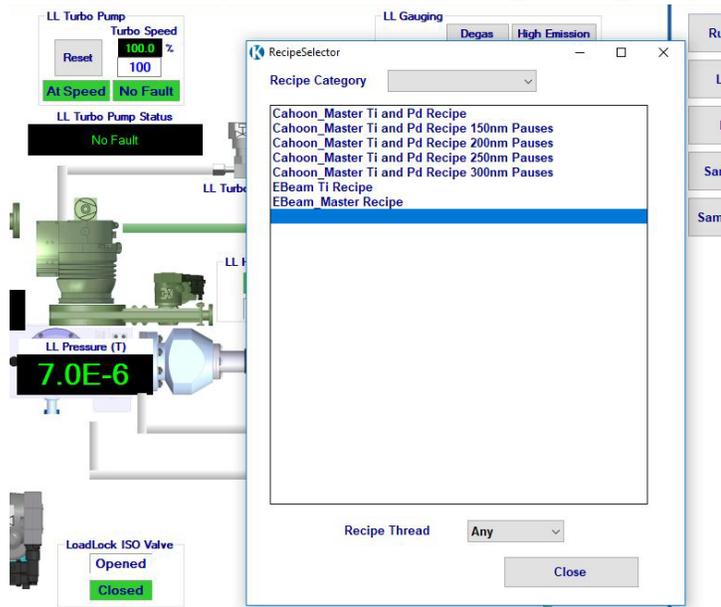
Can be used to monitor the deposition rates, thickness, etc. Check the lifetime (“Q%”) of the crystal monitors here. By clicking “Source Setup” you can see which metal is in each pocket.

Loading Samples:

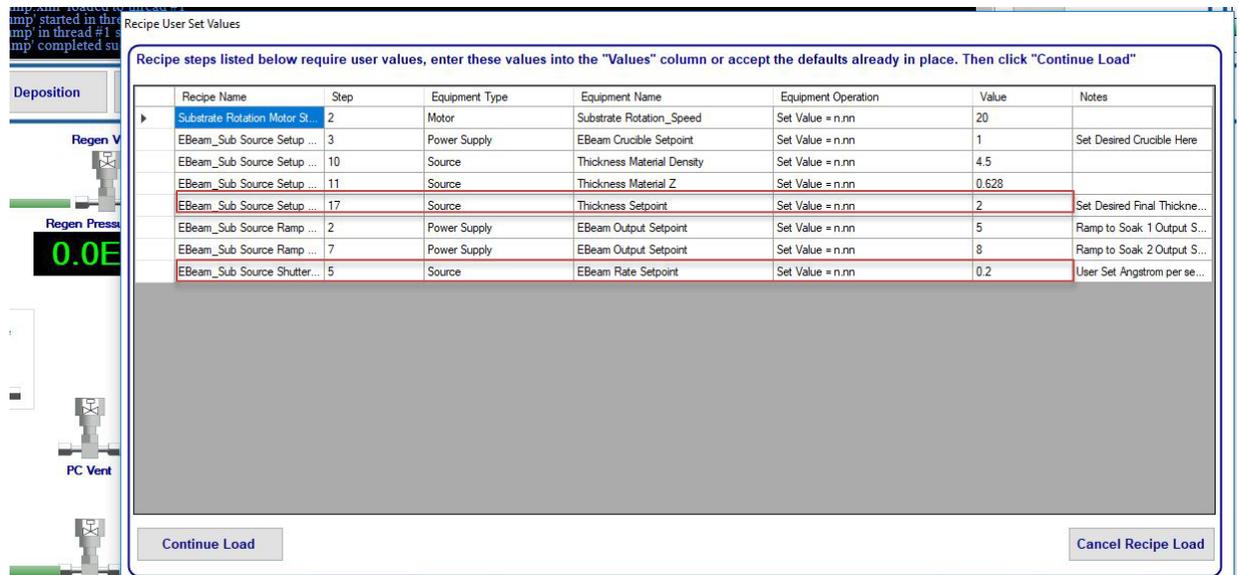
1. Check that the chamber is pumped down to your desired base pressure.
2. Vent the loadlock chamber by clicking the “LL Vent” button on the side panel of the vacuum screen
3. Remove the sample platen and the platen holder from the loadlock
4. Secure your sample onto the platen using the clips on the platen. *Please do not use tape in this evaporator.*
5. Load the platen holder and the platen back into the loadlock and check to make sure both are seated properly.
6. Pump the loadlock chamber by clicking “LL Pump” on the vacuum screen
7. Once the loadlock has finished pumping, load your sample into the chamber by clicking “Sample Load” button

Running a Deposition:

1. Click “Run Recipe” and select “Ebeam_Master_Recipe” (or other pre-written recipe)



2. Change the pocket number for the pocket number of your desired metal, choose an “Ebeam Rate Setpoint” (deposition rate), and a “thickness setpoint”. Rates are in angstroms (A) per second and thicknesses are in kA (100 nm = 1 kA).
3. Click “Continue Load”



4. During deposition, make sure that the beam is centered on the metal in the crucible. If not, contact Jun Yan.
5. Repeat steps 1-4 for any additional metals you’d like to deposit.
6. If you need to create a more complex recipe, contact Jun Yan.

Unloading Samples:

1. Click "Sample Unload" button and wait for arm to bring platen back into the loadlock.
2. Click "LL Vent."
3. Carefully remove platen with samples.
4. After removing your sample from the platen, put the platen and holder back in the loadlock and select "LL Pump".

General Maintenance:

- Near the end of your deposition, please check the following things and let Jun know if they are low
 - The fill level of the crucible (should be at least 30% full)
 - The lifetime of the crystal monitors (lifetime starts at 100% and goes down; should be at least 30% for next user)