Operating Procedures:
KJL PVD 75 Sputterer

1. Vent chamber
2. Install target
3. Load sample
4. Pump chamber
5. Run deposition
6. Vent and pump chamber
Vent Chamber

1. Start your kiosk session
2. Press **Start PC Vent**
3. When venting, the turbo pump will turn off and spin down to 0%.
4. Venting is complete when chamber pressure reaches atmosphere (~7.60E2 Torr). This will take about 20 minutes.
5. Open chamber door once pressure has reached atmosphere
Install Target

1. Remove the shield
2. Unscrew and remove the target’s centering rings
3. Replace target with desired target
4. Replace centering rings. Screws should be firm but not tight
5. Make sure the shield is properly seated and placed on position 1
6. Use a multimeter to confirm an open circuit between the shield and target. You should measure a Mega-Ohm resistance.

Shield

Checking for a short
Load Sample

1. Open Substrate Shutter (Get image)
2. Remove substrate holder by pushing up and out
3. Secure substrate to holder using clips provided
   a. Substrate should not extend beyond the holder
   b. Note that the deposition rate is lower near the edge of the holder
4. Replace holder and close shutter

Substrate holder (6” diameter)
Pump Chamber

1. Press **Start PC Pump**
2. When the chamber begins to pump, you will hear a load noise. Firmly press onto the chamber door to ensure a good seal. If the noise continues and the chamber pressure does not start to decrease, abort the process. See appendix for aborting.
3. Wait until the chamber pressure reaches 5E-5. This will take ~30 minutes.

1. Vent chamber
2. Install target
3. Load sample
4. **Pump chamber**
5. Run deposition
6. Vent and pump chamber
Run deposition

1. Select Edit/Process
2. Select the material you wish to sputter
3. Set the deposition rate ($\leq 2.0 \text{ A/s}$) and final thickness (units: kÅ)
4. Close the window and save the process when prompted

1. Vent chamber
2. Install target
3. Load sample
4. Pump chamber
5. Run deposition
6. Vent and pump chamber
5. Confirm that the Sigma Launch button is ON
6. Turn OFF the Sigma Stop Process button

Run deposition

1. Vent chamber
2. Install target
3. Load sample
4. Pump chamber
5. Run deposition
6. Vent and pump chamber
Run deposition

7. Press Run Recipe button
8. Select the material you wish to deposit – be sure to select the correct gun/material combination
9. Press the green bar to begin the process
10. If you want to deposit another layer, start Run Deposition step again

1. Vent chamber
2. Install target
3. Load sample
4. Pump chamber
5. Run deposition
6. Vent and pump chamber
Vent and pump chamber

1. Vent the chamber once the deposition is complete
2. Remove your samples and place holder back in chamber
3. Pump down chamber
4. Do not leave until you are sure that the chamber pressure is decreasing
5. Stop your kiosk session

1. Vent chamber
2. Install target
3. Load sample
4. Pump chamber
5. Run deposition
6. **Vent and pump chamber**