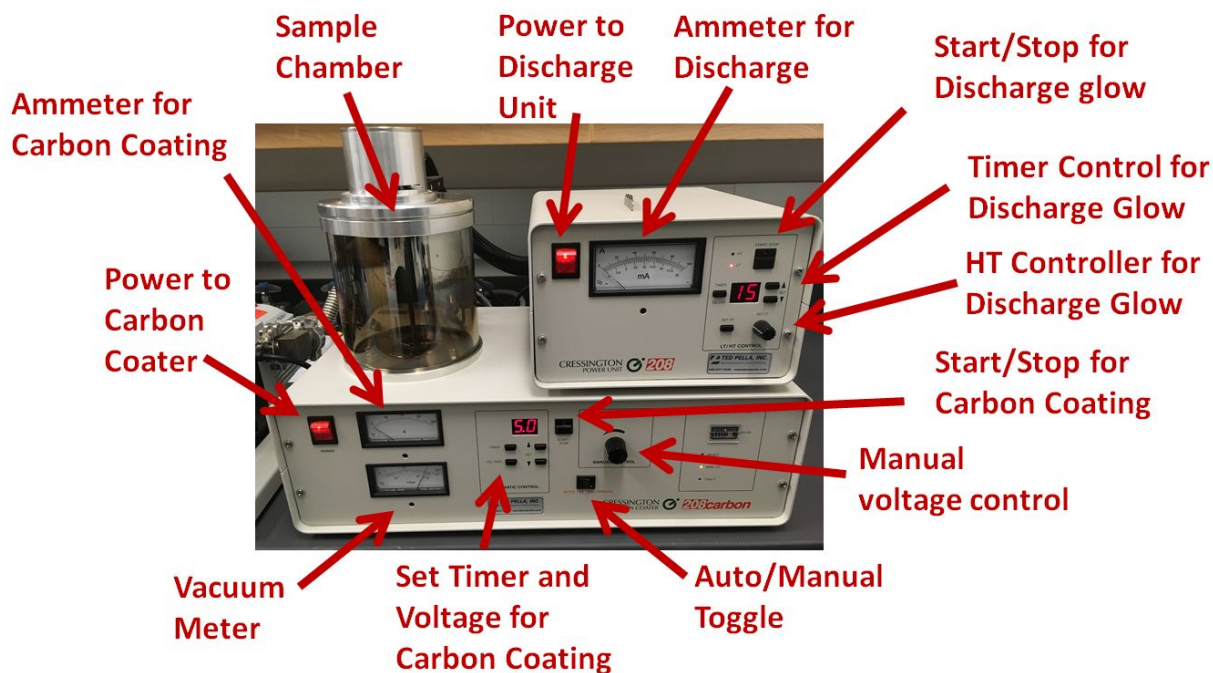


Carbon Coater - Quickstart Guide - Layout



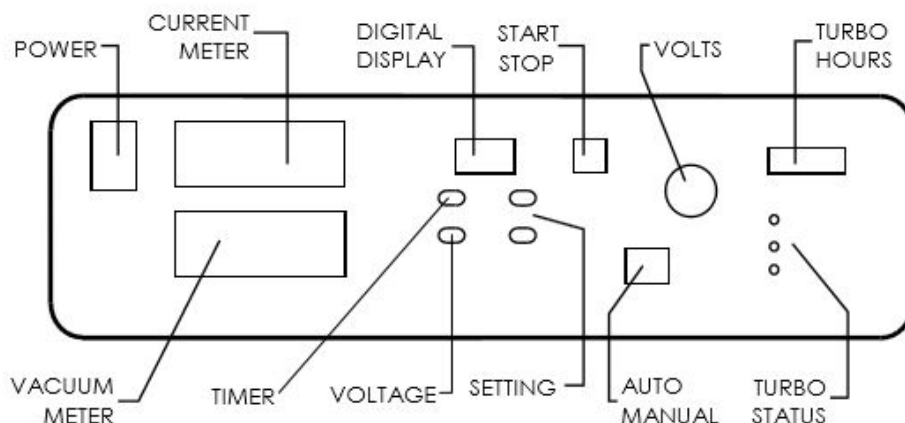
Front Panel - Top unit (Power Unit) is for discharging specific metal
Front Panel - Bottom unit (Carbon Coater) is for evaporating carbon.

Gas Leak Valve



Behind the Carbon Coater unit (left side while facing machine) is the gas handling controls. The flat switch is down and the round switch is up when not leaking gas (closed).

Carbon Coater - Quickstart Guide - Carbon coating



NOTE: The Cressington Power unit is for discharging metal (top unit), while the Cressington Carbon Coater unit (bottom) is for coating your sample with carbon (schematic above).

1. **Sign in** on Equipment user sheet.
2. **Turn on the Argon gas tank and arrow valve up** (near entrance of sample preparation room).
3. **Open the sample chamber and input your sample. Check that the carbon rod is present and close the chamber.**
4. **Turn on the power** to the Carbon coater unit (bottom unit).
5. When the vacuum is good (The green "Ready" light is lit "Turbo Status").
6. **Set to Auto.**
7. **Set the Voltage to 4.0V** by holding down on "Voltage" and pressing the up and down keys in "Setting" (bottom unit).
8. **Set the Timer to 6 seconds** by holding down "Timer" and pressing the up and down keys in "Setting" (bottom unit).
9. **Leak Argon** into the chamber by switching the **flat toggle switch up** and the **round toggle switch down** at the back of the carbon coating unit (left side).
10. **Turn the gas leak valve** to let argon into the system (you should see the vacuum increase in pressure). This helps remove residual air in the chamber.
11. **Close the gas leak valve** (the vacuum should be back to normal and the green light for "Ready" is back on). **Switch the flat toggle switch back down** and the **round toggle switch to the up position.**
12. **Press the "Start/Stop" for the Carbon coater unit.** Your sample will be coated with carbon (DO NOT LOOK DIRECTLY at the DISCHARGED LIGHT). Coat as needed (each burst is 4.0V for 6 seconds). Adjust as needed.
13. **Turn off the power and close the Argon Gas tank and close the arrow valve.**
14. **Sign off on the login sheet (include number of runs)**

Glow Discharge for TEM grids (Using the top unit Power Unit)

- 1. Sign into Login Sheet**
- 2. Open the sample chamber and input your sample. Check that the carbon rod is present and close the chamber.**
- 3. Add your source for discharge (or leave empty).**
- 4. Turn on the power** to the Carbon coater unit (bottom unit) and the Power Unit (Top unit).
5. When the vacuum is good (The green "Ready" light is lit "Turbo Status").
- 6. Set the HT**, by holding it down and turning the "SET LT" knob to 20 (top unit)
- 7. Set the Timer on the Power Unit (Discharge)** by holding down "Timer" and pressing the up and down "Set" keys to 10, 20, or 40 seconds (top unit).
- 8. Leak Argon** into the chamber by switching the **flat toggle switch up** and the **round toggle switch down** at the back of the carbon coating unit (left side).
- 9. Turn the gas leak valve** to let argon into the system (you should see the vacuum increase in pressure). This helps remove residual air in the chamber.
- 10. Adjust to 0.1 mbar.**
- 11. On top of the sample chamber, open the slider to allow the discharge to hit sample.**
- 12. Press START/STOP on the Power Unit (top unit). Do not directly view the discharge light.**
- 13. Repeat coating as needed.**
- 14. Close the slider on the top of the sample chamber.**
- 15. Close the gas leak valve** (the vacuum should be back to normal and the green light for "Ready" is back on). **Switch the flat toggle switch back down** and the **round toggle switch to the up position.**
- 16. Turn off the power for both units.**
- 17. Close the Argon Gas tank and close the arrow valve.**
- 18. Sign off on the login sheet (include number of runs)**