

JEOL2100 – Quick guide to starting the HT

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Contact Hetty if you encounter a problem/don't understand the protocol/have questions or concerns.
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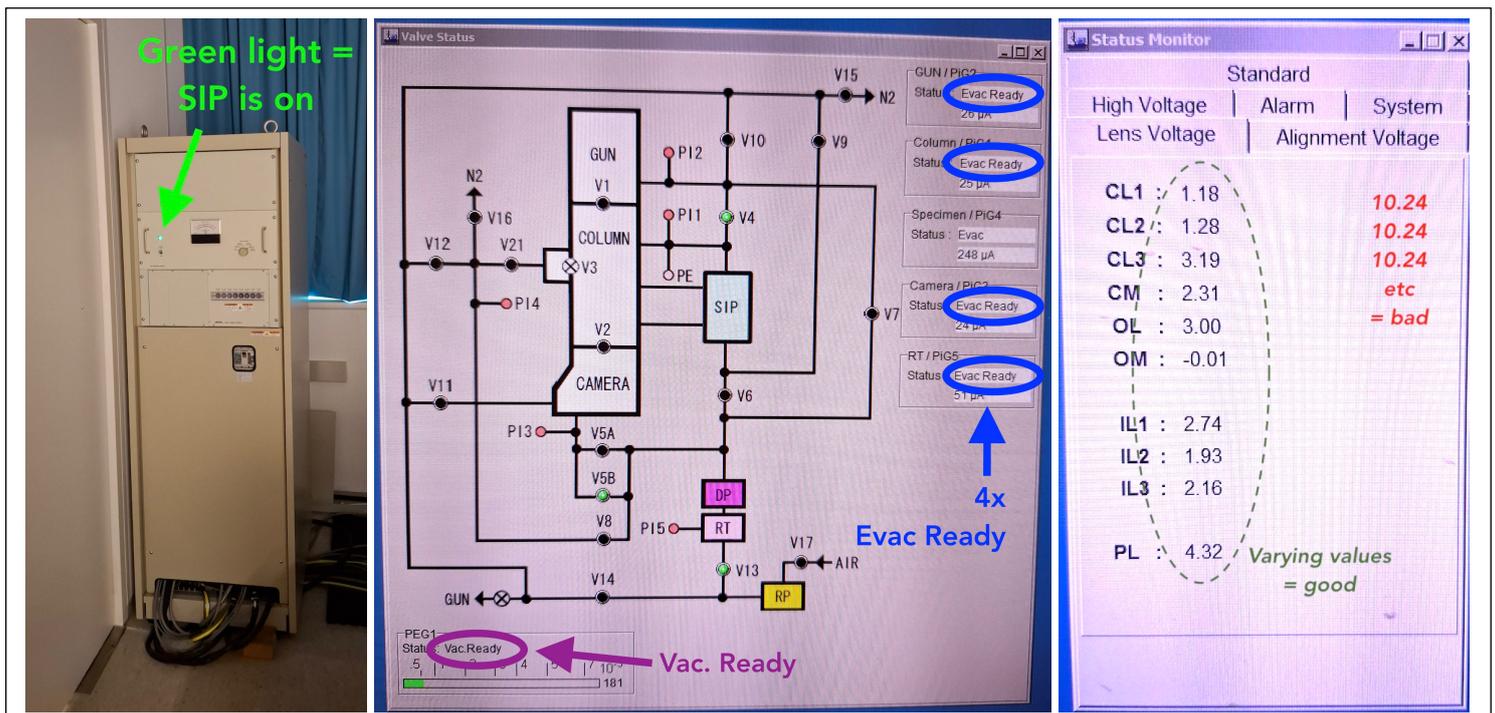
Purpose

To improve the longevity of the HT (high tension) tank, the HT should be maintained at 200 kV, even when the microscope is not in use. The only time when the HT should be off, is during the ACD bake-out.

Step I: Check microscope status

Before starting the HT, please check the following (see figure below):

- The SIP pump is on (green light is on)
- The vacuum is good (4x "Evac. Ready" and 1x "Vac. ready")
- The lenses are on:
 - Check "Lens Voltage" subpanel in the status monitor. If the lenses are off, all the values will read 10.24.

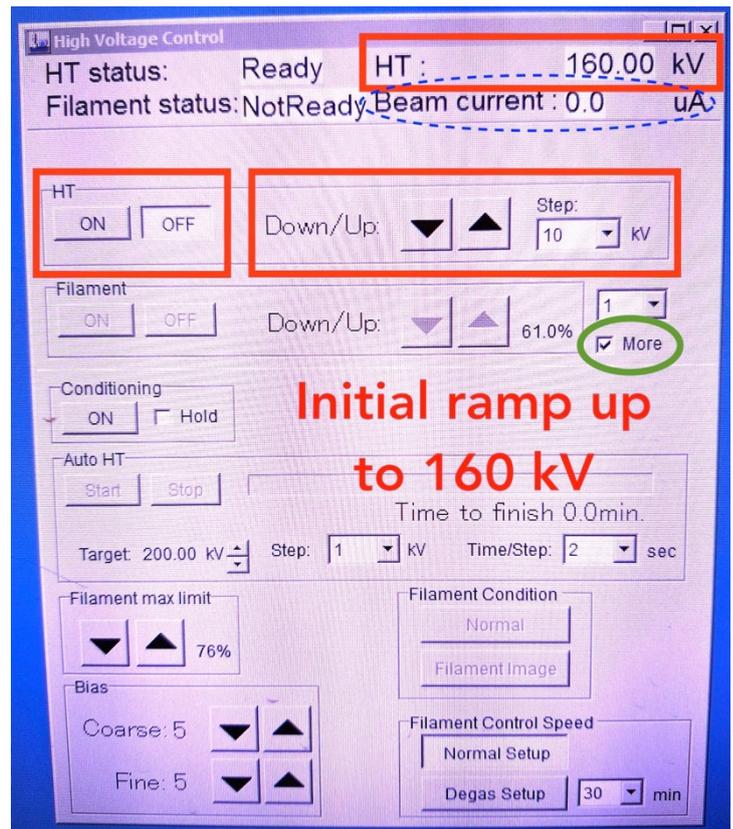


[Protocol continues on next page]

Step 2: Start the HT

The HT is built up in two phases: quickly to 160 kV, then slowly from 160 to 200 kV.

- Go to the “High Voltage Control” subpanel.
 - If needed, check “More” to expand the menu (green circle).
- Start the initial ramp up to 160 kV as follows:
 - Set HT target to 160 kV, using the “HT down/up” arrowheads
 - Select steps of 10 kV,
 - Under “HT”, click “ON”
 - A pop-up appears: “setting the accelerating voltage”
 - After about 3 min, the HT will reach 160 kV
 - The beam current should read between 81-82 uA (blue dotted circle)



- Once you reach 160 kV, use the HT scheduler to go to 200 kV as follows:
 - In “Auto HT”, set target to 200 kV
 - Select steps of 0.5 kV every 10 s (should take 13.3 minutes).
 - Under “Auto HT”, press “START” (green square)
- Check after 15 min that 200 kV has been reached.

