

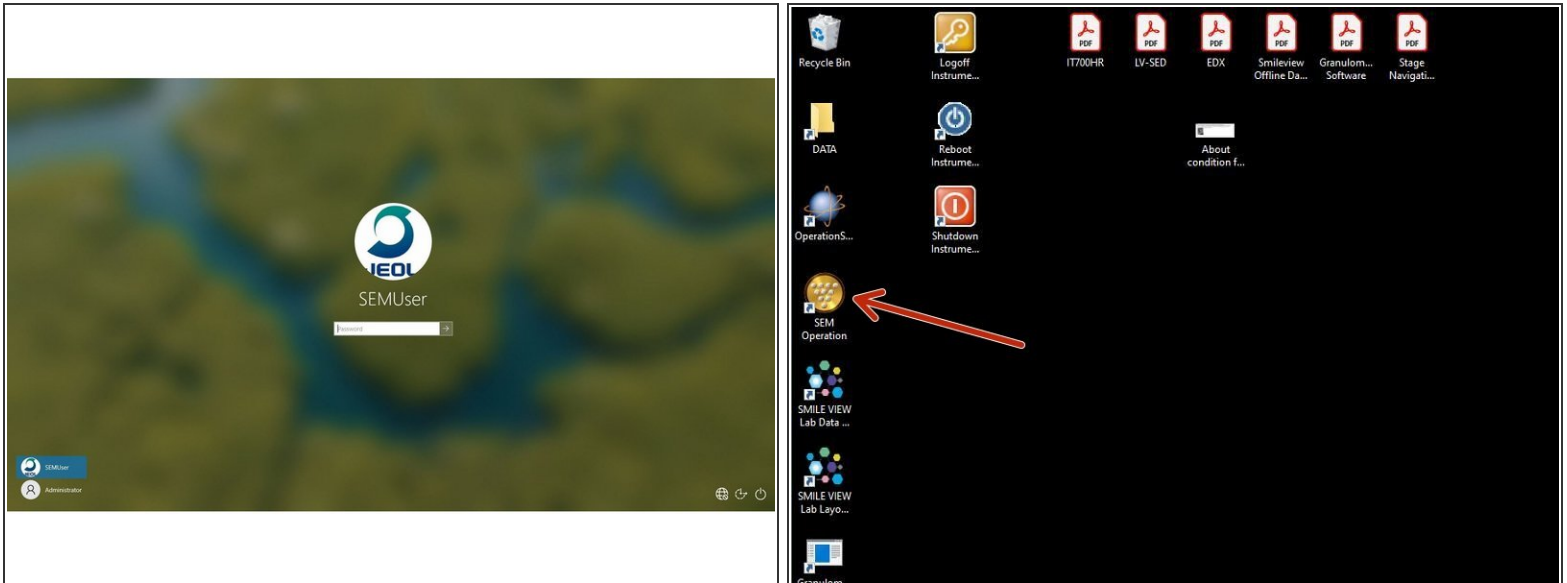
SEM - Jeol JSM-IT700HR: Part 1 - Start-up

The guide helps you to load a sample and start imaging.

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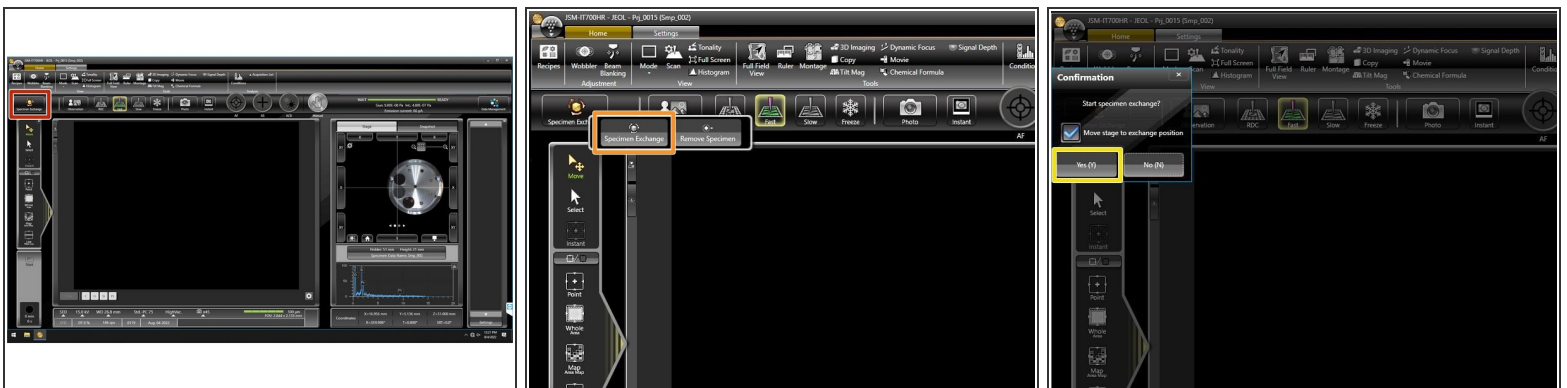


Step 1 — Login to microscope computer and software



- Logging to microscope computer using SEMUser as user and password.
- Start "SEM Operation" software

Step 2 — Specimen exchange



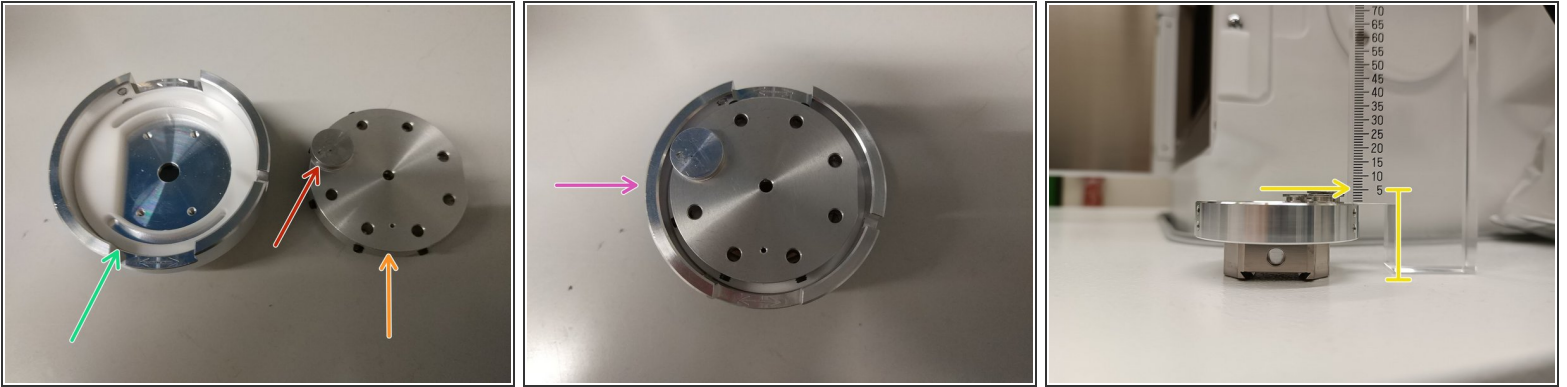
- Press "Specimen exchange".
- Activate "Specimen exchange" in the popup menu.
- Activate "Move stage to exchange position" and confirm with "Yes (Y)"

Step 3 — Remove sample holder (if still inside chamber)



- Open door of instrument using the handle on the right side.
- Remove sample holder as indicated on the screen.
- Press "OK"

Step 4 — Prepare samples holder



- Use regular stubs for Zeiss instruments.
- Mount on regular Zeiss holder and attach with the screws.
- Clip Zeiss holder into Jeol carrier. Only one orientation possible.
- Holder assembly.
- Measure height of the whole assembly with dedicated tool. Top of sample to bottom distance.

⚠ It is important to measure correctly.

Step 5 — Create new or open existing specimen data file



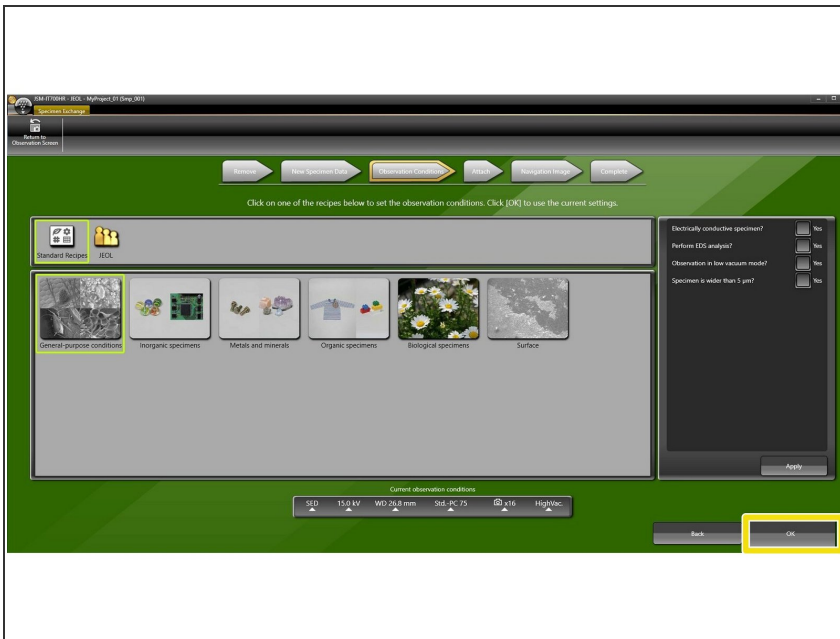
i You must create a new file or open an existing one.

- For creating, press "Create..."
- Select proper holder (bright green square: 51 mm).
- Click "Add"
- Insert name of choice and click "Add" in the popup window.
- Adjust height measured in the previous step using the slider.

! Make sure you select the correct height. If value is too low by mistake, the backscatter detector may be damaged.

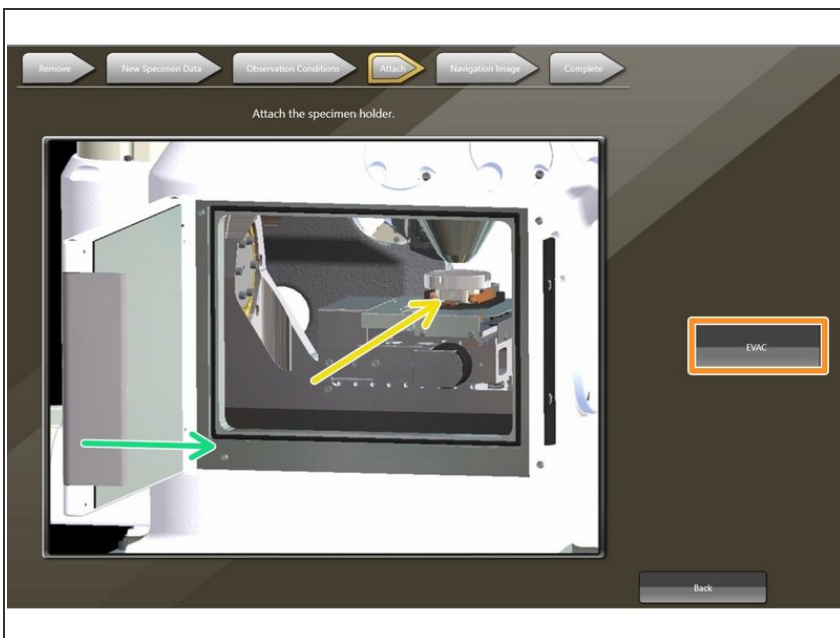
- Press "OK" and confirm.

Step 6 — Select observation conditions



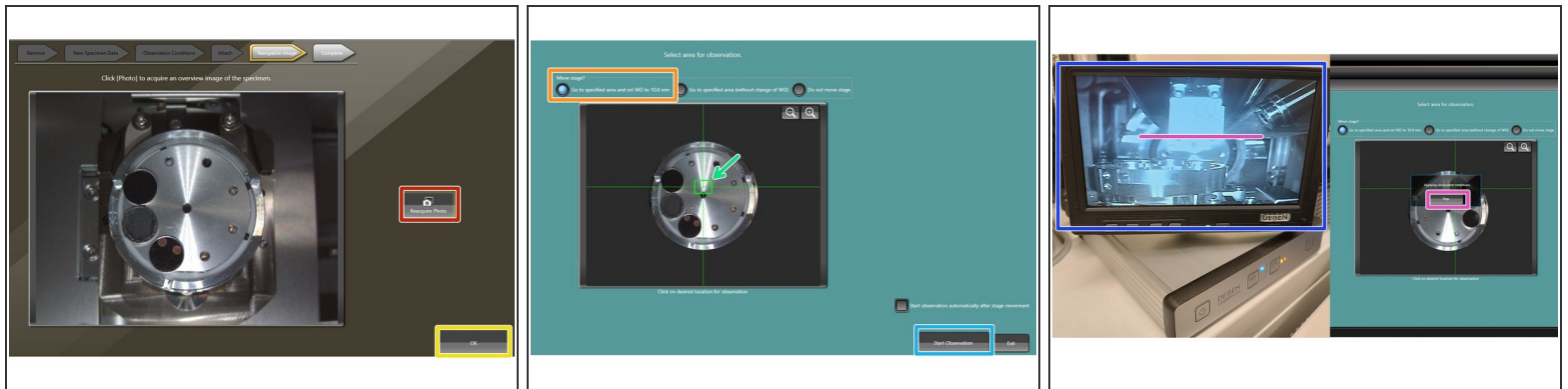
- Select observation conditions.
- Press "OK"

Step 7 — Insert sample holder (Attach)



- Insert sample holder into chamber as indicated on the screen.
- Close door.
- Press "EVAC" and confirm.

Step 8 — Acquire navigation image of stage and start observation



- Press "Reacquire Photo"
- ⓘ Stage will move to camera position and acquire an image.
- Pres "OK"
- Select appropriate stage movement. In general "Go to specified area and set WD to 10.0 mm".
- Select the region of interest by clicking on desired location.
- Press "Start Observation".
- Observe the stage movement using the chamber scope.
- You may interrupt the stage movement if it moves too close towards the lens: purple line (only happens if height not measured properly).

Step 9 — Start imaging



- Start imaging by clicking "Observation".
- ① Electron beam will be turned on and column valve opens.
- Press "Fast" to start scanning/unfreeze.
- EDX system is always on and measures spectra on the go.