



ZEISS FIB-SEM 002 Safely Powering Off On your Crossbeam System User Manual

[Home](#) » [Zeiss](#) » ZEISS FIB-SEM 002 Safely Powering Off On your Crossbeam System User Manual 

ZEISS

**FIB-SEM 002 Safely Powering Off On your Crossbeam System
User Manual**



Brief Instruction FIB-SEM 002

Safely Powering Off/On your Crossbeam System

Contents

- [1 Shutting down the Microscope](#)
- [2 Restarting the Microscope](#)
- [3 Documents / Resources](#)
- [4 Related Posts](#)

Shutting down the Microscope

This manual will safely guide you to power your Crossbeam Off and On.

Info

Please note the following

- This method works with the pumping system off for one day maximum. For a longer period of time, contact Zeiss service to help you with an eventual bakeout of the system or a more complex vacuum recovering procedure.
- Not every user profile is allowed to switch off the SEM gun. For this procedure, select at least the SYSTEM user profile.

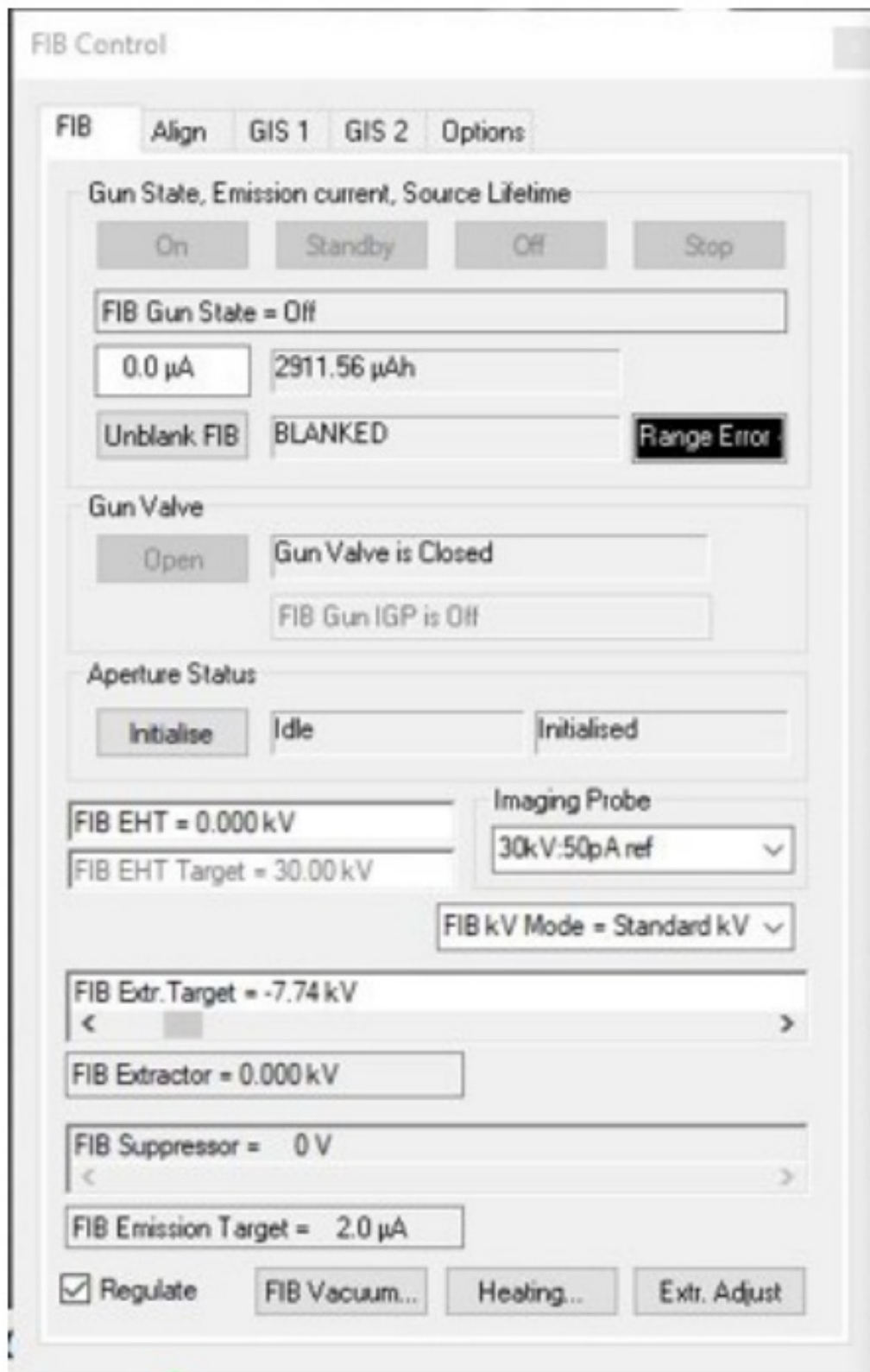
1.1 Shutting down the FIB Gun Procedure

1. Select the FIB Control panel.

The screenshot displays the 'FIB Control' software window. It features a tabbed interface with 'FIB', 'Align', 'GIS 1', 'GIS 2', and 'Options' tabs. The 'FIB' tab is active, showing several control sections:

- Gun State, Emission current, Source Lifetime:** Includes buttons for 'On', 'Standby', 'Off', and 'Stop'. The 'FIB Gun State' is set to 'Regulating'. The emission current is '1.9 μA ' (highlighted in green) and the source lifetime is '2911.56 μAh '. There is an 'Unblank FIB' button, the state is 'BLANKED', and a '947 pA ' value is shown.
- Gun Valve:** Includes a 'Close' button and a status 'Gun Valve is Open'. The 'FIB Gun Pressure' is '2.71 e-07 mbar'.
- Aperture Status:** Includes an 'Initialise' button and a status 'Initialised'.
- FIB EHT:** Shows 'FIB EHT = 29.98 kV' and 'FIB EHT Target = 30.00 kV'.
- Imaging Probe:** A dropdown menu is set to '30kV:50pA.ref'.
- FIB kV Mode:** A dropdown menu is set to 'Standard kV'.
- FIB Extr. Target:** Shows 'FIB Extr. Target = -7.74 kV' with a slider.
- FIB Extractor:** Shows 'FIB Extractor = -7.72 kV'.
- FIB Suppressor:** Shows 'FIB Suppressor = 1590 V' with a slider.
- FIB Emission Target:** Shows 'FIB Emission Target = 2.0 μA '.
- Bottom Controls:** Includes a checked 'Regulate' checkbox, and buttons for 'FIB Vacuum...', 'Heating...', and 'Extr. Adjust'.

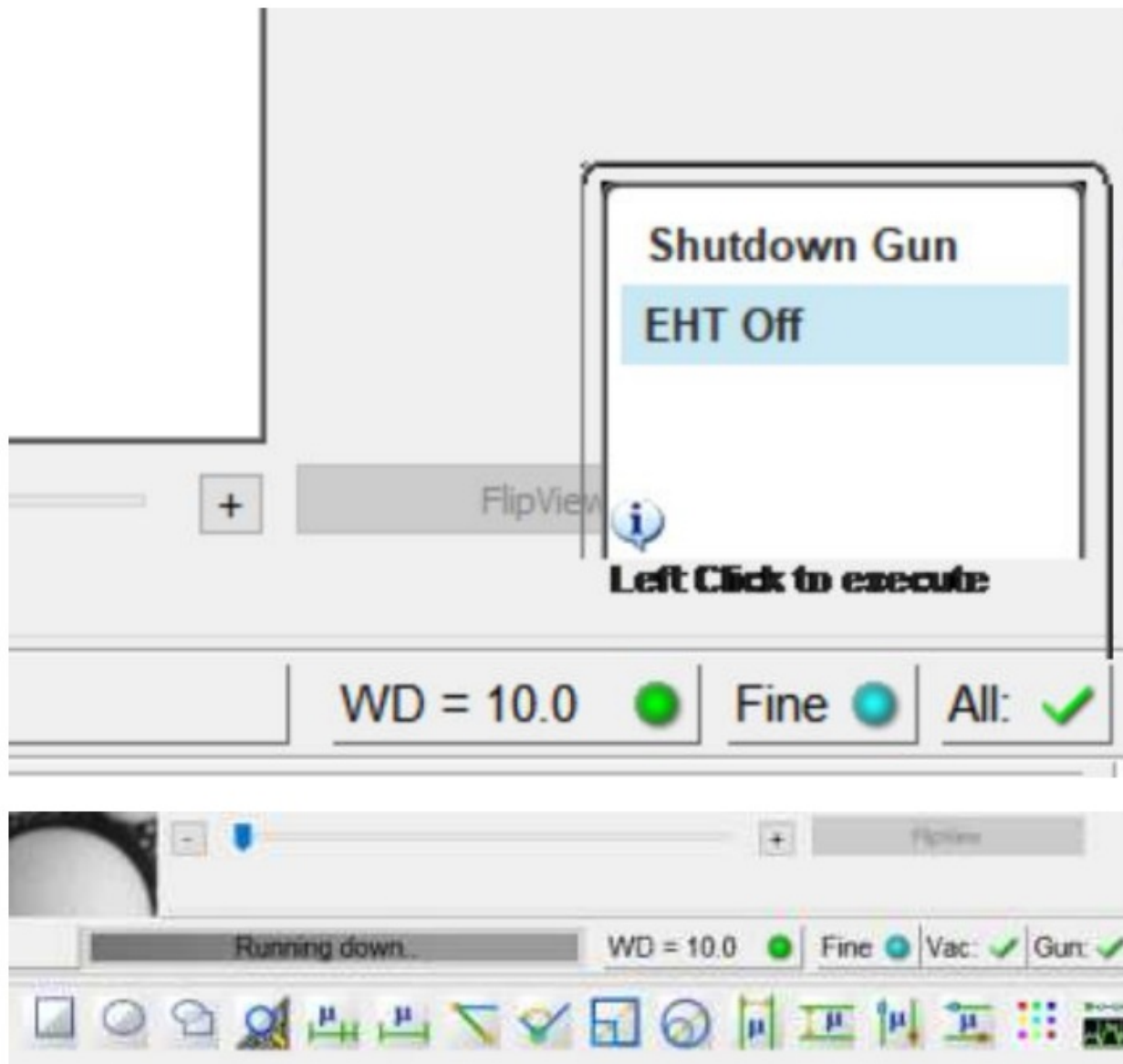
2. Click Off.
3. Wait for FIB EHT = 0




4. Close the FIB Control panel.

1.2 Shutting down the SEM EHT Procedure

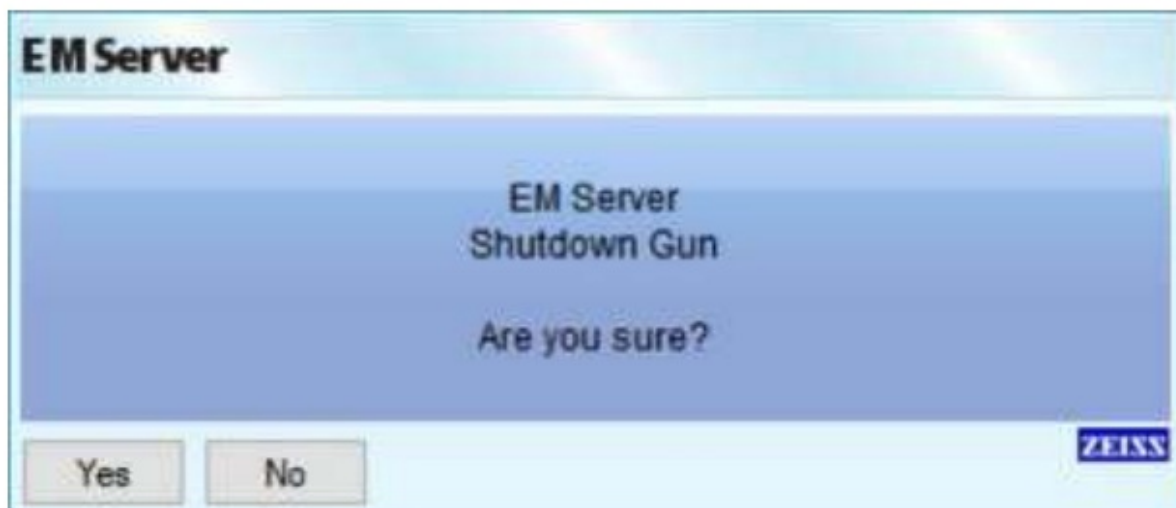
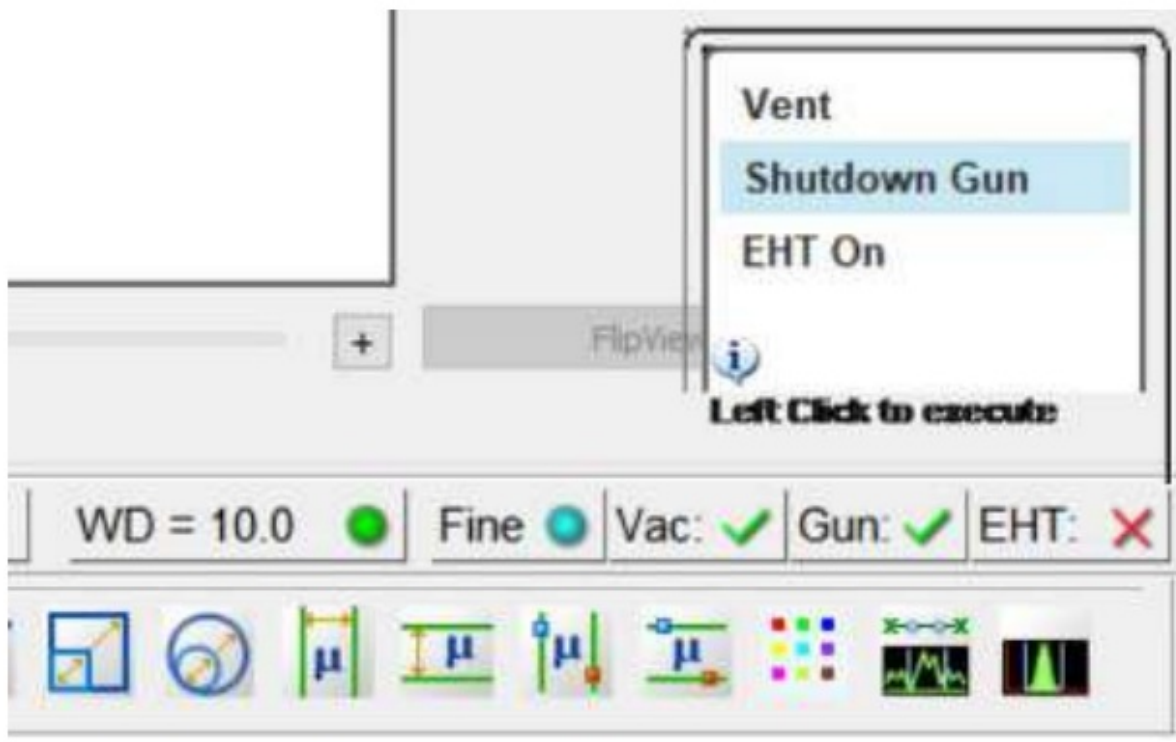
1. Go to the lower right corner of the user interface.
2. Select All > EHT Off.



3. Wait for the Running down.. bar to fill and disappear →  is displayed.

1.3 Shutting down the SEM Gun Procedure

1. Go to the lower right corner of the user interface.
2. Select Gun > Shutdown Gun.



3. Confirm with Yes.



4. Wait for the Running down.. bar to fill and disappear is → Gun: ✗ displayed.

1.4 Shutting down the SmartSEM User Interface Procedure

1. Go to the upper right corner of the user interface and click X .



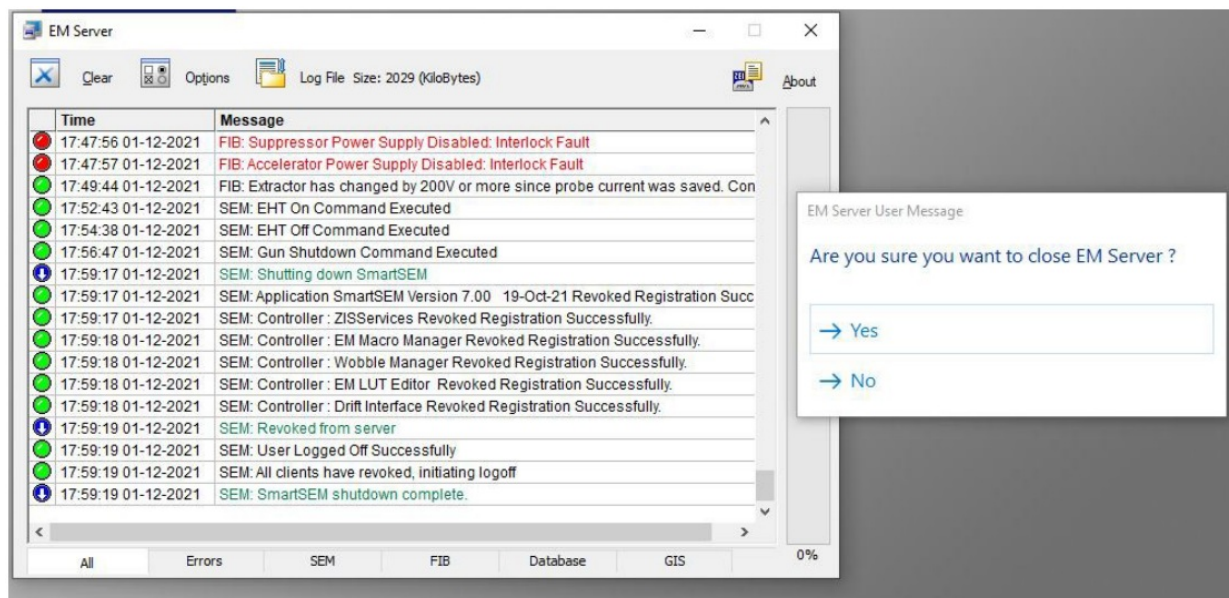
2. Confirm to close the software.



The SmartSEM user interface closes.

1.5 Shutting down the EM Server Procedure

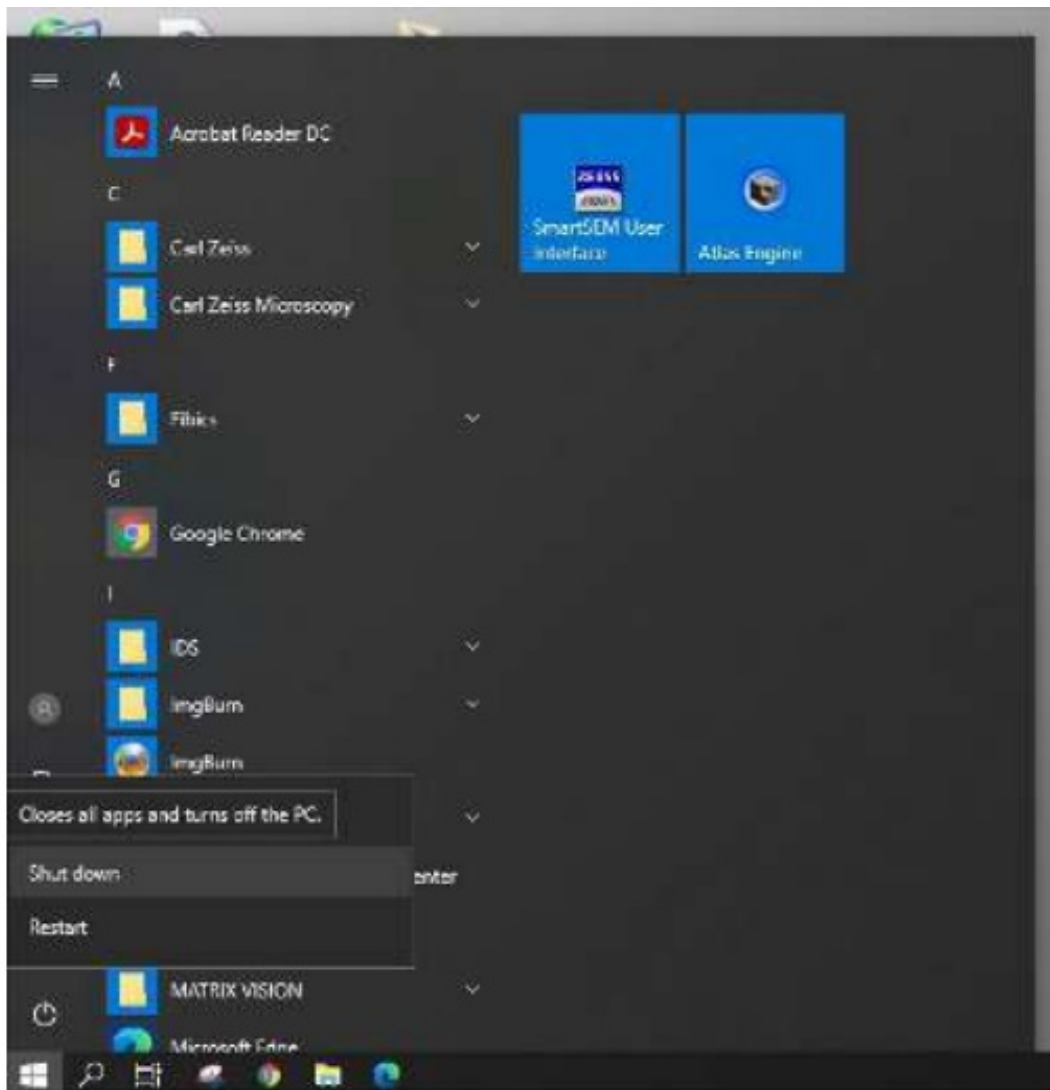
1. Locate the EM Server window. It may be minimized in the Windows toolbar.
2. To close the server, click X in the upper right corner.
3. Confirm to shut down the EM Server.



4. Wait until the server window disappears.

1.6 Shutting down the PC Procedure

1. Close all running applications.



2. Shut down the PC.

1.7 Turning off the Microscope at the Front Panel Procedure

1. Locate the three buttons at the front of the microscope



2. Press the red OFF button and wait until it is the only one that remains illuminated.



1.8 Turning off the Microscope at the Back Panel Procedure

1. Locate the black rotating knob at the back panel of the microscope.



2. Turn it to the OFF position.
The microscope is now off.

Restarting the Microscope

2.1 Switching on the Microscope at the Back Panel Procedure

1. Locate the black rotating knob at the back panel of the microscope.



2. Turn it to the ON position.
The microscope is now ON.

2.2 Switching on the Microscope at the Front Panel

Prerequisite

Only the red OFF button is illuminated

Procedure

1. Locate the three buttons at the front of the microscope.



2. Press the ON button and wait until it is the only one that stays illuminated.

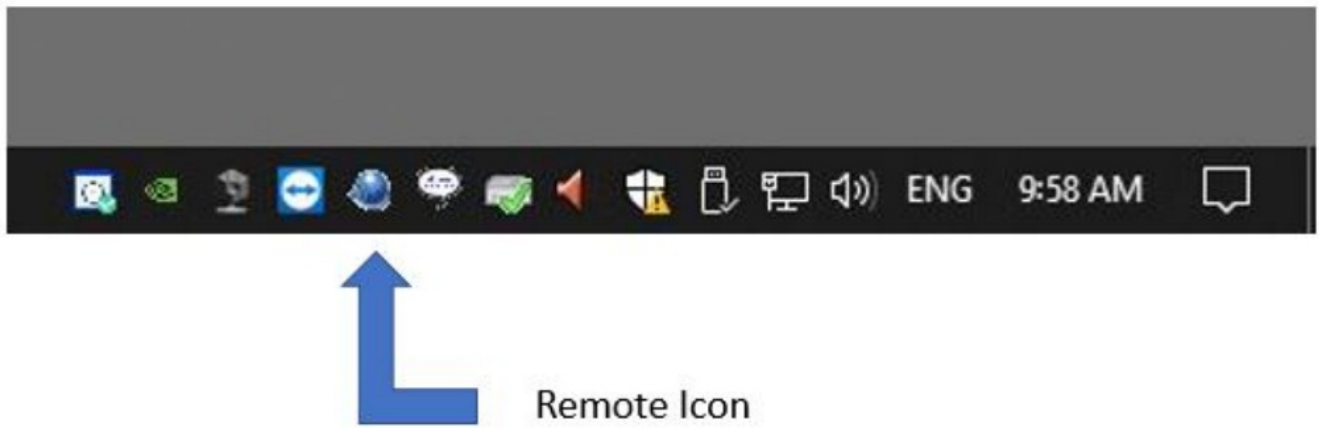


2.3 Starting the PC

Procedure

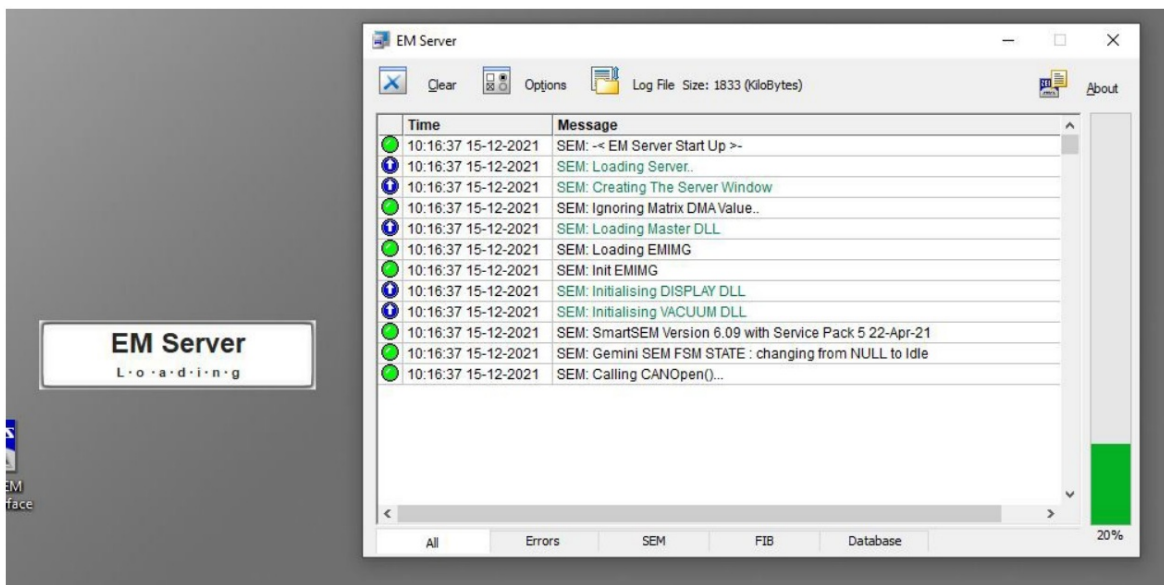
1. Switch on the PC.

2. Log on to your Windows user account (default is User: SEM; Password: sem).
3. Make sure the remote icon is displayed in the bottom right corner before launching SmartSEM.

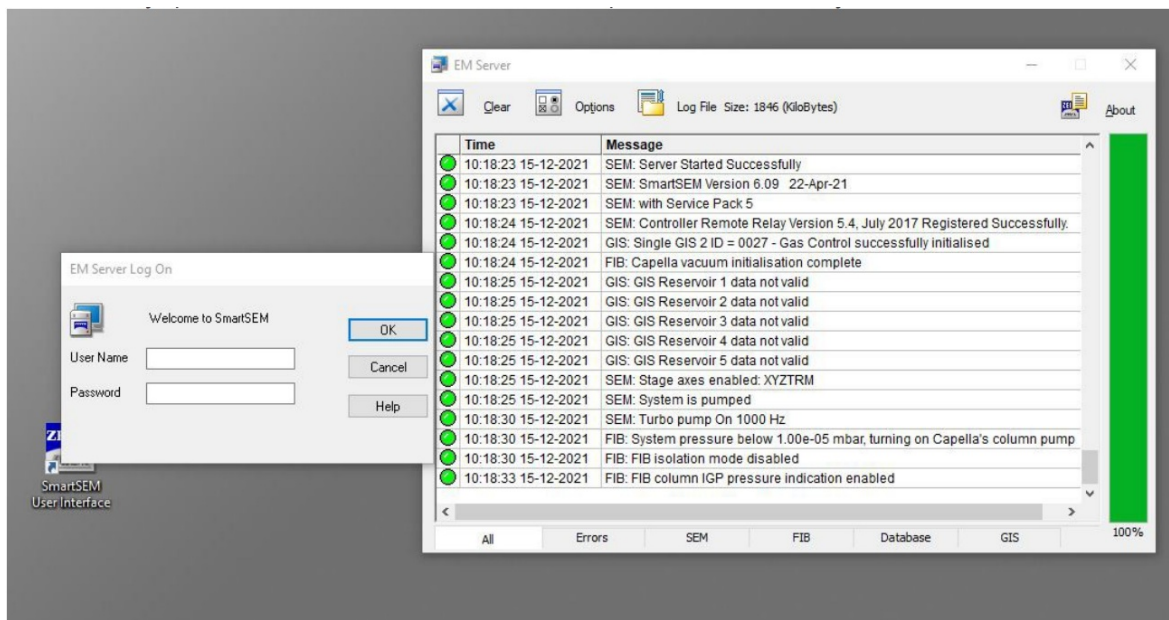


2.4 Starting SmartSEM Procedure

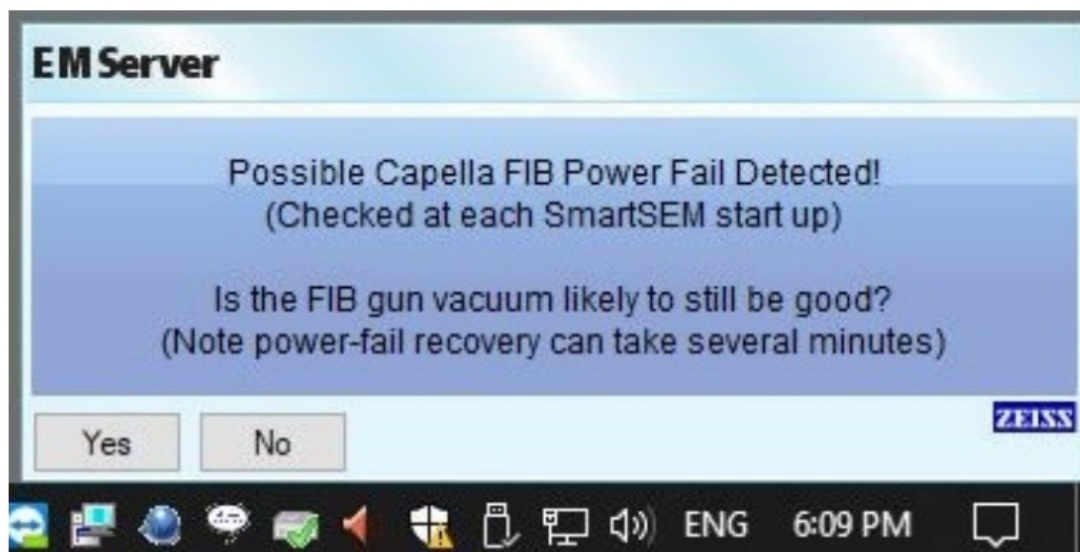
1. On the desktop, double click the SmartSEM user interface icon
The EM Server starts.



2. Log on to the "system" account by entering user name and password.
Alternatively, press <Ctrl+s>. There is no default password for the system user.



An error message should appear in the bottom right corner of the screen.



3. Do not click anything, but wait for SmartSEM to finish booting.

2.5 Waiting for SEM Vacuum Procedure

1. Navigate to the Crossbeam SEM Control panel and wait until Vac Status is "Ready".

x
^
Crossbeam SEM Control

Control
Imaging
Gun
Vacuum
Stage

General

Vac Status = Ready

EHT Vac ready = Yes

Column Chamber valve = Open

Gun Vacuum = $8.30\text{e-}10$ mbar

System Vacuum = $9.70\text{e-}07$ mbar

Chamber = $0.00\text{e+}00$ Pa

Chamber Status = Power Up

Pump

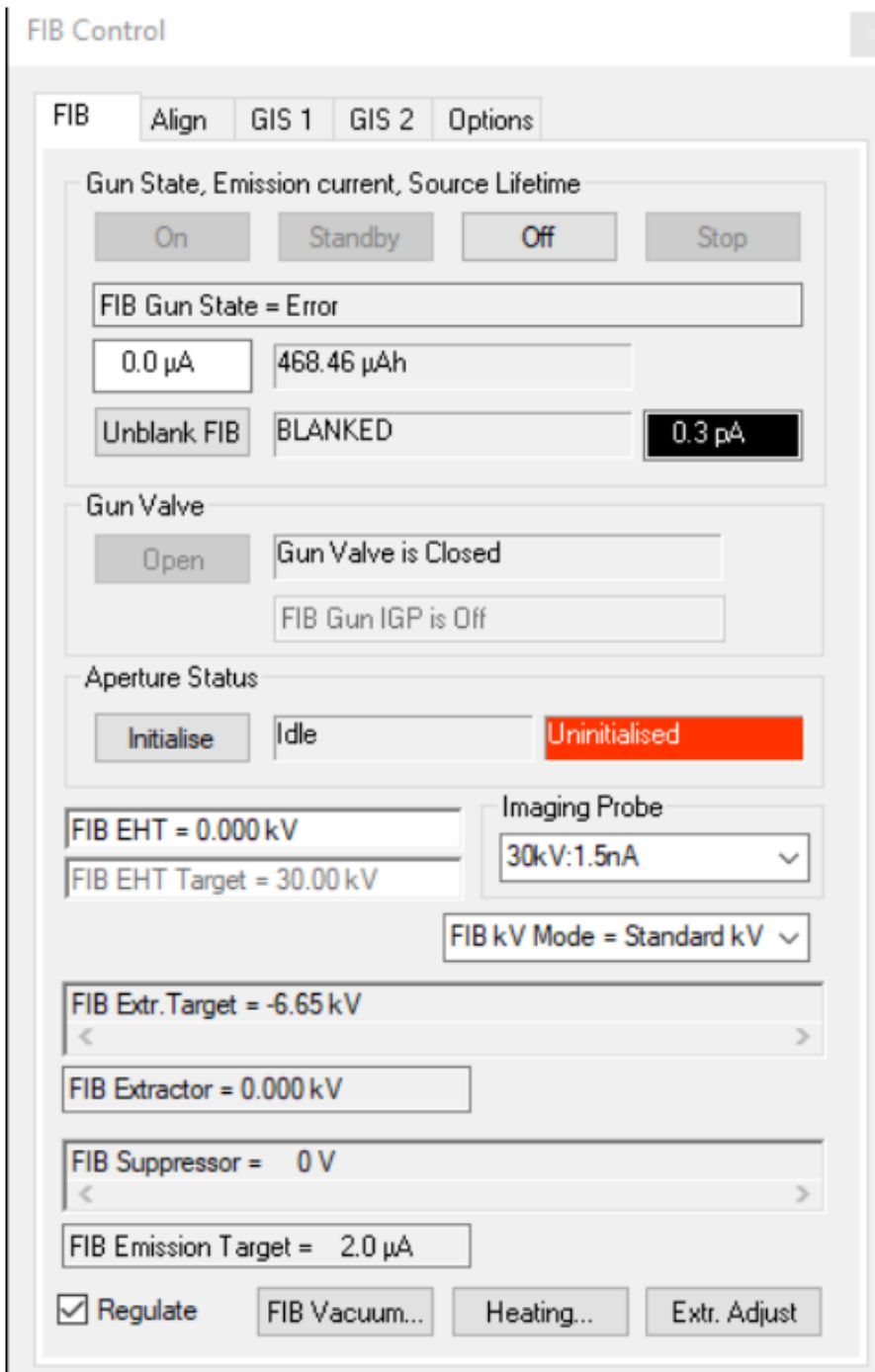
Vent

☐ Partial Vent on Standby
☐ Vac Quiet Mode

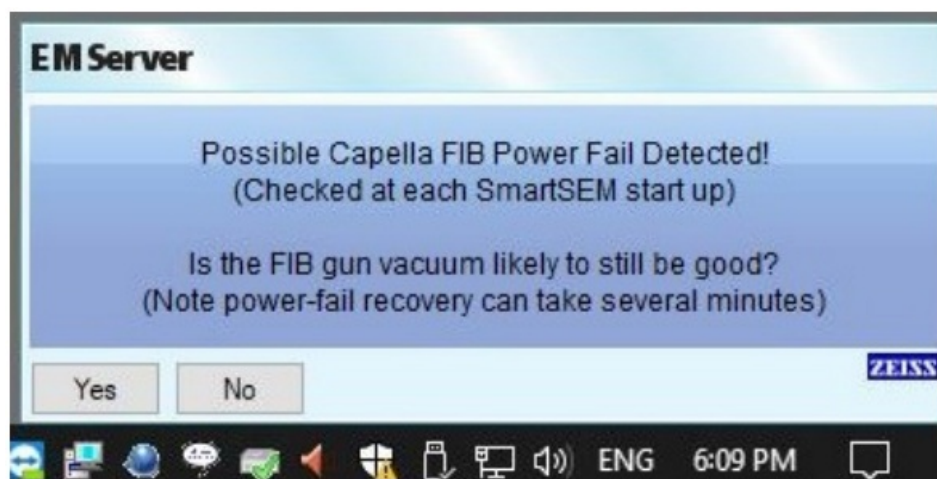
2.6 Waiting for FIB Vacuum Procedure

1. On the top right corner of the UI, click the FIB Control icon
The FIB Control panel is displayed.





2. In the bottom right corner, confirm the error message with Yes.



SmartSEM launches the power fail recovery process.

After pumping time the last power fail recovery message should be displayed.

