Starting up the microscope:

1. Press OPERATE, and insert floppy (you need to boot up from floppy every time). If it doesn't boot, press green button next to drive. When software loaded, eject disc.

2. To load your samples, place in the carousel and secure with Allen key. Now press the green CHAMBER button and release the clamp - it will come open in a few minutes. Insert carousel and tighten screw to secure. Close chamber door and press CHAMBER button to pump down.

3. You can view the specimen through the window. Position the specimen you want to look at under the detector. To move the specimen you can use the metal knobs on the column. For very flat specimens you may want to tilt (typically by -35).

4. The vacuum needs to be 1.0E-4 torr before you can turn beam on. When the vacuum reaches this level, press EMISSION IMAGE button (under GUN ALIGN) and press STATUS and CONFIGURE buttons under MENU. Now select Auto RunUp from the Configure menu, using the trackerball and blue “Select” button. The filament current will typically go up to about 2.5 A (this is displayed in the STATUS window). Press EMISSION IMAGE button again to get image of specimen.

5. It is a good idea to set the probe current manually, rather than rely on the default “Auto” setting. This is done by pressing MANUAL under PROBE, and the adjusting using the red knob. A current of around 100 pA is suitable for magnifications up to a few 1000x.

Basic operations:

- To move the specimen use the controls on the column or the "gearstick" knob, with the appropriate yellow button depressed (XY under "Stage"). You can get fine image movement by using gearstick with BEAM selected (yellow button).

- To change magnification, use LH black knob. Focus using RH black knob. When the image is in focus, the working distance should be about 17mm. If not, adjust specimen height accordingly. To get fine focus, select REDUCED RASTER (hit NORMAL to remove reduced raster).

- To adjust Brightness and Contrast - yellow knob on RHS with appropriate yellow ADJUST button depressed (both can be set to auto).

- To adjust astigmatism: hit MANUAL under STIGMATOR and use trackerball (autostigmator only works well with high brightness, contrast and beam current).

- To display and remove information boxes on screen: Status box: hit STATUS button to bring this up. Hit again to remove it. "Data zone": (band along top of screen): hit F9 LH menu and lower information bar: F20

Shutting down the microscope:

Go to low mag., select emission image, then hit FILAMENT ON/OFF and OPERATE.

Remove the carousel from the microscope and leave chamber pumping. Fill in the log sheet.