

GETTING A GOOD IMAGE

The following controls are for different views on the television set.

CONTRAST: (use manual)

Manual (quicker than auto and you can get about the same contrast)

- 1) Press the Auto contrast button to the Manual setting
- 2) Press the ***** button one time.
- 3) Look at the right television screen- there should be a frozen line scan.
- 4) Adjust the brightness and contrast knobs to move the line up and down. Move the line so that about 90% of it is in the "bright" section that you can see near the center of the screen.
- 5) You can check to see what your image looks like by pressing one of the image scan buttons shown above.

Auto:

- 1) Press the Auto contrast button to the Auto setting.
- 2) Press the ABC button
- 3) Wait five seconds until contrast is ready.

FOCUS: (use auto)

Auto:

- 1) Press the Focus switch so that it is in the auto setting.
- 2) Press the coarse focus button.
- 3) Listen for a beep. Then press the focus fine button.

STIGMATISM:

Auto:

- 1) Press the auto stigmater button. Wait for the beep.

DISTANCE OF SAMPLE TO SEM:

You want to be about 6mm away for fine resolution (with coated samples) and 10mm away with the backscatter (N-SEM non-coated samples)

To move sample to correct distance:

- 1) Press one of the focusing buttons once. The focal distance from the sample to the SEM will be shown in the magnification window.
- 2) ****Press the “focusing” button up or down to make your focal plane at the correct distance from your sample.
- 3) Then, when the focal plane is correct, use the manual Z bar on the front of the SEM to move your sample into focus.
- 4) Refocus using auto focus.

BEAM SIZE:

This refers to the size of the electron beam that is scanning your sample. You want a big spot for low magnification (fly eyes are low mag at 100x). A smaller beam will focus the electrons on your sample in a much smaller area and can ruin your sample. So only use a smaller beam for much higher mag (10,000x).

To adjust the beam:

FILTERS:

You probably want all the filters off. To set the filters off (or on):

- 1) Press either the one triangle or two triangle scanning buttons.
- 2) Press F3.
- 3) Turn all filters off.

BRIGHTNESS:

By playing with these controls with your frozen image you might be able to get a better looking image by highlighting important features. You can only do this with a frozen image.

- 1) Freeze the image by pressing the **** button.
- 2) Press F7.
- 3) Adjust the controls with the arrow keys.