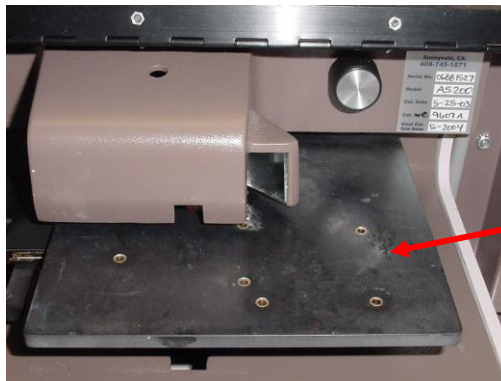


Operating Procedure for Alpha-Step 200



I. Prior to Operation

- A. Be sure that the table is lowered; it can be lowered by using the down arrow on the keyboard labeled *Table*.



Substrate Table

II. Operation

- A. Begin by placing the wafer on the table. Be sure to place the wafer over the small holes on the table, since there is a vacuum beneath the table that creates suction in order to secure the wafer's position.



- B. Use the x and y-axis knobs on the left side of the table to move the wafer's position beneath the stylus in the Alpha-Step. **Never move the table with the stylus in contact with the wafer!** The x-axis knob is used for left/right movement. The y-axis knob is used for forward/backward movement. The x-axis knob is located furthest back, and the y axis knob is located in front.



- C. Adjust the table height using the up/down keys on the keyboard, until the cursor appears to be touching its reflection on the monitor to the right of the Alpha-Step.
- D. Always raise the stylus to reposition the sample under the stylus**
- E. Position the cursor to the side of the area that needs to be measured, and then press the green Start/Stop button to take the wafer's measurements.
- F. Once the measurements are taken, a graph will appear on the screen. A black key on the keyboard labeled *CUR*, (cursor) along with a left arrow key and a right arrow key can be used to adjust the range of desired measurements on the graph. By pressing the *CUR* key, either the left side of the range, the right side of the range, or both together, can be selected. Once the correct side is selected, the range can be adjusted using the left and right *CUR* arrow keys.
- G. After the correct range is selected, the *Plot* key can be used to plot the graph of the selected area on the screen. If desired, this can be printed, using the white *Print* key on the keyboard.



III. Leveling the Plot

Once a plot is obtained from the scan performed by the stylus on the substrate, a leveled plot is needed to obtain the most accurate readings. In order to level a plot, hit the level key. When the video is ready for leveling, move the cursors to two different points on the same plane that you want to level. Hit the plot key and the Alpha Step will level the plot using the two cursor points chosen. Leveling is always recommended if the plot has a tilt to it. Plots will have a tilt if you are measuring a step rather than a well as the Alpha Step does not have a good second reference.

IV. Changing paper

Additional rolls of printer paper are available in the cabinet drawer beneath the optical microscopes.