

## **OPERATING INSTRUCTIONS FOR THE ULTRACUT E MICROTOME**

1. Turn the power on by pressing the green button on the control panel.
2. Turn lighting on by using the control knob at the front left corner of the instrument.
3. Load the sample block in the specimen holder and tighten using the Allen wrench.
4. Lock the specimen holder assembly into the trimming block. Slide the trimming block onto the main stage of the instrument. Expose the tissue on the block face and trim it into a trapezoid shape with a razor blade.
5. Load the specimen holder assembly on the cutting arm. Slide the knife assembly onto the main stage.
6. Reset the main stage and cutting arm by turning their advancing knobs counterclockwise and clockwise respectively. (The main stage coarse advance knob is on the front side and the specimen arm advancing knob is in the right rear corner of the instrument.)
7. Mount a glass knife in the knife holder. Set the clearance angle at  $4^{\circ}$ . Manually move the knife holder assembly towards the specimen. Lock the knife holder assembly in place by pushing the locking lever to the right.
8. Advance the main stage towards the specimen block using the coarse advance knob while locking through binoculars. Adjust the knife edge (horizontal) and block face (vertical) so they are parallel to each other.
9. Set the fine knife advance thickness control knob on the left side of the instrument to the desired setting.
10. Smooth the block face using the right side of the knife. Move towards the left side of the knife and cut 1-3  $\mu\text{m}$  thick sections.
11. When semi-thin or thin-sections are being cut, a "wet knife edge" should be used. The instrument must be set on the automatic cutting mode.
  - a. Set the clearance angle at  $4^{\circ}$ .
  - b. Turn the back lighting on (lighting control knob at white dot).
  - c. Adjust the cutting window.
  - d. Set the thickness meter on the control panel.
  - e. Set the cutting speed knob on the control panel.
  - f. Start the instrument on the automatic cutting mode by pushing the lever to its lowest level.
12. Reset the main stage and specimen advance arm after using the instrument.
13. Record your complete name and the number of hours you have used the microtome on the record sheet.