

Preliminary Check

1. Switch power ON (located on back of unit). [Fig 1]
2. The LED display should read VERSION 2.03. [Fig 2]
3. Press Xtal Life button [Fig 3] to check crystal health. [Fig 4]
 - Note:** Xtal Life is based on programmed values of frequency minimum and maximum.
 - Note:** Replace quartz crystal if needed (See Quartz Crystal Replacement manual.)



Fig 1



Fig 2

Setting Film Parameters

1. Press Program button [Fig 5] to enter film setup menu.
2. Rotate Control Knob [Fig 6] to select one of nine possible films.
3. Depress Control Knob to enter film parameters menu.
4. Rotate Control Knob to change film parameters.
 - Note:** Typically, density, z-Factor and Tooling parameters need to be specified for each material. See Technical Data for Depositing Thin Films Under Vacuum table for various material parameters.
 - Note:** Next and Prev buttons [Fig 5] may be used to move through parameter menu.
5. Depress Control Knob to save current parameter value and move to next parameter.
 - Note:** Pressing Clear [Fig 5] resets current parameter value.
6. Press Program to save changed parameters. [Fig 5]
 - Note:** SQM-160 is ready to monitor film thickness.



Fig 3



Fig 4

Film Thickness Monitoring

1. Verify that Crystal Status LED is lit and not flashing. [Fig 7]
 - Note:** If Crystal Status LED is flashing xtal life may report as dEAd. In this case, test with crystal known to be good. If LED continues to flash check electrical connections between controller and crystal.
2. Digital displays should indicate Rate on left and Thickness on right.
 - Note:** If Xtal Life or Program mode is active Press Xtal Life or Program button to return to normal mode. [Fig 3]
3. Press Zero button [Fig 3] to reset all displayed values to zero.
4. Begin deposition.
 - Note:** Press Zero just before opening shutter. After shutter is closed, record final thickness value once film has "relaxed" (typically within 1-2 minutes).
 - Note:** Lower digital display indicates total elapsed time and is reset when Zero is pressed.
5. When not in use switch off SQM-160 power. [Fig 1]



Fig 5



Fig 6



Fig 7