

# LAURELL SPIN COATER OPERATION

## 1. Equipment Operation

1. Open the cover, and center your wafer on the chuck. (CDA should be displaying on the LCD of the controller indicating there is not vacuum applied yet).
2. Make sure the nitrogen tank valve is open and that the pressure meter shows 30-60 Psi.
3. Open the valve which connects the nitrogen to the spin coater (status will change from CDA to LID indicating that there is enough vacuum).
4. Press the "Vacuum" button on the control panel. This locks the wafer down on the chuck. The display should stop flashing the word "VACUUM," and instead display a number. If this number is not over 15.0, DON'T run the spinner. Check to see that the vacuum shutoff valve is turned on (it is on the line that runs from the wall into the spinner). If this valve is already open, make sure the house vacuum is turned on.
5. Select the program you want to run by holding the "Program Select" button, and using the UP/DOWN arrow keys to go through all the programs (they are shown as A-T on the upper right part of the display).
6. If you want to customize any program or create a new one hold down "F1" key. (Check the programming instructions below for more information).
7. Apply the material to the wafer. Close the cover and press RUN/STOP. An interlock prevents the same program from running twice unless you lift the lid of the machine between runs, or hit F1 twice to override the interlock.
8. Clean the inside surfaces of the spinner, including the drain hole. Clean the chuck also, but do not force compressed air in the center hole, and don't allow any fluid to leak down either.
9. Leave the machine with the lid open, and clean up any mess around it.

## 2. Programming Instructions

1. Place unit in "Programming" mode by pressing the F1 key. The PGM message will appear in the mode area of the display to indicate that the unit is in "programming" mode.
2. Select the program letter (A-T) to be modified using the PROGRAM SELECT key. The program letter selection will appear in the upper right area of the display.
3. Use ADD STEP and DEL STEP keys to select the number of steps necessary in then program. Up to 51 steps can be programmed. (To delete a step, hit DEL STEP, then confirm within 5 seconds by pressing ENTER).
4. Use the CURSOR left and right keys to position the cursor over the value to be changed.

5. Use the **VALUE** up and down keys to change set point values. Repeat steps 3 and 4 until all parameters for a given step agree with programming sheet. Note: The ACL at the bottom of each step screen stands for acceleration. If desired, the acceleration the chuck undergoes between steps can be modified. There are two numbers shown after ACL—the first is an index number, which you can change with the up/down arrows. The second is the actual acceleration (or deceleration) in rpm/s that the chuck will undergo as it approaches the spin speed specified for this step. Use the **STEP** key to advance to the next step.
6. Repeat steps 4, 5, and 6 until all steps have been entered.
7. Hold the **STEP** key to go through the program and verify all values.
8. Press **F1** to return to “run” mode.
9. The display should show the Speed (rpm) and time (mm:ss) set and below the actual speed (RPM) and time remaining (A).
10. Press the **RUN/STOP** key to start the program.



Spin coater controller display