Spin Coater
(Headway PWM32-PS-CB15PL)
September 2010
Preparation

• Make sure that your substrates are clean and dry
  - Some pretreatment (piranha cleaning, HMDS treatment, etc.) might be needed
• Turn on the power to the spinner controller
• Make sure that nitrogen gas and vacuum pump are on
Loading a Sample

• Open the lid using the switch on the left side of top surface
• Make sure that the bowl is covered with aluminum foil
• Choose the appropriate chuck for your sample
  - Chuck slightly smaller than sample
• Center your sample on the chuck
Starting the Spin Coater

- Turn on the vacuum using the switch on the right side of top surface
- Close the lid
- Select the recipe to be run by pressing the key “RECIPE” on the controller and then the recipe number (0-9)
  - Recipe number appears in the upper left display
- Apply photoresist in the center of your sample using a pipette
  - Silver dollar-size pool of resist for a 4-inch wafer
- Start spin coating by pushing the “START” button
Finishing the Spin Coating Process

- Turn off the vacuum using the switch on the right side of the top surface
- Open the lid using the switch on the left side of the top surface
- Remove the sample with tweezers
- Shut off the system by turning off the controller power switch
- Clean the bowl and chuck, and replace aluminum foil

Note: If you need to stop or abort the coating process while spinning, push the “START” button.
Programming a Recipe

• Choose a number from 2 – 9 that you wish to use for your recipe (while in the “Ready” state only)

Recipes 0 and 1 are reserved for NRF staff recipes!

• Erase the entire recipe by pressing “RECIPE” then “CLEAR” and then a number from 2 – 9 you wish to use

- Once programmed, a single step cannot be erased or eliminated. It can be skipped by setting its time to 0, or all steps of a recipe can be simultaneously erased.
Programming a Recipe – Continued

- Program Step 1 by pressing “STEP” followed by the number 1
- Press “SPEED/RAMP”, enter the desired speed (0-10,000), and press the “ON OR ENTER”
- Press the “SPEED/RAMP”, enter the acceleration/deceleration speed for this step (0-10,000) then press the “ON OR ENTER”
- Set the time duration (0-999.9 seconds) then press “STEP TERMINATOR” to end the current step
Programming a Recipe – Continued

• Select Steps 2, 3, ..., by following the same procedures
• Terminate the recipe and exit the programming mode by pressing the key “STEP” then 0

Note: 1) The last recipe used will be recalled immediately after turning on the power
2) Most recipes will have at least 2 steps: a low speed spreading step (few hundred rpm) to bring the resist puddle out to the sample edge, and a high speed step (few thousand rpm) to set the final thickness