OPERATING PROCEDURES

Rev. 10/18/2002

Introduction

This four-point probe has a linear Fell probe head with tungsten carbine tips, 0.050-inch spacing, 0.004-inch tip radius and 85 gram pressure. Measurements will be set 10mm from the edge of the wafer. The probe head is a precision part of this equipment and caution must be used when operating the probe unit. Do not attempt to handle the probe head or any internal mechanism of this equipment.

Pre-Check

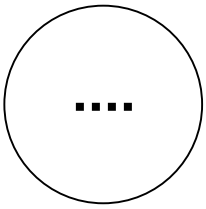
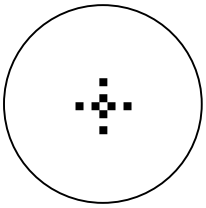
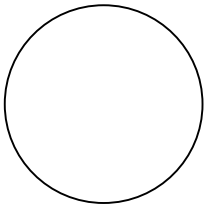
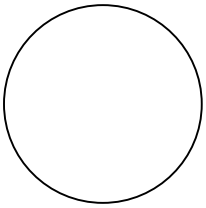
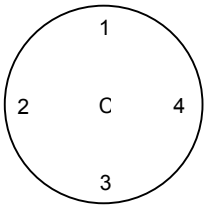
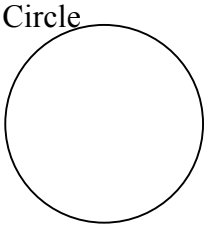
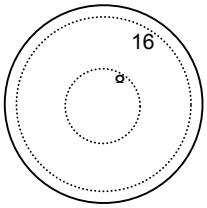
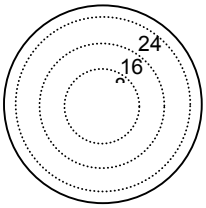
1. Check for the red light on the front of the stage unit.
2. Move the mouse to disengage the screen saver to the monitor.
3. The screen should display two window options:
    a. **Configuration Program**
    b. **Measurement Program**

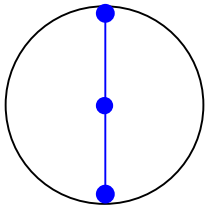
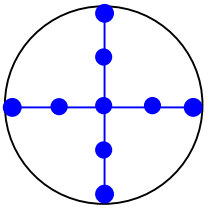
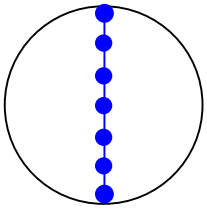
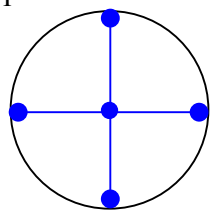
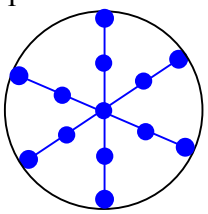
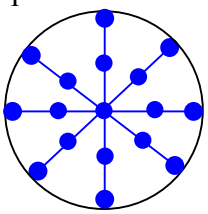
Configuration Program

The multiple pattern configurations have been programmed for both **3-inch** and **4-inch** wafers. The reports will:

- List the ohms–cm and ohms/square measurements
- Display a color map of the measurements
- Display points of measurement

The patterns set are:

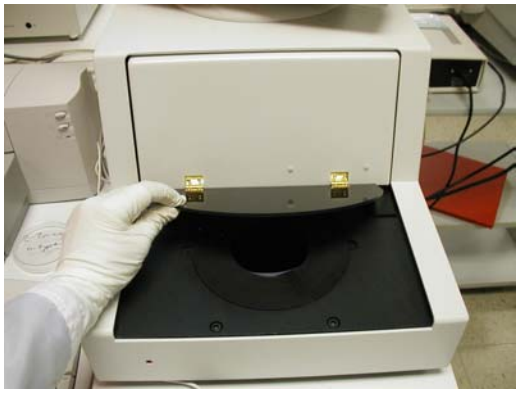
1 Center 	2 Centers 	SEMI 5 point 	SEMI 9 point 
ASTM 5 point 	ASTM 9 point or 1 Circle 	2 Circles 	3 Circles 

1 Radial 1 pt/radius 	2 Radials 2 pts/radius 	1 Radial 3 pts/radius 	A radial is edge-to-edge (same as a diameter
2 Radials 1 pt/radius 	3 Radials 2 pts/radius 	4 Radials 2 pts/radius 	A radius is a line starting at the center and going out. Points are specified as to the number per radius.

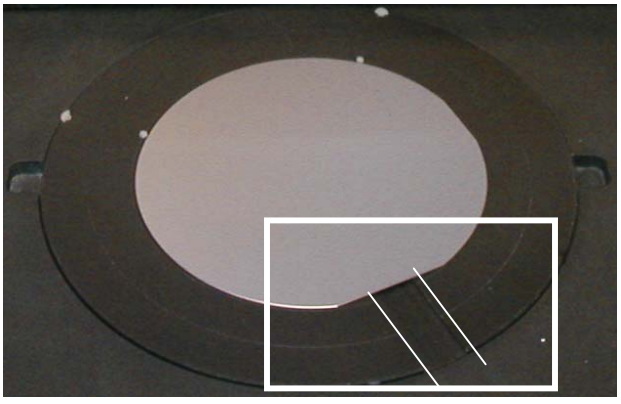
Measurement Program

Measure

1. Gently lift plastic light shield.



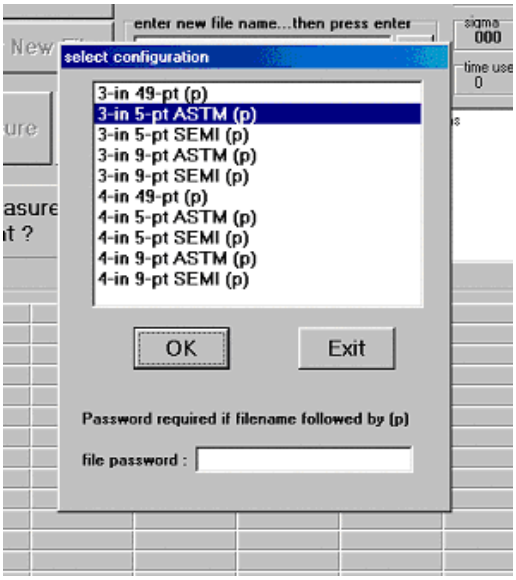
2. Remove dummy wafer from vacuum stage and store in container.
3. Center your wafer on vacuum stage. ***IMPORTANT***: Place the flat of the wafer perpendicular to the tweezers slot.

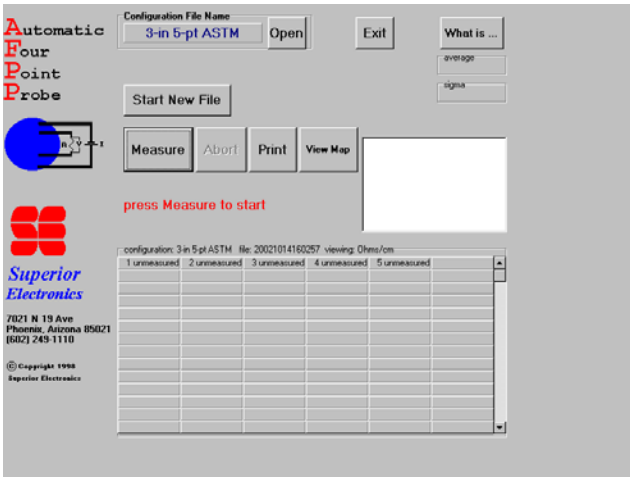


Picture shows a 4-inch wafer positioned on stage.
Stage home position is at 22.5°

4. Gently close plastic light shield.
5. Click on **MEASUREMENT PROGRAM** tab.

6. Select size of wafer and type of measurement pattern.
7. Type in correct password.





8. Click on **START NEW FILE**.
9. Type in filename or use default filename. Click **OK**.
10. Check position of wafer and program selected.
11. Click **MEASURE**. Allow the program to complete all measurements.

View Map

1. When the measurement program has completed, you can change the map view.
2. Click on **View Map**.
3. You can change:
    - Rotation of wafer
    - Tilt of wafer
    - Apply a grid to wafer map
4. Click **Done** to return to the measurement screen.
5. Ensure that the printer has paper. Click **Print**.
6. Click **Exit** when measurements are completed.
7. Go to **End of Use** or repeat steps for Measurement Program for each wafer to be measured.

End of Use

1. Gently raise plastic light shield.
2. Remove your wafer.
3. Replace dummy wafer on vacuum stage.
4. Record use in logbook.