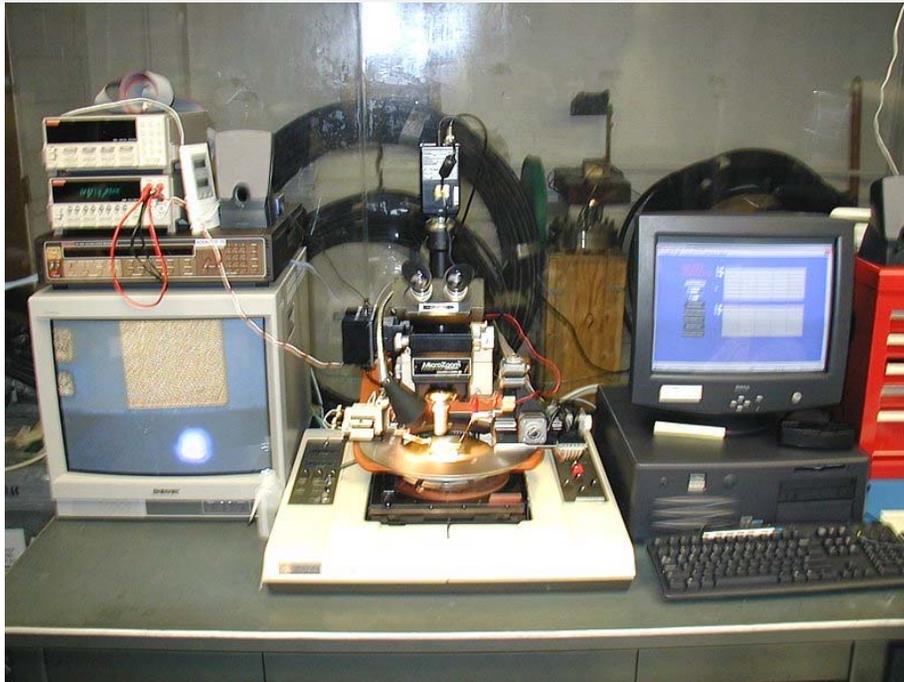
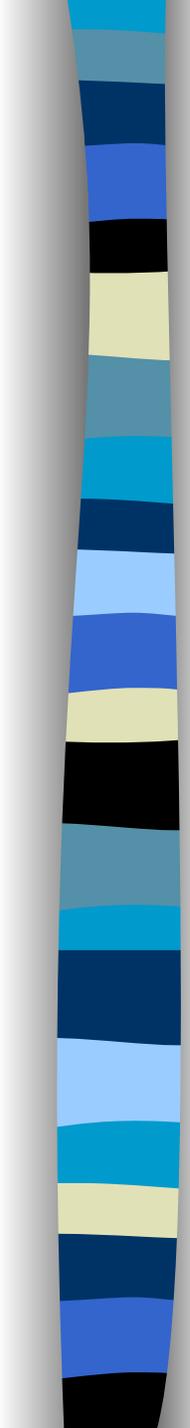


# Bare Hybrid Testing at KU

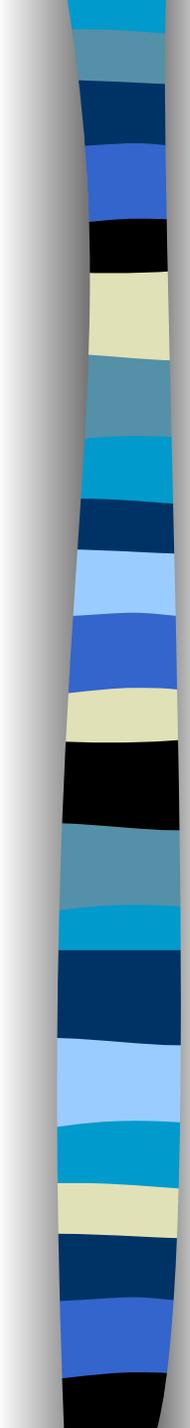


Jake King  
5-15-03



# Summary of Tests

- Visual Inspection
- Continuity Testing
- Shorts Testing
- Total time per hybrid is about 2.5 hours



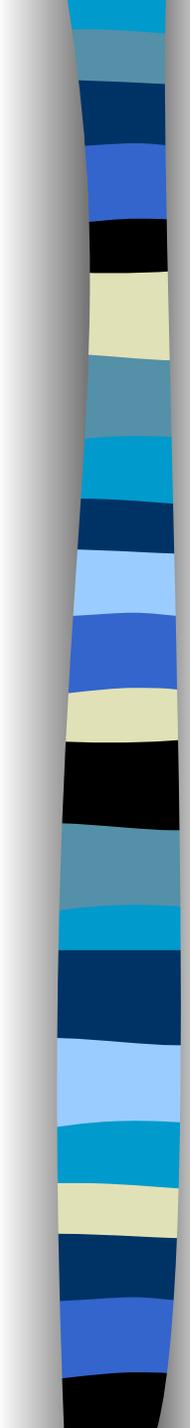
# Visual Inspection

- Check for broken lines beneath the surface
- Look for major scratches or damage
- Check the hybrid for major defects from manufacturing

# Automatic Probe Station

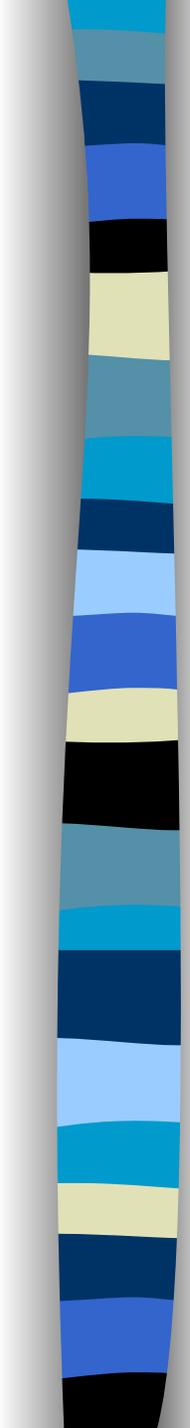
- Composed of a Stationary Probe with a Moving Hybrid and a Moving Probe
- A Labview program controls the test station and reads the output.





# Continuity Test

- The probe station checks every pad for continuity with every like pad.
- Errors are then checked manually as most are slight mechanical errors (due to the flatness of the hybrid) in the probe station. (1-5 errors per hybrid)
- 533 measurements taken for an L2A hybrid.

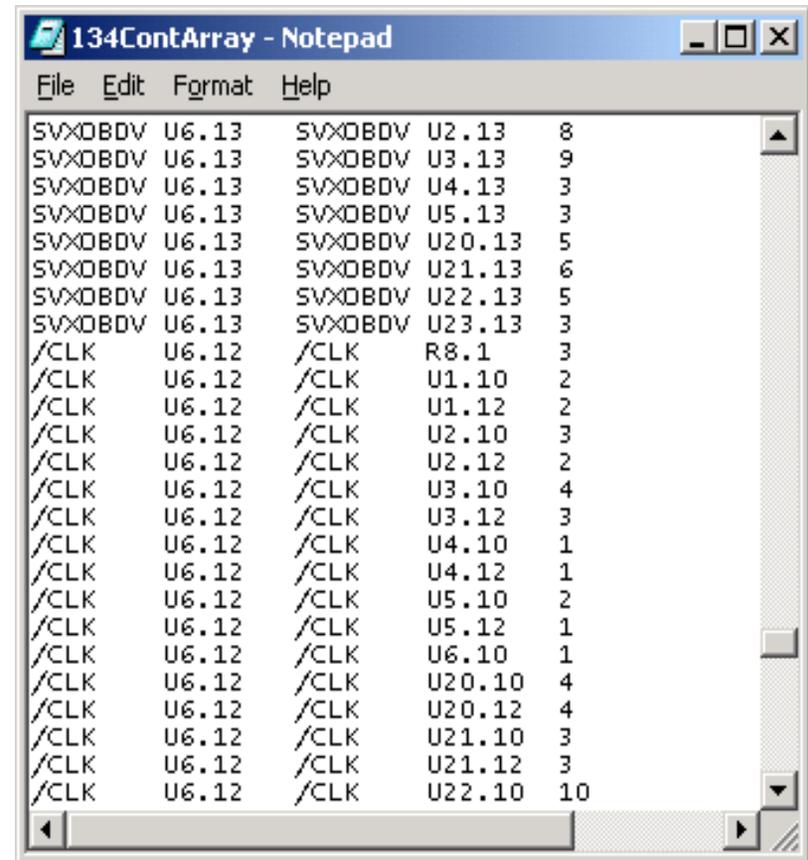


# Shorts Test

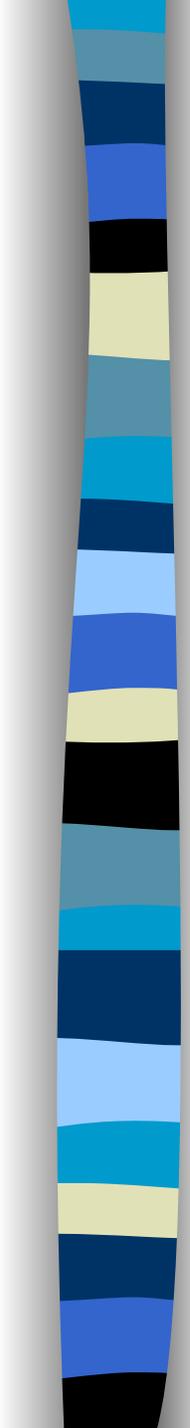
- Each pad on the AVX connector is checked relative to every other pad.
- 666 measurements are taken for any hybrid.

# Output Files

- List pads tested, type and the resistance measured.
- Two files per hybrid; one shorts test and one continuity test.
- We are presently formatting the files to provide the best database information



```
File Edit Format Help
SVXOBDV U6.13 SVXOBDV U2.13 8
SVXOBDV U6.13 SVXOBDV U3.13 9
SVXOBDV U6.13 SVXOBDV U4.13 3
SVXOBDV U6.13 SVXOBDV U5.13 3
SVXOBDV U6.13 SVXOBDV U20.13 5
SVXOBDV U6.13 SVXOBDV U21.13 6
SVXOBDV U6.13 SVXOBDV U22.13 5
SVXOBDV U6.13 SVXOBDV U23.13 3
/CLK U6.12 /CLK R8.1 3
/CLK U6.12 /CLK U1.10 2
/CLK U6.12 /CLK U1.12 2
/CLK U6.12 /CLK U2.10 3
/CLK U6.12 /CLK U2.12 2
/CLK U6.12 /CLK U3.10 4
/CLK U6.12 /CLK U3.12 3
/CLK U6.12 /CLK U4.10 1
/CLK U6.12 /CLK U4.12 1
/CLK U6.12 /CLK U5.10 2
/CLK U6.12 /CLK U5.12 1
/CLK U6.12 /CLK U6.10 1
/CLK U6.12 /CLK U20.10 4
/CLK U6.12 /CLK U20.12 4
/CLK U6.12 /CLK U21.10 3
/CLK U6.12 /CLK U21.12 3
/CLK U6.12 /CLK U22.10 10
```



# Conclusion

- A bare hybrid can be tested manually, however probe station operation is mechanized.
- One hour labor per hybrid for all tests and database updating.
- We've tested about 30 hybrids so far and we are prepared for more.