

K&L Microwave Internship



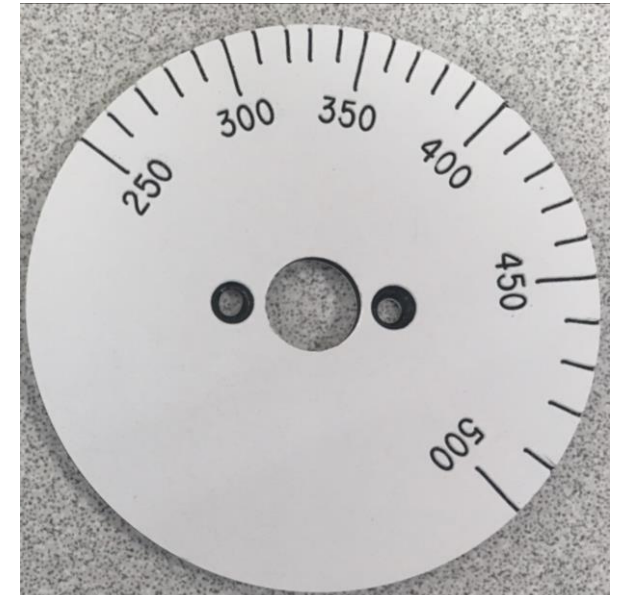
About K&L Microwave

- Design, manufacture electronic filters
 - Electronic filters allow electric signals with only a few frequencies to pass through them.
 - Tunable filters allow customers to change the frequencies that the filter passes.
- Facilities in the United States and Dominican Republic
 - Around 300 employees

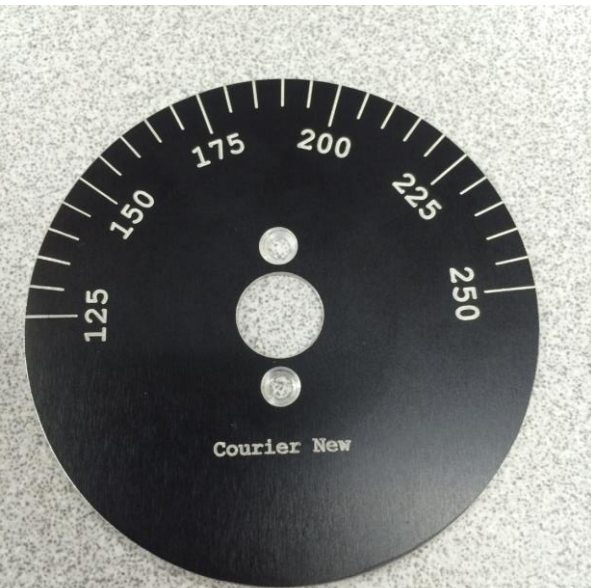
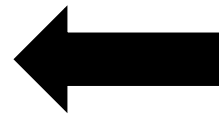
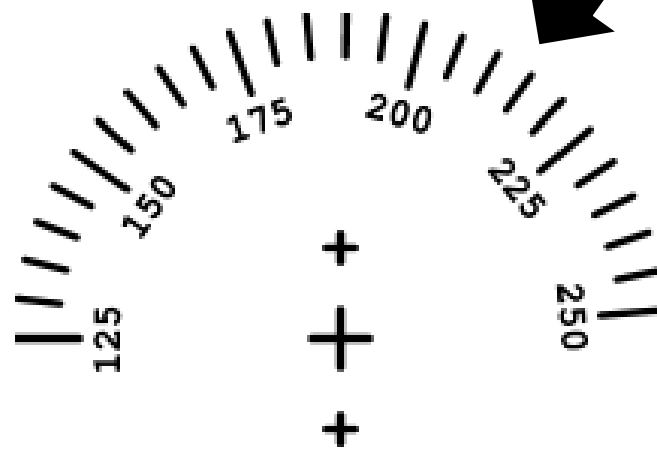
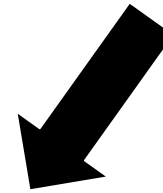
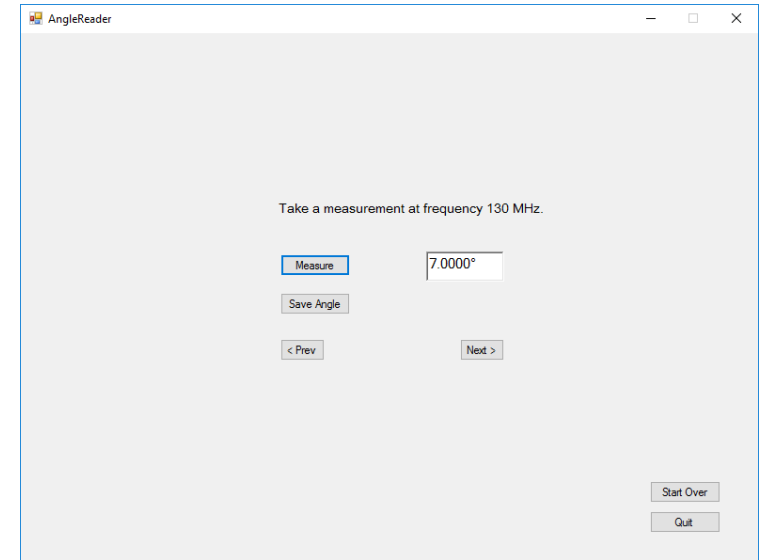
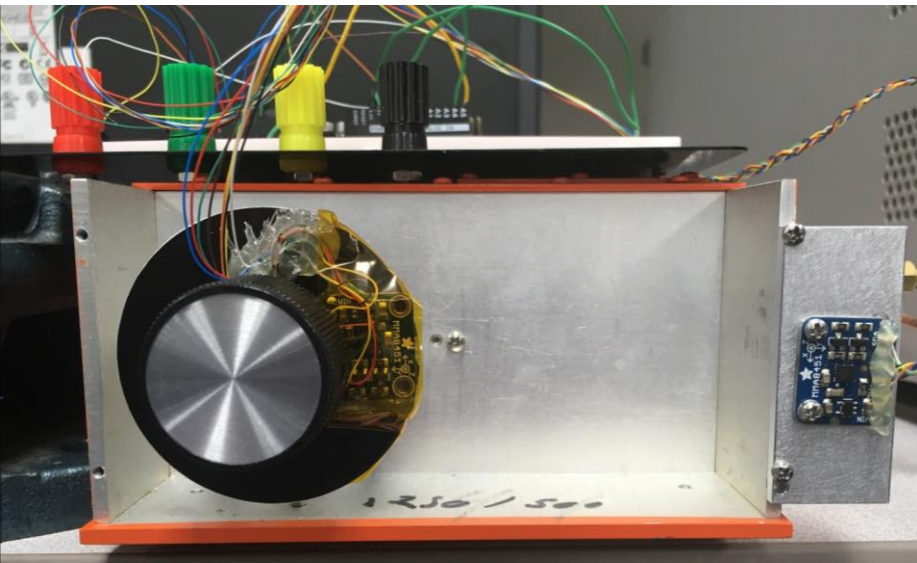
Dial Creation Problem



- Only technicians can make dials
- One mistake can cause the whole process to start from the beginning.



Solution



Method

- Start with a vector reading from each accelerometer
- Calculate dot, cross products
- Use definition of dot, cross products to calculate angle between two vectors.

Challenges

- Propagation of error
 - Angles near 0, 180 degrees