HUDSONVILLE ROBOTICS

2016 Engineering Notebook Guide

The engineering notebook should be a continuous running record of your team, robot design, and competition progress. Information is not to be removed, erased, deleted, destroyed, obfuscated, or any other method to make the existing content unavailable.

Note: Students may keep personal engineering notebooks but only the team engineering notebook can be submitted to judges for review.

Getting Started

1. The cover should have Hudsonville Robotics, your team number, and optionally your team name.
2. Start by numbering your pages in pen in the same position on each page (upper outside corner preferred).
3. The first few pages (3) should be your Table of Contents and it needs to have room to grow. As you add content you will add to this list.
4. The next few pages (3) should be your project timeline with a date for each milestone / goal
5. Then leave a page for each team member's Achievements and one more for the team.

Each Entry

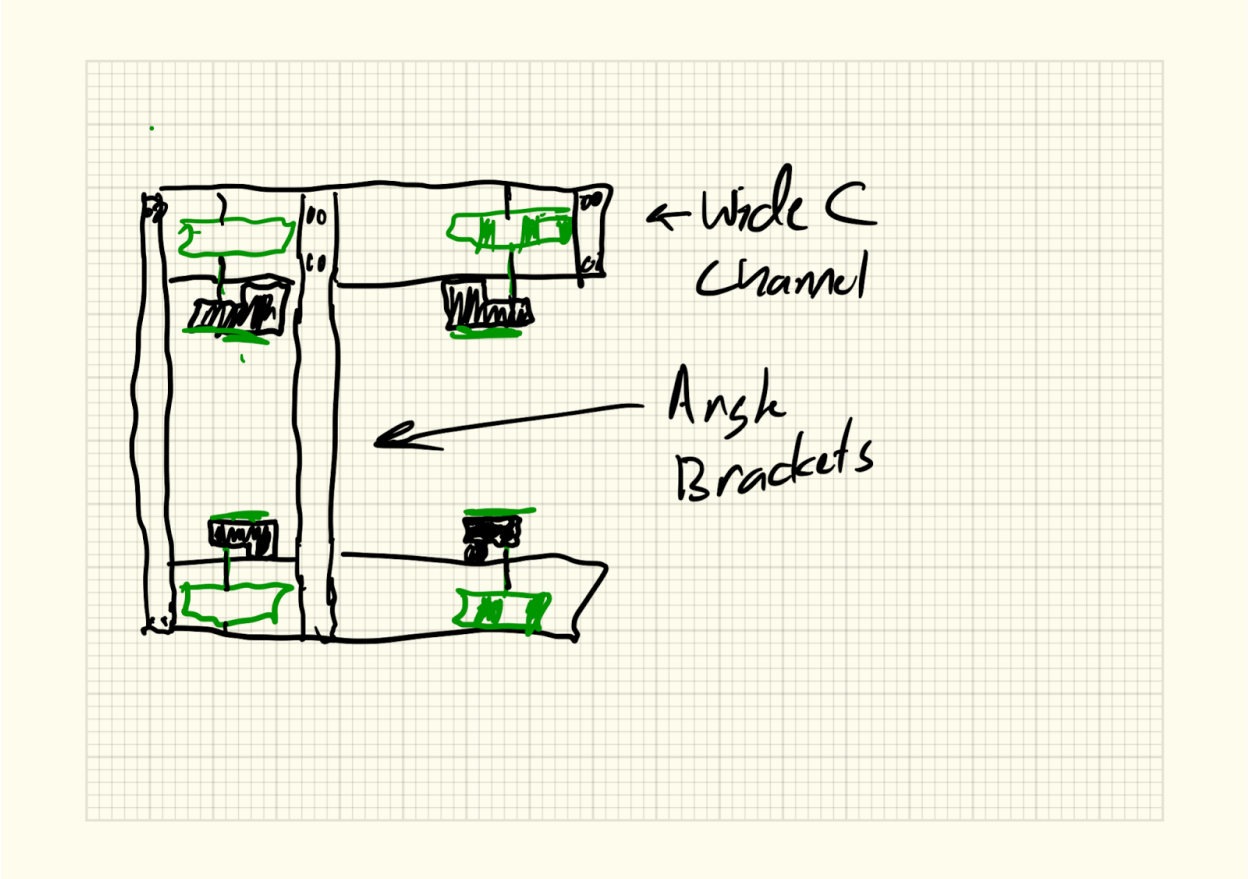
1. Write the date of the entry and then list the team members contributing starting with the team member that is documenting the information.
2. Write a subject line at the top of the page. Ie: Build meeting, league night, programming review, chassis test.
3. The contents of the page can be anything that you prefer but it should have a goal, some results, and a summary of what needs to happen next.
4. Examples of topic: Build idea, build testing, programming design, programming tests, game strategy discussion, collaboration with another team, prototype.

Tips:

Take a picture of your robot at each practice and also take close ups of significant changes.
Write in your notebook at every meeting.
You can keep an optional electronic version of your notebook to present to judges. This should be a summary version that is less that five pages but you should also have your handwritten notebook too.

Chassis Build	Sep 19, 2016 Theodore Alvin Simon

We decided to build a 4-wheel drive H drive chassis using standard motors, two traction wheels and two omni wheels. We feel that this will give the robot plenty of pushing power. Dave from the other team suggest that we use nylock nuts.



Results:
We were able to finish the structure portion but using on the nylocks took a lot longer than we expected. We are happy with how strong the chassis is.

Next meeting we need to attach axles, wheels, and motors. Also the team needs to come up with some intake ideas to pick up the stars and cubes.

Chassis Build Day 2	Sep 22, 2016 Theodore Alvin

Will be installing the wheels and motors on our chassis.

Activity:
We found out that we need to use bearing for the axles. Otherwise the axle rubs against the steel frame.

We finished installing everything and Bill from another team helped us connect a Cortex and a battery but the robot still would not move. Then Sam showed us that we can run an orange wire between the robot and the controller and that worked.

Results:
Yay! We are able to drive our robot.

To Do:
Need to figure out why the wireless keys are not working. I will ask one of the mentors for help next time.

I think the black plastic bearings are coming loose. Alvin is going to figure out what's wrong.

We have one more build night before our first league night. We need to talk about game strategy and who is gonna drive.