

FRC TEAM 3501: FREMONT HIGH FIREBOTS



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WEEKS 1/2: BRAINSTORMING THE ROBOT

Right after kickoff, we began brainstorming of ideas for our robot. We debated which types of robot would be the best at stacking crates in competition and weighed the pros and cons of each design. Some designs we looked into included forklifts, claws and elevators. Ultimately, our team decided to utilize a claw-based design.

We spent most of the second week fleshing out our robot design. While our mechanical team began the process of CAD to lay out the drive train and claw, our software and electrical team continued to prepare for their roles: they needed the necessary information from the mechanical sub-team before they could actually begin their duties.



WEEKS 3/4: DESIGNING THE ROBOT

By the beginning of week three, our electrical team obtained the information needed to begin designing our electrical board; our software team likewise began developing code as well. Our mechanical team continued to work on CAD drawings in order to create a more realistic model of our future robot.

Our electrical team designed the board throughout week four, while our software team began brainstorming methods of efficiently designing our code. Our mechanical team had finished most of its computer aided design, and began building the robot's drive base by the middle of the fourth week. We decided to construct two robots: one for competition and one to further practice with after bag-and-tag day. This provided further debugging time and a greater timespan for developing code for our software team.



WEEKS 5/6: BUILDING THE ROBOT

By the fifth week of build, our electrical team had finished building most of the board and placing component wiring. Our software team had implemented most of our drive code, and our mechanical team continued to work on the drive base while also ordering parts for the arm.

At the conclusion of the build season, our electrical team had created a sturdy and high-quality product. Our electrical board was not only finished, but also properly organized as well- a very esteemed accomplishment for our team. Our mechanical team finished the competition robot with enough spare time left to do some rudimentary testing. We anticipate doing further testing with the practice robot to refine our code, and making further improvements on it to increase our robots' quality.

Good luck to everybody at competition!

