



BONDS Week Nine Newsletter

March 2-March 9 2025

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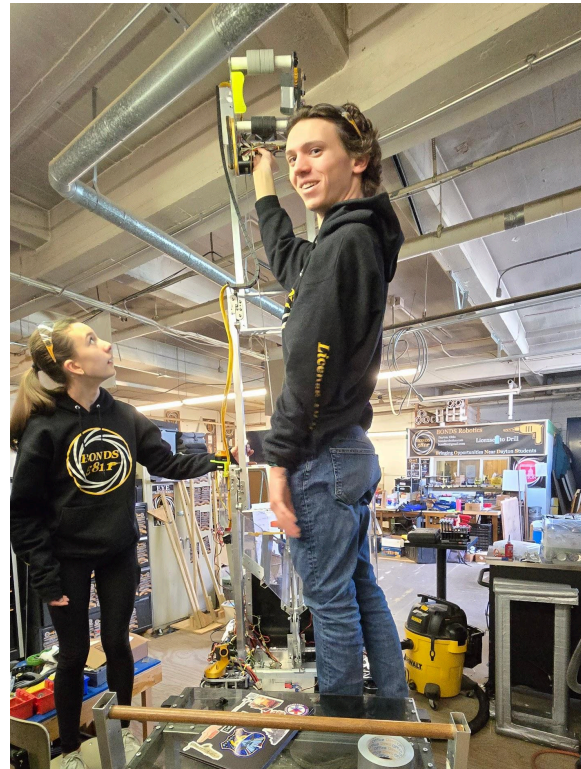
Controls

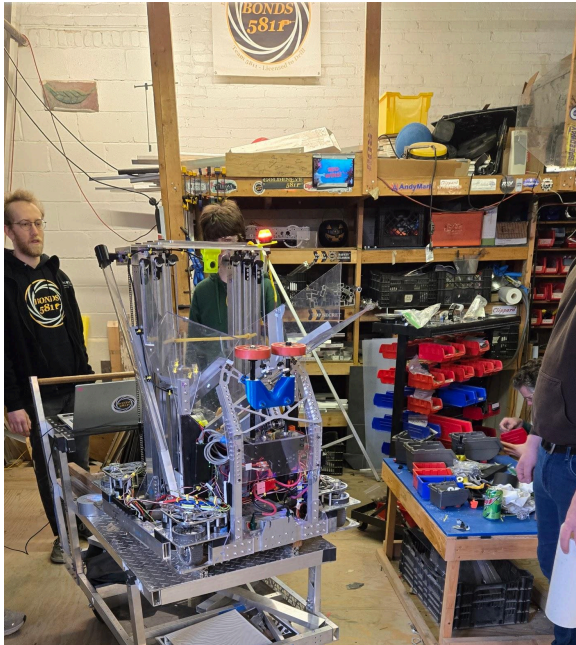
This week, students finished wiring the robot, adding sensors (a beam-break and limit switch, specifically), and prepping behind the scenes to start programming the robot.

The beam-break sensor is on the carriage, which holds and carries the coral up and down. It senses when coral is in the robot and stops the intake wheels from spinning.

The limit switch sits underneath the carriage and lets the program know when to stop the carriage's travel. This is so the carriage doesn't slam into the bottom of the robot.

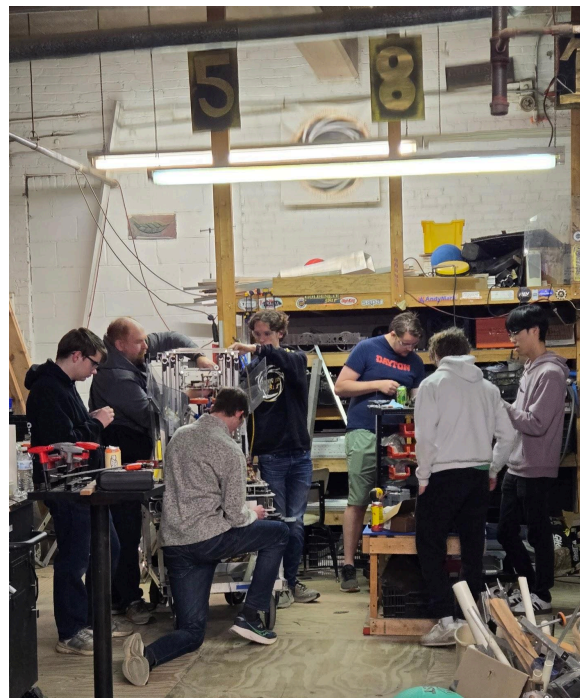
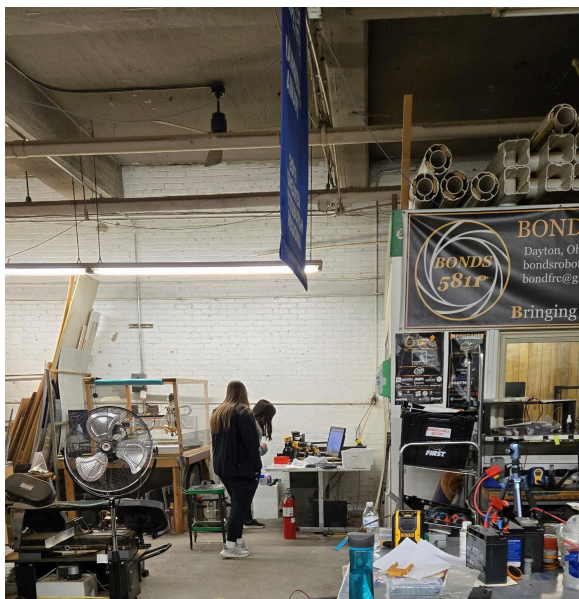
During the week, they intermittently tested the elevator to ensure the wiring and code were working together, roughly. On Saturday, programming got to use the robot for the first time since early season, when they used the temporary electrical board on the chassis. They worked on ensuring that the code written during build-time worked on the robot without causing any issues. For example, the code had a spot where it was dividing by zero, so the elevator tried to raise itself up as quickly as possible into infinity! It was E-stopped pretty quickly, but it was a good reminder to everyone watching that testing code can be a tricky process and to always prioritize safety (protective gear and being close to the E-stop).





Build

Some last minute parts were being made on our X-carve, and some replacement parts were cut out of aluminum on the Omio. These were replacing parts on the robot that were temporarily lexan, but for sturdiness, needed to be made from aluminum for competition.



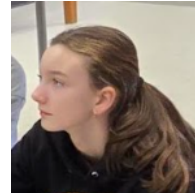
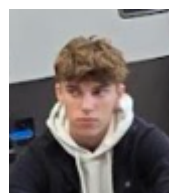
We did a great job this week at working in parallel - Controls was putting wiring in protective sheathing for the elevator while Build fixed the climber and made more parts! It gets pretty hectic at this point in the season, but the team did an incredible job at banding together and staying focused. The team also fixed and secured the elevator rope, and swapped out the old carriage for a new one made from the aluminum plates that they had made.



Miscellaneous

There are always plenty of things going on at practice! We don't put every detail of practices in these newsletters, but there are some fun things happening in the background that we thought we should mention.

The drive test went very well! Congratulations to the following students (in order of appearance):



Coach: Oliver Spaulding (12th)

Driver: Harry Zheng (11th)

Manipulator: Anthony Schneider (11th)

Human Player: Emily Salisbury (9th)

We also are in the process of designing the pit and robot banners, as well as buttons papers for the pins we give out at competition. We give out over 1000 pins at any one competition! It's a staple of FRC, and every team has their own designs and branding that you can walk around and collect.

We want to give a big thank you to all of our sponsors! Our team can compete because of your support, and none of this would be possible without our sponsor's help. Our team, BONDS, will keep improving and continue learning STEM skills and values this season.

To see our season's progress, please follow us on Instagram, Youtube, Tiktok, and our official website for weekly newsletters.

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