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“Rolling Thunder” Team 1511 Newsletter

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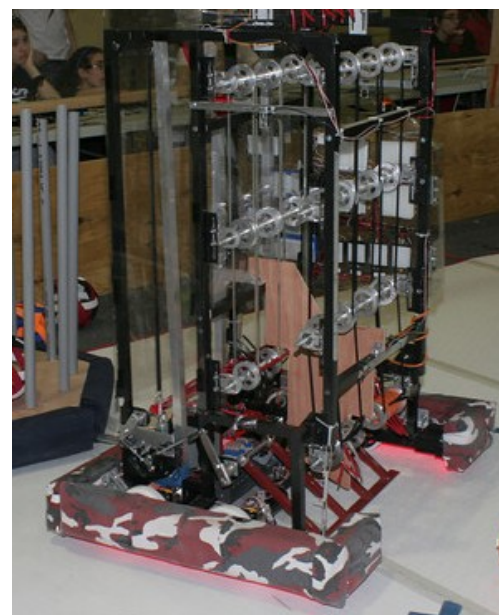
Build Season Wrap Up!

We're done with build season - the robot was shipped out on February 17th!

During the initial brainstorming sessions in early January, the team decided to design a robot that could collect balls both from the floor and from human players (called “payload specialists”). To use both these capabilities, the robot has rollers that pull the balls from the floor, then a conveyor system that dumps the balls into a hopper. The hopper has an open top, so the payload specialists can also throw balls directly into it.

In order to score points with the balls, the robot’s conveyors can be reversed to pull balls from the hopper and eject them out the top of the robot. The electrical controls team, who can’t resist nifty-looking controls, chose bright “pinball machine” buttons to fire the balls. With any luck, the balls will land in an opponent’s trailer!

About those balls...when *FIRST* designed the “Lunacy” game, they selected balls that could be purchased at Wal-Mart, so that teams across the country would easily be able to obtain more. Shortly after the January 3rd kickoff, teams discovered that Wal-Mart had discontinued purchasing the



This year’s robot, “Thunderplucker,” with red underglow that reflects off the white field.

balls – all that was left was the inventory on the shelves! Getting more by February was impossible, since the factory in China had stopped making the balls when Wal-Mart stopped carrying them. Of course, making a similar ball is just an engineering challenge, and engineering challenges are what *FIRST* is all about!

Within a week after kickoff, Gus Team 228 from Connecticut had deconstructed a store-bought ball,

Upcoming Events

- Finger Lakes Regional at RIT (Gordon Field House), March 5th-7th
- Chesapeake Regional at U.S. Naval Academy (Annapolis, MD), March 19th-21st
- FRC Championship in the Georgia Dome (Atlanta, GA), April 16th-18th

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Build Season Wrap Up! (continued)

figured out how to replicate it, and posted written and video instructions online. Big thanks to the Gus Team! Using their instructions and a bit of trial-and-error, the Rolling Thunder team created 90 “orbit balls” in preparation for the pre-ship Rally event at Penfield High School. One of our work rooms was routinely filled with people in the various stages of ball assembly. We’re currently making a giant “orbit ball” to take to competitions – in our team colors, of course!



Team member Shauna Richards works on the ball-handling system of “Thunderplucker.”

Students and mentors were busy throughout build season with Autodesk Inventor (CAD program) to create our robot’s design. Detailed pieces were made and the robot was assembled in time for testing before the Rally event. Student and adult programmers wrote lots of code to control the robot’s many functions. The robot’s conveyor system will need a bit of adjusting in the pits at the Finger Lakes Regional, but the robot drives very well, even on the slippery surface used for this year’s “Lunacy” game – it’s

programmed for traction control!

As if building one robot and 90 “orbit balls” couldn’t keep us busy enough, the Rolling Thunder team also mentored the Thomas Jefferson High School rookie team this build season, traveling to their school two days a week and having them visit us once a week. Our field team

even built them a crate for shipping their robot. The Jefferson students have really opened up and are getting excited about the *FIRST* program.

Rolling Thunder and the Jefferson team will both be competing at the Finger Lakes Regional at RIT, March 5-7. Hope to see you there!

“Engineering challenges are what *FIRST* is all about!”



Team mentor Cynette Cavaliere shows off a couple of the many “orbit balls” she helped make.

Team 1511 Newsletter

Regional Competitions

Team 1511 “Rolling Thunder” will be competing at two regional competitions this year before going to the championships in Atlanta. Our first competition will be right here in Rochester: the Finger Lakes Regional at RIT, March 5-7 in the Gordon Field House.

Fifty teams from all over the northeast and Canada come to Rochester for the FLR event. Last year FLR got socked with a major snow storm that put a crimp in the travel plans of some teams, so we’re keeping our fingers crossed for better weather this year! We’ll see some old friends and make some new ones, both on the field and off.

FLR has the advantage of a great venue: plenty of comfortable seating, a spacious pit area, and a fine crew of volunteers. If you haven’t been to FLR in prior years, mark your calendar and come on down! Thursday, March 5th will be a practice day, and a good time to stroll through the pit area to see all the robots without quite such a large crowd. The seeding matches start on Friday, March 6th and wrap up the morning of



Team 1511's pit at last year's Finger Lakes Regional. Look for the “red camo”!

Saturday, March 7th.

Once the seeding matches are complete, the top eight teams go through a selection process resulting in eight alliances of three robots each. Of course, we’re hoping to either be in the top eight, or be chosen by one of those teams! The eight alliances then go through elimination matches, resulting in a winning alliance of three teams.

Although the winning teams receive awards, *FIRST* also gives

awards in categories other than game play, such as engineering design, sportsmanship, safety, creativity, and many others. At our second competition, the Chesapeake Regional in Annapolis, Team 1511 will be submitting an essay, video, and live presentation for the Chairman’s Award. The Chairman’s Award is *FIRST*’s highest award and “honors the team that, in the judges’ estimation, best represents a model for

other teams to emulate, and which embodies the goals and purpose of *FIRST*.” Wish us luck in at the Chesapeake Regional, March 19-21!

“Fifty teams from all over the northeast and Canada come to Rochester for the FLR event.”

**Penfield High School / Harris RF Robotics Team
"Rolling Thunder" Team 1511**

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Penfield, NY 14526

"The thunder just keeps getting louder."

We're on the web!
www.penfieldrobotics.com

Useful links:

Team 1511 website: www.penfieldrobotics.com

Team 1511 photos: www.rollingthunder.smugmug.com

FIRST website: www.usfirst.org

"Lunacy" video:

<http://www.usfirst.org/community/frc/content.aspx?id=418>

"Lunacy" description:

http://www.usfirst.org/uploadedFiles/09_FRC_GameDescrip.pdf

FIRST at RIT: www.ritfirst.org



Sponsor Listing—THANKS for Keeping the Thunder Rolling!

Main Sponsor

Harris Corporation: RF
Communications

Eagle (\$500)

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Hawk (\$200)

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Dick Ide Honda
Drake Environmental Consultants
Huther Painting
Joy Luck Garden Chinese Restaurant

Kaloke Technologies
National Fire Adjustment Company,
Inc.
Park Dental Associates, PLLC
Pellittieri, Peter, DDS, PC
SCJ Associates, Inc.
Siam Fine Thai Cuisine & Wok with
You

Owl (\$100)

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ISG Chips (Imaging Solutions Group)
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Pea Pods Day Care
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Cortese Auto Block
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Hyjea
Michael's Valley Grill
Northside Salvage Yard Inc.
On the Road Glass
Penfield Fitness and Racquet Club
Perinton Carpet
Simulcast Solutions
Spitali's Barbers
Virtual Scopics And UR/Engineering
Willow Pond Chiropractic Association

Other

Pulp Nouveau
SunRise Pediatrics(Rainbow Pediatrics)
Vincent Mazda