

February 2012

# ROBODOX

NEWSLETTER

## This Month:

The Robodox "Kickoff" the FIRST Robotics season. This volume also includes: Los Angeles FRC Regional Volunteer Request (please read!), Upcoming Events, and Shooting for the...Hoops?: An explanation of this year's FRC game.

## ARE YOU READY TO RUMBLE?

### The FRC Kickoff and Design Day

The Robodox kicked off its FIRST Robotics season on January 7<sup>th</sup> at CSUN. Students and mentors learned about and discussed this year's FRC game Rebound Rumble. The room quickly filled with questions, ideas, and vigorous debate as the team worked to develop a unique and competitive machine. From discussion about scoring to balancing on bridges, the team is eagerly awaiting the chance to prove themselves competitively and graciously in the upcoming San Diego (March 2<sup>nd</sup> – 4<sup>th</sup>) and the Los Angeles (March 15<sup>th</sup> – March 17<sup>th</sup>) Regionals. A big thank you goes out to all of the mentors and parents who attended and/or will be supporting us throughout the year.



Team 599  
the Robodox  
at Kickoff

**On a side note, several members of the team have chosen to hone our VEX robots in preparation for the Golden State VEX Robotics Championship (February 25<sup>th</sup>) at CSU Dominguez Hills and the VEX World Championship (April 19<sup>th</sup> - 21<sup>st</sup>) in Anaheim.**

## GO DOX!



Above: Derek, Michael, Gabby, Johnathan, and Shuhrah take a break.



Left: The team watches diligently.

Written and Edited by: Johnathan Maynard

## Volunteers Needed!

The Robodox will be running our Robot FIRST-Aid Station at the Los Angeles FRC Regional from March 15th to the 17th, at the Long Beach Arena. This year, there will be 17 rookie teams at the LA Regional and we know the FIRST-Aid Station will be very busy – especially with “pit calls”. We would like to invite you, to help us in our effort to assist during this local regional. We’re especially looking for people who can help on March 15th (Thursday) to prepare robots for inspection. We’ll also need those who are familiar with “Pit-Level” fabrication, repair and maintenance, have a strong understanding of programming (C, Java, and/or LabView), the National Instruments’ electronics system or any other subsystems for FRC robots. If you’re available to help at this regional, please contact Jazmen Thomas at [events.robodox@gmail.com](mailto:events.robodox@gmail.com) with the dates you’re able to attend as well as how you might be able to help.

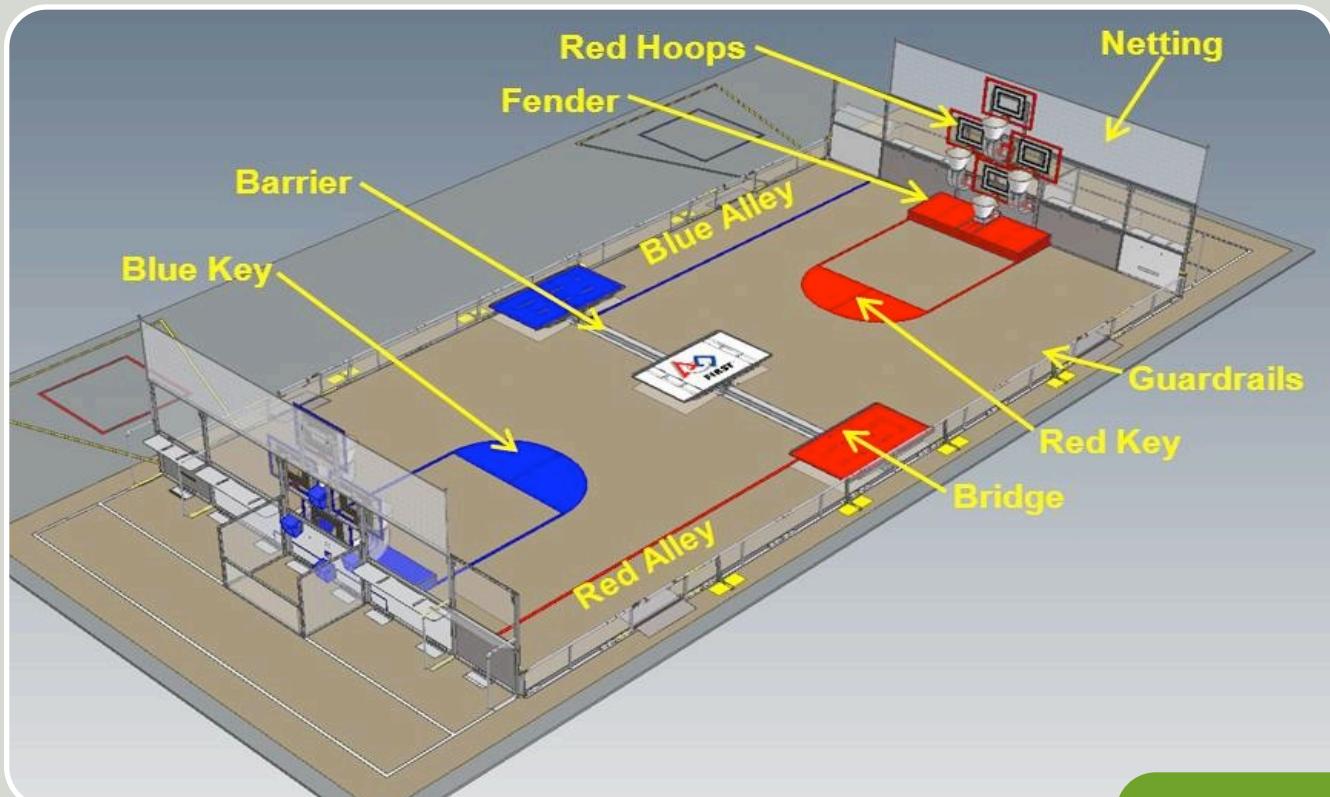
# Shooting for the...Hoops?: An explanation of this year's FRC game



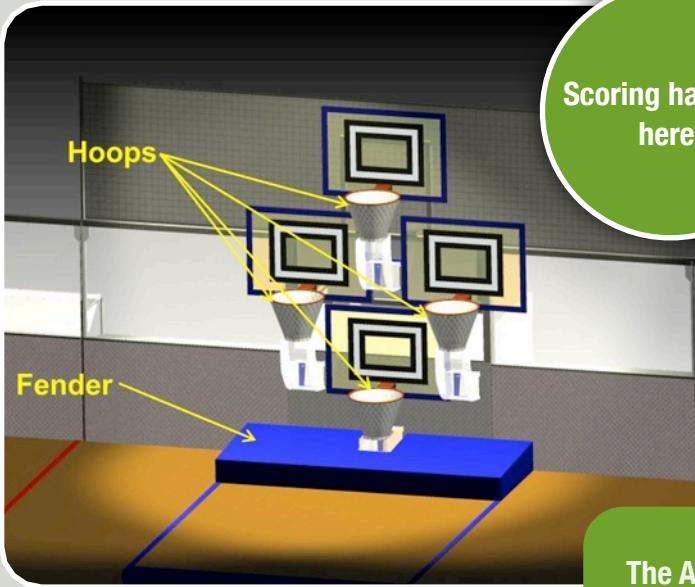
By Jeffrey Lee and Johnathan Maynard

Edited by: Johnathan Maynard

Rebound Rumble is played by two opposing alliances of red and blue, each consisting of three teams. Matches are 2 min. and 15 seconds long consisting of 15 seconds of autonomous/xbox kinect control and 2 minutes of tele-op or driver control. The goal of the game is to score more points than the opposing alliance by shooting/dropping 8" foam basketballs into one of four 18" hoops set at various heights. Robots can only hold/control up to 3 pieces. During the last thirty seconds of the match robots can choose to score additional balls or attempt to balance on the bridges in the middle of the field.



Above: The Court.



The match opens with a fifteen second hybrid period in which robots are either controlled autonomously (through coding and sensors) or by a player using the xbox kinect. Each shot during this period earns the alliance a three point bonus (added to the points scored by scoring in the low, medium, or high goals). Once the hybrid period ends, drivers step forward and take control of their robots. During the tele-op period, scoring in the 98", 61", and 28" goals earns the alliance 3, 2, or 1 points respectively.

During the last 30 seconds of the match, alliance members can balance on the bridges for additional points. During qualification matches, one robot on its alliance's bridge earns 10 points, two robots on it earns 20 points, and three robots on it also earns 20 points. However, in elimination matches, one robot earns 10 points, two earn 20 points, and three earn 40 points (opposed to the 20 points earned in qualification matches).

Adding a twist to the game and encouraging cooperation, balancing with the opposite alliance robots on the Coopertition bridge during qualification matches earns each alliance 2 Coopertition points and 1 point if the bridge isn't balanced, but is fully supported with a robot from each alliance. Winning a

The match is played on a 27' by 54' carpeted field called the Court. On each side of the Court are the 4 scoring hoops set at 98", 61", and 28", player stations, the alley (the zone where robots can receive game pieces from their alliance), the fender (a sloped block under the hoops), and the key (a "safe" zone where robots can shoot from). In the center of the field are the 3 bridges (1 bridge for each alliance and the Coopertition bridge) and the 4" barrier that spans the center of the field.

### The Alley

The alley is the only place that robots can directly receive game objects from the players. Each alliance has one alley in which it cannot be touched by opposing robots, however each alliances' alley is on the opposite side of the field from its hoops. This means that robots have to race across the field to receive game pieces and score.



Above: Two robots from the red alliance balance the red bridge while two robots from opposing alliances balance the Coopertition bridge.



match gains an alliance 2 qualification points and an additional 1-2 points for both alliances if the Coopertition Bridge was supported or balanced, respectively.

Left: Attached to the bridge are limit switches which sense the balance of the bridge and activates lights of the corresponding alliance color when the bridge is balanced at the end of the match.

## Thank You!

The Granada Hills Charter High School Robotics Team, aka. the Robodox, would like to thank Starbucks and Western Bagel for their donations to the team. Their support has kept our bellies full and our minds energized to forge ahead during the FRC build season.

| UPCOMING EVENTS | GOLDEN STATE VEX ROBOTICS CHAMPIONSHIP   | SAN DIEGO FRC REGIONAL   | LOS ANGELES FRC REGIONAL  |
|-----------------|--|--|---|
|                 | <b>Category:</b> VEX Competition<br><b>Date:</b> February 25th<br><b>Location:</b> CSU Dominguez Hills | <b>Category:</b> FRC Competition<br><b>Date:</b> March 2nd - March 4th<br><b>Location:</b> Valley View Casino Center | <b>Category:</b> FRC Competition<br><b>Date:</b> March 15th - March 17th<br><b>Location:</b> Long Beach Arena |

**FOR ADDITIONAL INFO, COMMENTS,  
CONCERNS, OR SUGGESTIONS  
CONTACT:**

**Our P.R. Executive Johnathan Maynard at [pr.robodox@gmail.com](mailto:pr.robodox@gmail.com)**

**Our team coaches, Mr. Vanderway ([jvanderway@ghchs.com](mailto:jvanderway@ghchs.com)) and Dr. Koroleva ([okoroleva@ghchs.com](mailto:okoroleva@ghchs.com))**