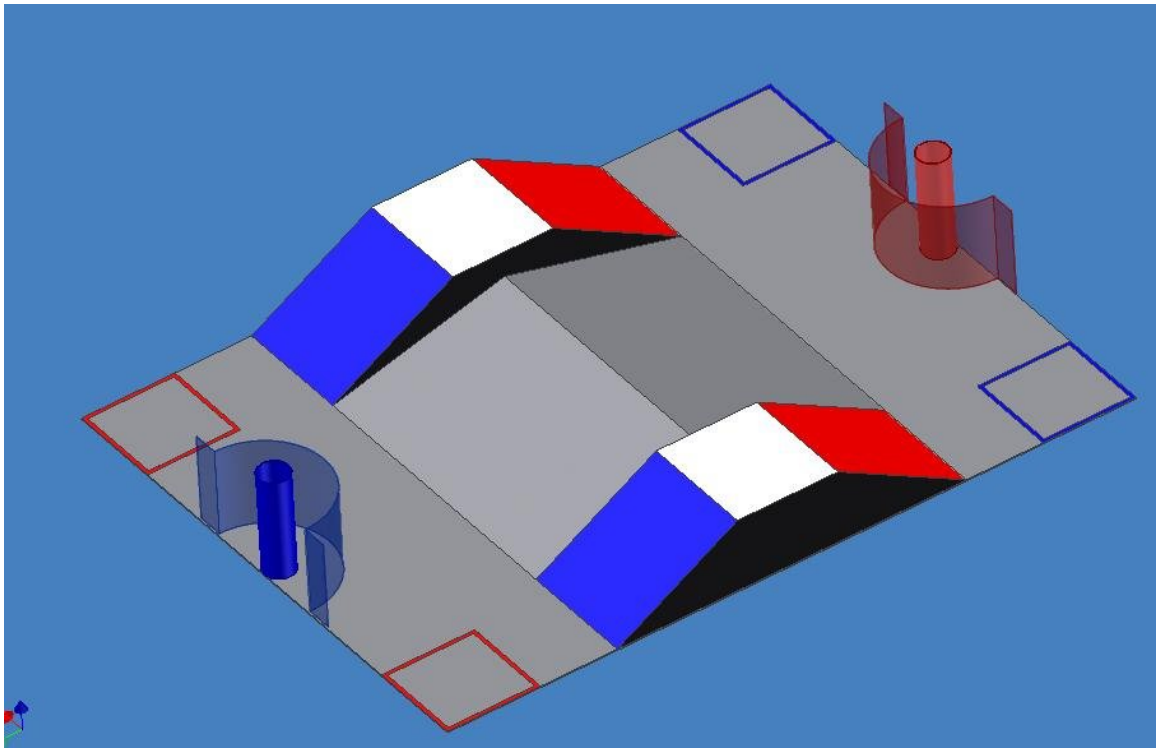
Ra Cha Cha VEX wiffle Wallop

Overview:
The Ra Cha Cha is a FIRST (for inspiration and recognition of science and technology) off-season event. The total event will consist of competitions or demos in all different levels of FIRST, FRC (FIRST robotics competition), FVC (FIRST VEX Challenge), and FLL(FIRST Lego League). At the Ra Cha Cha we will be hoasting a custom vex game.

The game at the Ra Cha Cha is an open vex event, meaning that anyone of any age or background can compete. There will be a small donation of $10 required to compete. The complete list of rules and regulations are described below. Please visit our website for more details about the Ra Cha Cha. Http://ruckus.firstrochester.org And http://usfirst.org for more information on FIRST itself.



Competition Rules:

Each 2-minute match features two-team alliances – one “red” and one “blue”. The object of the game is to attain a higher score by placing any of the 60 balls on the ground, in the goals and/or having one or both robots from an alliance on a deck at the end of the match.

Mission	Point Value
Each Ball on designated ground scoring area	*1*
Each Ball in designated Outer Goal	*3*
Each Ball in designated Inner Goal	*5*
Robot on Ramp	*20*

Robot Rules:

At the start of every match, the robot must be no larger than 12” x 12” x 12”.

Any official Vex component may be used in any quantity,
(Except as limited below):

- Contain only 1 Vex Microcontroller
- Up to 10 motors or servomotors (Any combination, up to 10)
- Only one battery pack
- Only two RF receivers

Additional Materials:

- You are allowed to spend up to $50 for non vex components (with the following conditions)
    - No non vex motors allowed
    - $50 is for raw materials only
    - You may be asked to provide a Bill of Materials (BOM)

Robots built with the sole intention of the destruction of the field or other robots will not be tolerated.

The Game:

The game is played on a 96” x 72” carpeted playing field. Robots will play in alliances of 2 for a total of 4 robots on the field during each match. The object of the game is to score wiffle golf balls by getting them on your side of the field or in one of the 2 goals at the ends of the field. Each goal has both an outer and inner section. Balls in the outer section are worth 3pts each and balls in the inner area are 5pts.

Game definitions:

Alliance – A pre-assigned grouping of two teams that will work together for a given match

Alliance station – the region at the ends of the field, marked with tape, which drivers and coach must stand during a match

Ball – The primary playing object, which is a waffle ball, sized to act as a practice golf ball. The diameter of this ball is approximately 1.675 inches but may vary by no more then .062 inches smaller

Outer goal -A lexan half circle, with a diameter of 17.75 and a height of 12”, supported by the back wall of each of the ends of the playing field. The lexan is 1/8 in thick.

Inner goal - A piece of 4” pvc pipe, 14” tall, located inside the outer goal, located in the center against the back wall. (see pictures for orientation)

30deg ramp – The outermost ramps on the field barrier with a 30 deg ramp to the platform surface. The ramp surface will be made from painted medium density fiberboard (MDF). Robots that are on this platform at the end of the match gives points as specified above.

15 deg ramp – The large ramp in the middle of the field which acts as a divider for the sides of the field. The peak of this ramp is the determining factor for scoring balls on either side of the field. Balls on the ramp surface at the end of the match do count for points. The ramp surface for this ramp will be the same industrial carpet as the rest of the field.

Starting zone – robots will start in a 12”x12” square located at the 4 corners of the field.

Official Vex component – any component branded by the vex name or any components available for purchase from vexlabs.com.

Drive team – up to 3 people including up to 2 drivers and 1 coach. There are no age/school level requirements for any of these positions.

Tournament Rules:

Teams will have the opportunity to compete in as many matches as possible during the timeframe at the competition. The structure of this tournament will be round robin, the total number of matches will be totaled and the team with the most wins will be declared the winner. In the event that there are multiple teams with the same record the rank will be determined by total points accumulated throughout the tournament. All robots will be given the same number of matches to count for the round robin tournament; if an uneven number of teams compete some teams will be asked to play extra matches, which will not affect their ranking.