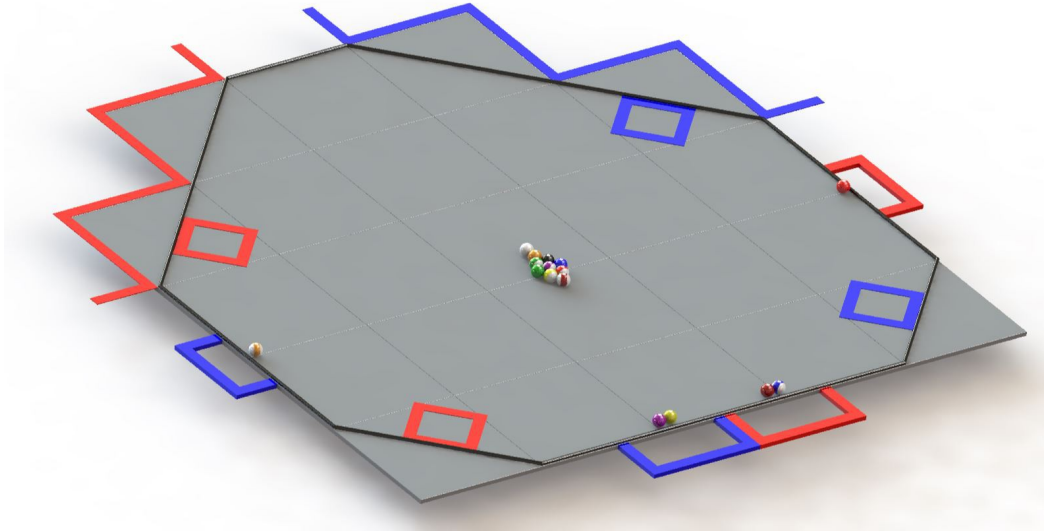# CREATE

AIM High - Challenge Description

General:

The AIM High Challenge has two components; the mandatory alliance portion and the optional individual team portion. (Some awards are only available to teams participating in both portions of the challenge.)

Alliance:

The alliance portion of the competition requires teams to build a robot to exact specifications and then to program the robot to behave in a very specific way. All robots must have the minimum drive characteristics to compete in the alliance portion of the challenge. The robots then compete in the Alliance Tournament playing Freeze-Pool. The first phase of Freeze-Pool is played by two alliances, one red and one blue, made up of randomly paired teams. The top two ranked teams through the qualification rounds will go up against the 3rd and 4th ranked teams in the finals.

Freeze-Pool is played on an irregular octagon playing field with a 40' perimeter. Play ends when time runs out or all the scoring objects are scored or removed from the field and one alliance gets both robots parked. Matches are 90 seconds long.

The object is to score more points than the opposing alliance by pushing billiard balls into alliance goals. Each ball scored in the small goal is worth 2 points. Each ball scored in the large goals are worth 1 point.. In addition to the balls numbered 1-15 there is also a white cue-ball which acts as a goal negater. If scored in the last 20 seconds of the match any goal into which the white cue-ball is scored cancels out all scores in that goal.

Teams may not de-score their opponents balls. Any ball pushed out of the playing field will not be returned. Each robot has a bumper switch that when pressed will freeze the robot for 5 seconds.

Team:

Most of the specifications will be given in advance. Some will not be revealed until shortly before the alliance competition. This is the team portion of the challenge. Each team will be given a new behavior to program into their robot. Top teams in this challenge will then be judged by both their robots execution of this behavior and the elegance, structure and clarity of their code.

Awards:

Tournament Champions
(2 teams per division.)

Programming - 1st Place
(1 team per division)

AIM High Honor Award
(1 team across all divisions. This award combines both on field performance, sportsmanship, technical knowledge and the program written in the programming challenge.)