

# International

## Botball®

### The 2016 Story

The first manned mission to Mars was evacuated during a severe storm, and BotNaut was left behind in the chaos! Now he's stranded and has to survive for months until the rescue mission arrives. Fortunately, a crew of robots is already on the Crater Floor building a Habitat. BotNaut will need their help with a wide variety of tasks to improve his chances for survival!

**The Rift Valley:** BotNaut is in the Valley, scavenging supplies. The robots will need to clear debris and obstacles to make a path, and then take BotNaut back to the Habitat, or even to the Crater Rim for easier retrieval!

**Energy:** There are several Solar Arrays providing power to the Habitat, but they need to be cleared of dust for better efficiency. If possible, some need to be moved to the Crater Rim, where they can collect more sunlight.

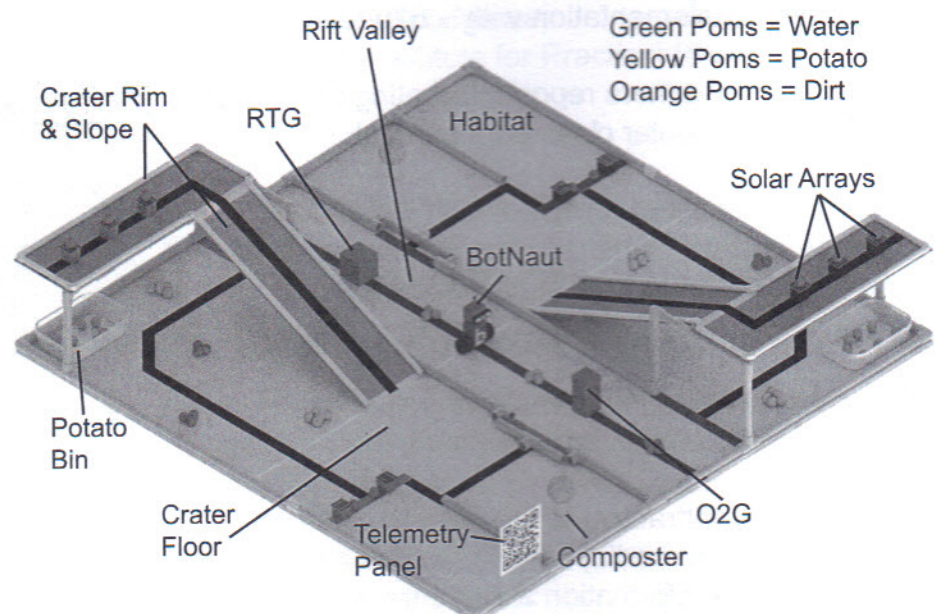
**Air and Heat:** The Oxygen Generator (O2G) and Radioisotope Thermoelectric Generator (RTG) will need to be retrieved and repaired to make the Habitat usable.

**Food and Water:** Through the magic of Science!, BotNaut will be able to grow Potatoes to supplement his food rations. The robots will need to gather plenty of Martian Dirt and Water Deposits to pull off this agricultural feat, as well as use a special Composter.

**Interference:** A second group of robots may "accidentally" get in the way during their own operations, thwarting your attempts to help BotNaut. Be on the lookout!



### The 2016 Game Board





# KIPR Open

The KIPR Open Tournament encourages ongoing robotics education beyond the high school level. Mentors, parents and teachers of Botball® teams are encouraged to focus their own creative energy into a solution for the KIPR Open Tournament (let the kids build their own robots!).

The KIPR Open Tournament consists of two separate rounds - seeding and double elimination. During the seeding rounds teams compete unopposed on the game board as their robots attempt to score as many points as they can. The seeding rounds are a great opportunity for teams to show what their robots can really do.

Teams go head-to-head in the double elimination rounds as robots from two different teams compete on the game board simultaneously. Teams attempt to score as many points as possible, but also to keep their opponent from scoring.

Teams are awarded for their performance in seeding and double elimination rounds, but judges' choice awards are also given in a variety of categories. Judges' choice awards are not necessarily related to a team's ability to score points during the tournament rounds.

## KIPR Open

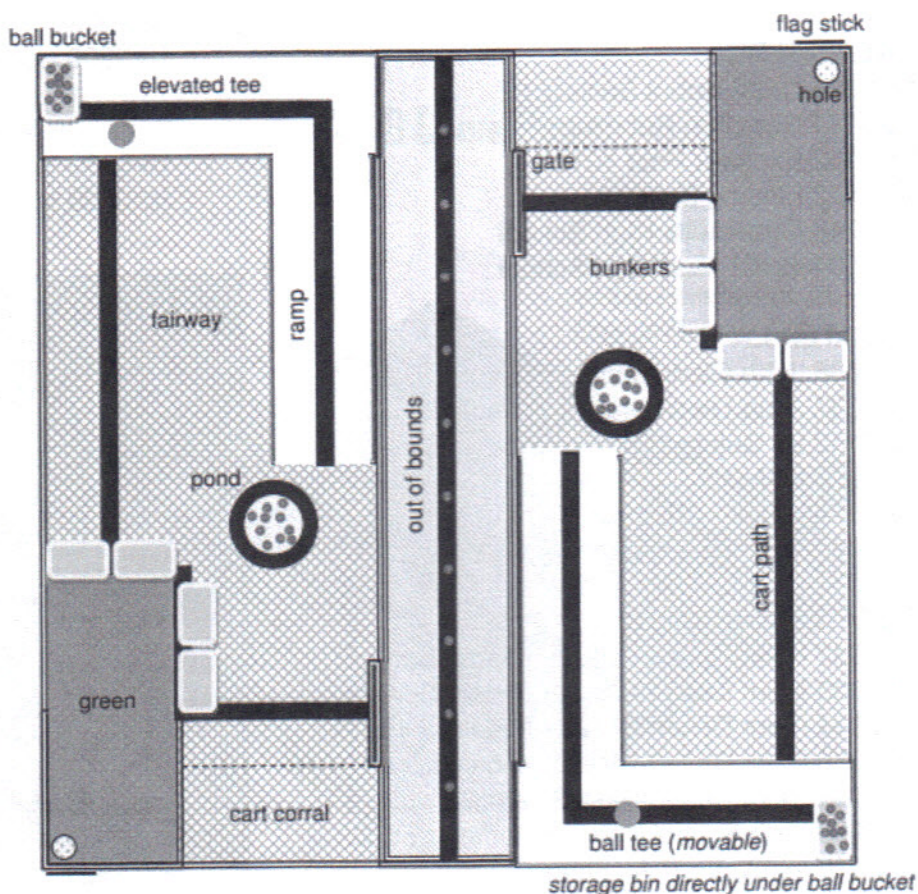
### SCHEDULE:

Seeding Rounds  
July 7, 2016  
6:30 PM - 9:30 PM

Double Elimination  
July 8, 2016  
2:30 PM - 4:00 PM

### TEAMS:

Below Par - Maryland  
Let the Big Dog Eat - Maryland  
PRIA Allstars - Austria  
Rosebotics - Indiana  
Task Force X- Oklahoma  
The Great Scotts - Maryland  
SIUE Robotics - Illinois  
Team Monsorno - Florida





The KIPR Autonomous Aerial Robot Tournament Game is an autonomous robotics challenge designed and distributed each year by the KISS Institute for Practical Robotics (KIPR) to encourage ongoing robotics education beyond the high school level.

## **This Year's Game: Search and Rescue**

Send an Autonomous Drone and Unmanned Ground Vehicle (UGV) through a structured, static environment, to recover Botguy. Your base station must map the environment and then direct the drone to fly safely through to scout ahead. An Unmanned Ground Vehicle can be deployed to recover Botguy and bring him back to the base station. Through the combination of Drones and UGVs, you can accomplish your mission to retrieve Botguy.

Three sets of movable walls will be placed at random locations before the start of the game. Your Drone must successfully fly to the other side and land next to Botguy. Being unable to reach Botguy with the Drone will hurt the mission. An UGV can be deployed to recover Botguy to bring him back to the base

# KIPR Aerial

## **SCHEDULE:**

Competition Rounds

July 7, 2016

6:30 PM - 9:30 PM

Competition Rounds

July 8, 2016

2:30 PM - 4:00 PM

## **TEAMS:**

Cedar House Robotics - Maryland

Iron Patriots - Oklahoma

ODST- California

PDCMC Enterprise - California

PRIA Allstars - Austria

