

FRC 2791 - Shaker Robotics

Kickoff Rules Worksheet

The purpose of this worksheet is to identify the important rules and strategies for the 2018 season.

Note: Start with these pre-prepared questions. The mentors will be around shortly with additional questions specific to this game (as soon as we figure them out 🐱🐱🐱)

Make sure you answer the rules questions before you try and start on the strategy questions! Otherwise you may think of a strategy that is illegal or miss out on a killer strategy! While this may seem time-consuming, we're actually doing this to save time by making sure everyone thoroughly understands the rules. Remember, If we don't do something right the first time we need to make time to do it again.

Basic Rules

Shape of the field

- List the zones on the field. Think about what makes each of these zones important.
- List the field elements. What is the purpose of each of these elements?

Game pieces

- List the game pieces.
- What kind and how many game pieces can robots start the match with?
- Where are the rest of the game pieces at the beginning of the match?
- Are there any restrictions on the number of game pieces that can be possessed at once?

How to get points

- List **every** way to score points and their point values. Do all of them involve game pieces? Are they repeatable? Are there diminishing returns (eg: 2017 gears per rotor going up, 2011 tubes on lower levels are worth less)? Do not dismiss any scoring method as worth too little or being too hard to think about.
- Where on the field is each kind of game piece acquired? Can game pieces be stolen from opponents?
- Are game pieces returned to the game after being scored? If so, where? Which alliance has control of them?
- Is there any way to create closed-loop scoring (eg: 469 in 2010, secret passage sniping in 2016)?

- Where on the field is each kind of game piece scored? Are there multiple locations or ways to score game pieces?
- Are there any restrictions on where game pieces can be scored? Example: in 2017, fuel can only be scored in your own launchpad; in 2016, boulders cannot be shot over defenses

How to get penalties

- How many types of penalties are there in the game? What scoring has to be done to make up for each type of penalty.
- Write down the five most common penalties
- Do any of the penalties relate to zones on the field? For a penalty to happen which zones do which robots need to be in? IE: Can you be touching an opponent robot in the zone as long as you are not in the zone?

Advanced Rules

Game sections

- Are there different points in the game where the rules or point values change (hint autonomous, endgame?)

Point Denial

- Are there any choke points in the field, where limited spaces reduce maneuverability? Eg: between the airship and the walls in 2017. Between the pyramid and the wall in 2013.
- Are there any ways to create a chokehold strategy? A chokehold strategy is one where you can score a lot of points early then stop the opponent from being able to score at all. A chokehold strategy, when executed correctly, guarantees victory. Examples: 71 in 2002, 469 in 2010

Strategic Planning

Auton Strategy

- Where do robots start on the field?
- How much more valuable is completing tasks in auto compared to teleop? Is this significant?
- What is the max score in auto?
- How would multiple robots work together in auto? Example: in 2017, two rotor autos

Teleop Strategy

- Should each robot work independently to score points or are there ways they can work together?
- What is the maximum score of a single robot?

Endgame Strategy

- Are there any additional ways to score in the end game?
- Are there any additional penalties in the end game?

Tournament Strategy

- How do you rank highly in the game? Are there ranking points, if so how do you get them?
- What are the ranking tiebreakers?
- What strategies are likely to rank highly?
- What strategies are likely to win the event?