2018 Junior Robotics League
Competition Manual

7 THE TOURNAMENT
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7.1 OVERVIEW

The tournament will consist of three sets of matches called "practice matches," "qualification matches," and "elimination matches." The purpose of the practice matches is to provide each team a chance to run its Robot on the playing field prior to the start of the competition matches. The purpose of the qualification matches is to allow each team to earn a seeding position that may qualify them for participation in the elimination matches. The purpose of the elimination matches is to determine the event Champions.

7.2 PRACTICE MATCH SCHEDULE

Practice matches will be randomly assigned. Each team will be assigned to approximately the same number of practice matches. Some additional matches may be available on a standby basis. Each practice match will be played as a normal match. Every Robot will test connection with the field as a part of inspection before qualification matches begin.

7.3 QUALIFICATION MATCHES

7.3.1 Schedule
The qualification matches will be played in accordance with the Match List. The qualification matches will consist of a series of matches, with an arena reset between each match. The qualification match schedule will be available on the first day of the competition weekend.

7.3.2 Match Assignment
Each team will randomly be assigned two alliance partners for each qualifying match.

All teams will play the same number of qualifying matches **unless** the number of teams in attendance is not divisible by six. In that case some teams will be randomly selected to play an extra match. For the purpose of seeding calculations, those teams will be designated as surrogates for the extra match and the results from the match will not be used in the rankings for the surrogate teams.

7.3.3 Earning Points
At the conclusion of each match, each participating team will earn seeding points in specific categories that will be accumulated during the tournament, and used to continuously determine the rankings of teams throughout the qualification matches. These categories are: Qualifying Score, Endgame Score, Autonomous Score, and Teleoperated Score.

7.3.4 Qualifying Score

At the completion of each qualification match, each team will be awarded a win, loss, or tie depending on the final score. The team's Qualifying Score will be the total number of Qualifying Points earned throughout the Qualification Matches:

- Each team on the winning Alliance will receive 2 Qualifying Points.
- Each team on the losing Alliance will receive 0 Qualifying Points.
- In the event of a tie, all six teams will receive 1 Qualifying Point.

7.3.5 Endgame Score

At the completion of each match, each team will be awarded Endgame Points based on the location of the alliance squids and the number of Robots that successfully climb the masts.

7.3.6 Autonomous, Teleoperated Score, and Bonus

A team's **Autonomous Score** will be the total number of Autonomous Points earned throughout the Qualification Matches. At the completion of a match, each team will receive Autonomous Points equal to the number of points scored by their Alliance during the Autonomous Period.

A team's **Teleoperated Score** will be the total number of Teleoperated Points earned throughout the Qualification Matches. At the completion of a match, each team will receive Teleoperated Points equal to the number of points scored by their Alliance during the Teleoperated Period.

7.3.7 Match Point Exceptions

A Surrogate team will not receive points of any kind.

A team is declared a no-show if **no** member of the team is in the Alliance Zone at the start of the match. A no-show team will be disqualified from that match and will not receive points of any kind.

During the qualification matches, teams can be individually disqualified in a match. A disqualified team will not receive points of any kind.

7.3.8 Qualification Seeding

All teams in attendance will be seeded at the conclusion of the qualification matches. If the number of teams in attendance is 'n', they will be seeded '1' through 'n', with '1' being the highest seeded team and 'n' being the lowest seeded team.

The following seeding method will be used:
● Teams will be ranked based on their Qualifying Score.
● In the case of a tie, Endgame Score will be used to break the tie.
● The next tiebreaker will be Autonomous Score, followed by Teleoperated Score.

7.4 ELIMINATION MATCHES

At the end of the qualification matches, the top third of the seeded teams will become the Alliance Captains. The top seeded alliances will be designated, in order, Alliance 1, Alliance 2, etc. Using the alliance selection process described below, each team will choose two other teams (other than an Alliance Captain) to join their alliance. This is subject to change based on the number of teams registered each year.

7.4.1 Alliance Selection Process

Each team will choose a student team representative who will proceed to the playing field at the designated time to represent their team in the alliance selection process. The alliance selection process will consist of two rounds during which each Alliance Captain will invite a team seeded below the top third in the standings to join their alliance. At the end of the first round of selections, teams will select their third Alliance Member in reverse order, beginning with the lowest seeded team and ending with the first seeded team. An invited team may not decline the invitation.

7.4.2 Wild Card Determination (if applicable)

Before the elimination matches begin, the Wild Card Alliances will compete to gain entrance into the elimination bracket by winning their respective Wild Card match. The Wild Card matches will be single elimination. Once the winners of each Wild Card match have been determined, the Wild Card Alliances will be ranked according to their original alliance seed and inserted into the elimination bracket taking new identities.

7.4.3 Elimination Scoring

In the elimination matches teams do not earn Qualifying Points; they are awarded a win, loss or tie. Within each bracket of the elimination match ladder, the advancing alliance is the one that is the first to win two matches. Tied matches will be replayed.

7.4.4 Elimination Match Ladder

In any round of play, all of the first matches in the round will be played, then all of the second matches will be played and then the third matches will be played if necessary. At the end of each round, any tied matches will be replayed if neither alliance has won two matches. **For example**, during the

quarterfinal round the order of play would be:
- First: QF1-1, QF2-1, QF3-1, QF4-1
- Second: QF1-2, QF2-2, QF3-2, QF4-2
- Third*:   QF1-3, QF2-3, QF3-3, QF4-3
  Then any QF replays due to ties*
  (* if required)

The initial alliance pairings for the elimination matches will be the same as a standard team single elimination brackets.

The placement of the alliance pairings in the bracket and the order of the matches will be displayed at the tournament.

7.5 TOURNAMENT RULES

7.5.1 Referee Interaction Rules
The Head Referee has the ultimate authority on the field during the competition. ***The Head Referee's rulings are final!*** The referee will not review recordings of matches under ***any*** circumstances.

If a team needs clarification on a ruling or score, a ***student member*** from that team should address the Head Referee after a field reset has been signaled. Depending on timing, the Head Referee may postpone any requested discussion until the end of the subsequent match. The Head Referee will only discuss calls, scores, penalties or match outcomes with student team members.

7.5.2 General Tournament Rules

7.5.2.1
The qualification match schedule will indicate alliance partners, opposing alliance members, and match numbers. It will also indicate the alliance assignment, RED or BLUE, for each match. The color is used to determine the placement of each alliance's Robots, drivers, and human players around the playing field.

7.5.2.2
If, in the Head Referee's or technical staff's judgment, a "field fault" occurs that significantly affects either the play or the outcome of the match, the match will be replayed. Example field faults include but are not limited to: broken field elements, power failure to a portion of the field, and improper activation of the field control system.

7.5.3 Timeout

There are no timeouts in the qualifying rounds. If a Robot cannot report for a match, the queuing staff must be informed and at least one member of the team should report to the field for the match to avoid disqualification. A non-functioning Robot does not mean a team cannot send a human player to the match allowing the team to receive the alliance points for that match.

During the elimination matches, if circumstances require an alliance to play in back-to-back matches, they will be granted additional time to reset and allow their Robots to cool down.

During the elimination matches, each alliance will be allotted one timeout of up to six minutes. If an alliance wishes to call for a timeout, they must notify the Head Referee directly after the Head Referee calls teams to the field. When this occurs, the timeout clock will count down the six minutes. Both alliances will be able to take equal advantage of the timeout. In the interest of tournament schedule, if the alliance calling the timeout completes their repairs before the timeout clock expires, the Alliance Captain is encouraged to inform the Head Referee that they are ready to play and remit any time remaining in the timeout. If both alliances are ready before the timeout expires, the match will begin with no further delay.

7.5.4 Special Equipment Rules

The only equipment that may be brought into the field area is the operator console, reasonable decorative items, and special clothing and/or equipment required a disability or medical condition. Other items, particularly those intended to provide a competitive advantage for the alliance, are prohibited.