

Overview

This guide has been prepared for use by Head Referees and Scorekeeper Referees in preparation for the 2020-21 RADC DownDraft season. This guide does not replace the Game Manual, but rather assists Referees referencing those resources along with a list of best practices. Refereeing is one of our most challenging and rewarding volunteer positions. Thank you for your willingness to make the VEX Robotics Competition a success by volunteering as a Referee.

Referee Position Summary

There are two different types of Referees, Head Referees and Scorekeeper Referees. Each event should have one (1) Head Referee and each field should have two (2) Scorekeeper Referees, one for each alliance. The Skills Field should have one (1) Scorekeeper Referee.

Referees observe matches, identify rule violations, and enforce the RADC DownDraft manual as written. They keep track of all game objects scored and record these results on a score sheet or scoring tablet. Referees also keep track of the match time and ensure that matches are running in a timely fashion.

Refereeing at a RADC event is different from a traditional sporting event in that the Referees actually HELP the competitors avoid breaking rules. For example, you will note in this guide we like to caution Pilots when they are getting close to an infraction, rather than watching passively until a violation has occurred.

Referee Key Attributes

Referees interact directly with teams and other event staff and need to have the following skills:

1. Thorough knowledge of the current game and rules of play.
2. Effective decision making
3. Attention to detail
4. Ability to work effectively as a member of a team
5. Ability to be confident and assertive when necessary
6. Strong communication and diplomacy skills

Referee Qualifications

Head Referees Must:

1. Be at least 20 years of age.
2. Be approved by the Event Partner.
3. Contain all the attributes in the Referee Key Attributes section found above.

Scorekeeper Referees Must:

1. Be at least 15 years of age.
2. Be approved by the Event Partner.
3. Contain attributes 1-5 in the Referee Key Attributes section found above.

Referee Key Responsibilities

The Head Referee and Scorekeeper Referees work together, but each have specific roles and duties.

Head Referee

The Head Referee has the following duties:

1. Trains Scorekeeper Referees. Ensuring they are fully versed in game rules
2. Acts as the liaison between the teams and the Scorekeeper Referees
3. Works with the Event Staff to ensure that matches are proceeding on time
4. Works with the Lead Inspector to ensure that all robots are safe and rule compliant
5. Makes all final scoring decisions and rulings
6. Discusses any rules or ruling questions with teams
7. Makes the final check that the field and teams are properly set before start of the match

Scorekeeper Referee

The Scorekeeper Referee has the following duties:

1. Brings possible rule violations to the attention of the Head Referee.
2. Discusses possible rule violations with the Head Referee after the match.
3. Records the number of scored objects or field elements and communicates those to each Alliance.
4. Communicates with the teams and event staff when the field is ready to be reset.
5. Ensures that the field gets reset properly and that the drones are positioned correctly before the Head Referee's final check.
6. If serving as a Scorekeeper Referee for a Skills Match, communicates final scoring decisions and rulings with teams. If there is a dispute of the score or ruling, the Head Referee will be asked to make the final scoring decision and ruling.

Referee Training and Preparation

In addition to this guide, the following resources are essential in preparing you for your Referee role. If this is your first time being part of a RADC event, we recommend that you do these in the following order to help you best understand your role and the RADC DownDraft game.

Essential Resources

1. [Official RADC DownDraft Game Manual](#)
2. [Official Q&A Forum](#)
3. [RADC Team Forum](#)

Referee Task List

The following is a list of the major tasks the Referees are responsible for during a match cycle.

Pre-Match

1. Check to make sure game objects are in the correct places after the last field reset.
2. Ensure that all team members are within the Alliance Station and everyone is wearing safety glasses. Only 2 students per team is permitted to be in the Alliance Station.
3. Only one drone is permitted to occupy each Landing Pad at the start of the match.
4. Drones must be turned on and have green lights showing. If the lights are red, the batter is not charged fully, and the drone may not be placed.
5. Verify that the spectators are not in the competition area.
6. The Head Referee asks if the Blue Alliance is ready, then asks if the Red Alliance is ready before starting.
 - a. If they are not ready, look at the scheduled start time and then decide how much time you can give them before starting the match without them. Try to give as much time as possible without running behind schedule. Waiting 5 seconds for a robot to connect is better than having that team sit out a match. But waiting 3 minutes for a team to fix a broken drone is probably too much time to wait.
 - b. If a team is not present, wait until the scheduled start time, then start without them. If you see them approaching the field, use your best judgement on if you can wait or have to keep things moving.
 - c. If a team cannot get their robot into a proper configuration in a timely fashion, then remove the robot and start the match.

DownDraft Period

1. The first 30-seconds of the match.
2. Drones may not leave their quadrant.
3. Watch for completed “DownDrafts” in the following order.
 - a. Navigate through the Keyhole Gate
 - b. Remove all four Martian Artifacts from the Hidden Dig Site utilizing air power only.
4. Once the DownDraft Period is complete, announce who has completed their DownDraft. After this period, no credit is given for competition of these tasks.

Flight Period

1. Immediately start the Flight Period after the Head Referee announces who has completed their DownDraft. Do not ask if the Pilots are ready again.
2. Watch for any instances of Team members stepping into the field.
3. Watch for any instances of drones leaving the field.
 - a. Order teams to Ground their drone if there are any immediate safety concerns.
 - b. Order teams to Ground their drone if they have left the field for more than 5-seconds.
 - c. Order teams to Ground their drone if they have gone above the 10-foot virtual ceiling.
4. Watch for any rules violations, verbally cautioning them when you see a drone come close to a violation. This is not a warning, as warnings become DQs if there are many. Give out cautions all day long. If a rules violation calls for a disablement, give that immediately. If a rules violation calls for a DQ, wait until the end of the match (see Post-Match).

Post-Match

1. Discuss any possible rules violations with the Referees. Refer to the RADC Game manual to determine the appropriate criteria and consequences for the specific violation. The Head Referee should talk to the Drive Team members about any violations.
 - a. If giving a Warning, the Head Referee should make note of the team on the Head Referee Match Anomaly Log.
 - b. If giving a DQ, the Head Referee MUST tell the Drive teams the exact rule and number that was violated. If the Head Referee cannot find the rule, then the team cannot be DQ'd. Use the other Referees or Event Staff to help look up a rule if needed. There is no fixed time limit on this. Tell the team that you need to find the rule and will determine if the rule was violated before they play their next match. Record the DQ on the Head Referee Match Anomaly Log and on the Score Sheet or tablet.

2. Scorekeeper Referees record the score of the match.
 - a. When scoring the match, count out loud so that both Alliances hear what is being scored.
 - b. After the match is recorded, but before saving, show both Alliances the score sheet or tablet to confirm.
3. If there are unanswered questions or disputes, the Scorekeeper Referees will get the Head Referee to come back and resolve any dispute or answer any questions from the Drive Team members as soon as the Head Referee is able. This might be after the next match.
4. Once the score has been confirmed, signal the field reset crew to reset the field and have the next teams prepare their drones for the next match.

Referee Best Practices

Other than scoring, a referee's primary role is to watch for violations and "call" them. Since the most common penalty in any REC Foundation game is a Disqualification for that Match, *please help to caution and guide teams before they violate the rules.*

The teams have put a lot of time and effort into the competition; it is the philosophy of the REC Foundation to be helpful rather than punitive when it comes to refereeing.

Waiting just a few seconds for a team to be ready will have a compounding effect on the match schedule. Instead, help the teams get set up and prepared for the match so that when the start time approaches, the teams are already in place and ready to compete. If the Scorekeeper Referees can have everything setup by the time the Head Referee gets back to the field, the event will run on time and at a more relaxed pace for the staff and competitors.

Scorekeeper Referees need to be careful to not answer rule questions to the teams. The Head Referee does this and needs to be consistent in the answers given to all teams. If there is disagreement between the Head Referee and the Scorekeeper Referees, look up the rule. If you cannot find it, then it might not exist. Don't make up rules based on how you think the game "should be" played. The game is designed without one strategy in mind, so teams will play the game very differently from each other. This can look like rule violations to the untrained eye.

List of Tips

1. Caution teams if they are close to being penalized.
2. Make the necessary calls, even if violations happen unintentionally.
3. Be fair and consistent to all teams.
4. Be friendly and positive.
5. Remember that a referee's job is to enforce the rules as written, not as a referee thinks they should be written. Global consistency is key in ensuring the integrity of competition.
 - a. Do not invent, modify, or ignore rules.
 - b. Do not penalize teams who are not playing in a way that a referee "feels" is right.
 - c. If a team violates a rule that calls for them to be disabled or Grounded, the easiest way to disable them is to have the Pilot push the Land button on their FlightPad controller.
6. Be very vocal and visual when making calls. This way the audience and the teams will be aware of what is happening.
7. Direct all team questions to the Head Referee. The Head Referee should be the only person discussing rulings with the teams. When multiple Referees are explaining rulings to the teams, inconsistencies in verbiage can easily arise.
8. The Head Referee (and only the Head Referee) should explain all controversial rulings and close calls to the teams. This level of communication is a positive experience for the teams.
9. When it comes to issues such as Disqualifications, often Referees will want to rule leniently to avoid being too harsh. Unfortunately, by not punishing a team for a rules violation, you directly punish their opponent. As unpleasant as it is, if a team violates a rule that is punishable by Disqualification, the team must be Disqualified. It is the only fair thing to do.
10. If possible, attend some practice rounds to get the feeling for a typical gameplay and start establishing a match flow system between all Referees and other event staff.

