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Overview

This guide has been prepared for use by Head Referees and Scorekeeper Referees in preparation for the 2021-22 VIQC season. This guide does not replace the Game Manual or referee training videos, 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 IQ Challenge a success by volunteering as a Referee.

Referee Position Summary

There are two different types of Referees, Head Referees and Scorekeeper Referees. Each event (or division if an event has multiple divisions) should have one (1) Head Referee and each field should have one (1) Scorekeeper Referee. The Robot Skills Field should have one (1) Scorekeeper Referee. The Scorekeeper Referees stay at their assigned field and the Head Referee rotates to each of the competition fields so that they can observe each match. For example, to properly staff three competition fields, you will need (1) Head Referee and (3) Scorekeeper Referees.

Referees observe matches, identify rule violations, and enforce the VIQC Game 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 VIQC 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 Drivers when they are getting close to an infraction, rather than watching passively until a violation has occurred. When a team has been cautioned, that is for their own sake and is not a penalty as no violation has yet 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 16 years of age.
2. Be approved by the Event Partner.
3. Contain all the attributes in the Referee Key Attributes section found above.
4. Be a REC Foundation Certified Head Referee for the VIQC 2021-22 season for all events that post official results to RobotEvents.com.

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 needs to have the following skills:

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 the start of the match.

Scorekeeper Referee

The Scorekeeper Referee needs to have the following skills:

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 robots are positioned correctly before the Head Referee’s final check.
6. If serving as a Scorekeeper Referee for a Robot 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 VIQC event, we recommend that you do these in the following order to help you best understand your role and the VIQC game.

Essential Resources

Please review these essential resources:

1. Official Game Video
2. Official Game Manual
3. Referee Training Videos
4. Robot Inspection Checklist
5. LRT Field Inspection Checklist
6. Head Referee Match Anomaly Log

Additional Recommended Resources

Reviewing the following helpful resources is recommended:

1. Official Q&A Forum
2. VEX TM Mobile (Official Tournament Manager Scoring App)
3. Official VIQC Hub App
   a. iOS
   b. Android
Referee Certification

Head Referees are required to be certified. The team experience is much more positive when the Head Referee is fully versed in the rules and how to manage the competition area. There is no fee or charge to become a Certified Head Referee. Ask your Event Partner or REC Foundation Manager how to become a Certified Head Referee. An exception can be made if the event takes place before the Head Referee certification is available for the season. In that case, Head Referees should ensure they have fully read the VIQC Game Manual and are up to date on the Official Q&A.

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 Driver Station and no more than 2 Drivers are present for each team.
3. Verify all robots are turned on and the joysticks have connection to the robot.
4. Verify all robots are of a legal starting size and in a legal starting position.
5. Verify that the spectators are not in the competition area.
6. The Head Referee asks if the teams are 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 robot 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.
7. **<R5> Starting configuration.** At the start of each Match, the Robot must be able to satisfy the following constraints:
   a. Only be contacting the Floor and/or the Field Perimeter.
   b. Fit within an 11” x 19” (279.4mm x 482.6mm) area, bounded by the Starting Positions.
   c. Be no taller than 15” from the Floor.
8. **<R6> The Match configuration will be inspected.** The starting configuration of the Robot at the beginning of a Match must be the same as a Robot configuration inspected for compliance.
   a. Teams using more than one Robot configuration at the beginning of Matches must tell the inspector(s), and have the Robot inspected in its largest configuration(s).
   b. A Team may NOT have its Robot inspected in one configuration, and then place it in an uninspected configuration at the start of a Match.
   c. Once the Match begins, Robots must not be capable of violating the 19” height limit set forth by **<G5>.** Teams may be requested to demonstrate any extendable Robot mechanisms during inspection, to ensure compliance with this limit. Software limitations are acceptable, for the purpose of this rule.
### During the Match

1. Give a clear countdown to start the match, but do not say Go. Allow the Timer sound to be the signal as to the start of the match. For Example, say: 3, 2, 1, <TM Operator starts the match and the starting bell sounds>. This will ensure that the timer starts counting down when the teams start to drive their robots.
2. Watch for any instances of Drivers touching robots or breaking the plane of the field. Keep them back, keep them safe.
3. If a robot is in need of help from the Driver, be sure that the team sets down their controller and places the robot in a legal starting position before picking up their controller again. If their robot is not legally reset, have the team set down their controller again until it is legal for them to do so. Teams might need help reaching their robot, if that is the case, gently pick up their robot and hand it to one of the drivers of that team.
4. Watch for any rules violations, verbally cautioning them when you see a robot 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 VIQC Game manual to determine the appropriate criteria and consequences for the specific violation. The Head Referee MUST talk to the Drivers about any violations. In most cases, the Head Referee will need to know the final score to determine if a violation is match affecting or not. When this happens, go through the process of scoring the match to determine if the violation was match affecting and use this information when discussing the match outcome with the teams.
   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. The Head Referee should survey the field and make any scoring calls that are close.
3. Head Referee moves onto the next field to start the next match while the 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.
4. 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 Drivers as soon as the Head Referee is able. This might be after the next match.
   a. <T2> explains that Drivers must stay in their Driver Station if they are going to appeal a decision.
   b. When the Head Referee comes to talk with the Drivers, the Head Referee can either settle the dispute immediately, or can ask that the Drivers come back at a specific agreed upon time, giving the Head Referee time to gather all of the facts and look up the exact verbiage of rules.
5. Once the score has been confirmed, signal the field reset crew to reset the field and have the next teams prepare their robots for the next match.

**Note:** Do not reset the field if Drivers are standing in the Driver Station waiting to appeal a ruling.
**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 the VEX IQ Challenge 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 VEX IQ Challenge 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.
6. If a team violates a rule that calls for them to be disabled, the easiest way to disable them is to have the drivers turn off their joysticks and place them on the ground.
7. Be very vocal and visual when making calls. This way the audience and the teams will be aware of what is happening.
8. 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.
9. 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.
10. 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 the other teams in competition. 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.
11. 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.