

# Q&A

## VEX IQ Robotics Competition 2024-2025: Rapid Relay

Tagged: RSC1

Welcome to the official VEX IQ Robotics Competition Question & Answer system, where all registered teams have the opportunity to ask for official rules interpretations and clarifications. This Q&A system is the only source for official VIQRC Rapid Relay rules clarifications, and the clarifications made here from the Game Design Committee (GDC) are considered as official and binding as the written [Game Manual](#) itself.

Please review the [Q&A Usage Guidelines](#) before posting. This system is only intended for specific VIQRC Rapid Relay rules questions.

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  - For VEX technical support, contact [support@vex.com](mailto:support@vex.com) or [sales@vex.com](mailto:sales@vex.com).
- For game questions, suggestions, or concerns outside of specific and official rules questions, contact [GDC@vex.com](mailto:GDC@vex.com)

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## 574: Look at the data and listen to your customers before it's too late to fix the 'Magic Hands' Ruling which had allowed Strategic moving of 'Controlled' Game Elements in Skills Matches

25-Feb-2020

RSC1

Unfortunately there has been a substantial increase in the Programming Skills scores following the adoption 2/12/20 of 'Magic Hands' Q&A Ruling which allowed Strategic moving of 'Controlled' Game Elements in the Q&A ( #518 <https://events.vex.com/VIQC/2019-2020/QA/518>).

- The 'Magic Hands' Q&A Ruling makes it easier for teams to score 60 points or more in Programming Skills by Strategically moving game elements 7 feet across the game board by hand.

This substantial increase in the Programming Skills scores has been realized in Indiana Middle School (MS) Division and more broadly in the USA Middle School (MS) Divisions: -- In Indiana there has been a ~50% increase in Indiana MS teams scoring 60 points or more in Programming Skills in the recent 10 days (was 31 & now 46 teams scored >60 between 2/13 & 2/23) -- Across the USA there has been a ~30% increase of USA MS teams scoring 60 points or more in Programming Skills in the past 10 days (was 164 & now 211 teams >60 Programming between 2/13 & 2/23).

- I'm hopeful that some of this growth in programming scores was through programming effort. However, the data do not support this interpretation as there is much smaller increase in Driver Skills Scores and locally Teamwork Finals top scores actually dipped in Final 10 days indicating limited growth in other areas of the game.

The data supporting these interpretations of IN MS and USA MS Skills Scores can be found at <https://docs.google.com/spreadsheets/d/1xxw68aoWwuyqePnvqPxZzygwocodKhWhADuPFZd6Le4/edit?usp=sharing> I did not have the foresight to look at the potential impact of 'Magic Hands' Q&A on other active regions and other age groups (Elementary?) . *Therefore I'd ask Game Design Committee to review your data to determine which regions and age groups are most impacted by the rule change (uncharacteristic increase in Programming Scores >60)?*

The data, cited above, indicate that this 'Magic Hands' Q&A ruling changed IN MS VEX IQ Skills Ranking System and penalized teams who competed prior to the 2/12 change. Thus it also changed the VEX IQ Qualifying Criteria [embed link] from Two ways for teams to qualify" to now '3 ways to qualify'

1. Qualifying Award or
2. Skills After 2/13 (Majority of Skill Qualifiers in IN MS VEX IQ)
3. Skills before 2/13 (<5% of All Teams registered IN MS VEX IQ) The Skills qualification system was design to select the top performers to compete at State and World as opposed to preferencing the most recent performers.

To ensure fair and equitable treatment of all teams, I would like to propose each region and age group to review their data and come up with an equitable plan.

I have been in contact with local REC and State Championship organizers proposing an expansion of IN MS VEX IQ Division to accommodate more Skill qualifiers for over a month, originally due to strong growth of interest in MS VEX IQ and more recently due to impact of the Magic Hands' Q&A.

I remain optimistic that they will accept my current proposal to expand the # of Indiana MS VEX IQ teams from current 110 to 116 to include 6 more teams. The number 116 was chosen as it represents equal number top Skills Scores who competed both before and after 2/13 (also clean cut off at Total Skills Score 124 or more). Previously I had proposed an increase to 135 teams, (35% increase) to match the number of World Qualifying Spots, but I now recognize time is now more limited and a smaller increase may be an appropriate compromise under this difficult timeline.

Lastly I encourage all involved to consider this problem and proposed solutions, as it may be in the best interest of our organizations and our youth to maintain equitable regulations so that all students have a fair chance.

Sincerely, Kevin Sheehan

### Answered by committee

Thank you for taking the time to write out this feedback; we will be sure to take it into consideration for future seasons.

In order to keep the Q&A system as organized as possible for all viewers, we do need to remind users of the Q&A Usage Guidelines. For general feedback, further discussion of a previous ruling, or other messages that are absent of a specific question, please feel free to contact the GDC directly via [GDC@vex.com](mailto:GDC@vex.com).

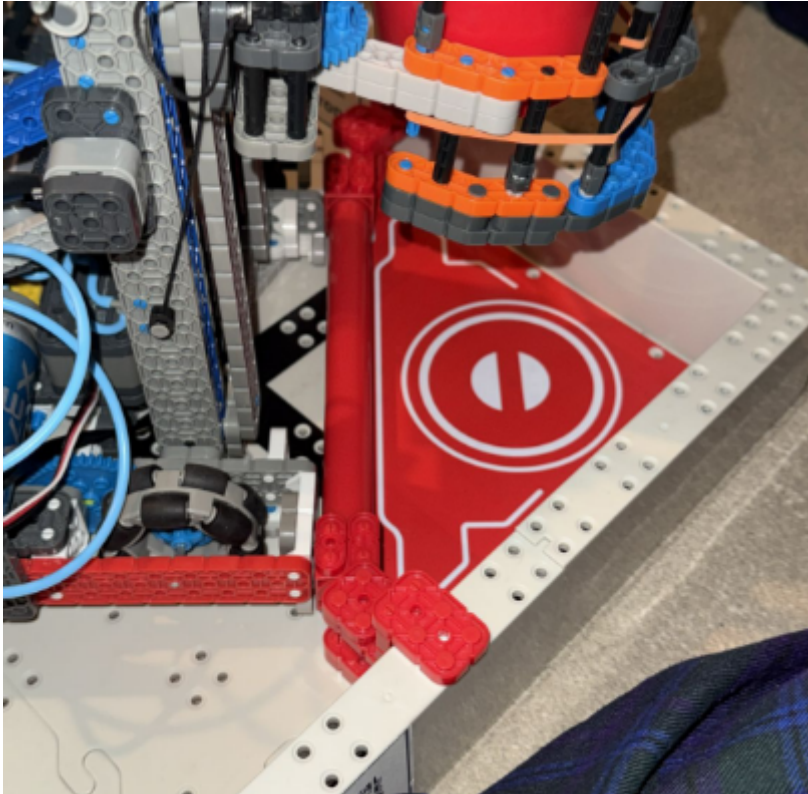
## 2944: Autonomous starting point

24-Nov-2025

RSC1 SG1

[<SG1><RSC1>](#)

Is it possible to start autonomous mode with a pin over the red triangular goal with the robot in contact as shown.



Thank you

### Answered by committee

A Preload can begin the Match over the red Triangle Goal as shown in your image, but cannot be in contact with the Field Perimeter or the structure of the Goal.

## 2794: Skills Scoring, what is the effect of a block leaving the field from the top of the Loader?

16-Sep-2025

RSC1 RSC2 SG4

<RSC1> says: a. Removing Blocks from the Field in a Robot Skills Match is not a Violation. Blocks that leave the Field cannot be returned.

<RSC2> provides that: d. The Team will earn points for a cleared Loader if no Blocks are within that Loader at the end of the Match.

If a team during skills autonomous/driving hits the bottom of the loader and a block leaves the field from the top of the loader, and the team then clears the loader, the violation of <SG4> would be score affecting, as the block leaving the field from the top of the loader contributed to clearing the Loader. However, <RSC1> says there is no violation for the block leaving the field.

In this scenario, should the score be zero, or should the team get the points for the loader being cleared?

#### Answered by committee

Hello, Richard, and thanks for your question!

<RSC1> changes <SG4> for skills matches, and there is no Violation if Blocks leave the Field through the top of Loaders.

<S1> applies, and a Team that damages a Loader may receive a Disablement and/or Disqualification at the discretion of the Head Referee.

We hope this helps!

## 2532: RSC1 Violation Note 3

13-Feb-2025

RSC1

### <RSC1>

*In a Robot Skills Match, Scoring a Ring or Placing a Mobile Goal into a Corner while in Violation of **Possession**, limits will be considered a Score Affecting Violation and will result in a score of 0 for that Match.*

Does this override Possession and Plowing mobile goals?

In other words if I possess a mobile goal and then plow a goal on my way to the corner it is fine as long as I don't score that goal in the corner or does Possession and Plowing still apply.

#### Answered by committee

Robots cannot Possess more than one Mobile Goal and/or more than two Rings at any time in a Match, and cannot Possess one Mobile Goal while plowing additional Mobile Goals---even in Skills Matches.

As described in rule <RSC1>, "All rules from "The Game" section of the manual apply to the Robot Skills Challenge, unless otherwise specified in this section." This includes the entirety of rule <SG6> and its Possession limits.

The 3rd Violation Note in rule <RSC1> is an addition to the standard rules that applies only in Robot Skills Matches, not a replacement.

## 2503: RSC1 - Skills Possession Violation

4-Feb-2025

RSC1

### <RSC1>

According to RSC1 Violation Notes, "In a Robot Skills Match, Scoring a Ring or Placing a Mobile Goal into a Corner while in Violation of Possession limits will be considered a Score Affecting Violation and will result in a score of 0 for that Match."

Does this mean that the final score is to be 0 if 3 rings are possessed during the run, or just the mobile goal that is placed or rings that were scored while in possession?

For example, during a skills programming run, a team scores 3 rings and has placed a goal into a corner, and then attempts to place a second goal but possesses 3 rings at once causing the violation. Is the overall score for that run 0 or does the placed goal and rings scored before the violation still count?

Thank you!

#### Answered by committee

Any Score Affecting Violation in a Robot Skills Challenge Match, including Scoring a Ring or Placing a Mobile Goal while in Violation of rule [<SG6>](#), should result in a final score of 0 for that Skills Match unless a rule has other specific guidance.

## 2445: SC1: Scoring after the match ends

16-Jan-2025

RSC1 SC1

[<SC1>](#) Violation Notes (bullet points 2 & 3) under [<SC1>](#) states: "If a team receives three Minor Violations within the same event, all future [<SC1>](#) Violations at that event will be considered Major Violations and Disqualifications." and, "This count does not reset for any reason within an event (e.g., Qualification vs Finals Matches, one of the Team's "dropped score" Matches, etc.)."

Do shots taken after the Timer reaches 0:00 and scored during Skills Matches (Driving/Autonomous) count towards violating SC1 and a, if so, result in a Major Violation and Disqualification if the cumulative total of SC1 violations during Skills and Qualification/Finals matches exceed three (3)?

If a Team has fewer than three SC1 Minor Violations prior to participating in a Finals Match and violates SC1 in their Finals Match, does that count as a Minor Violation (does not receive a disqualification) or as a Major Violation (receives a disqualification)?

#### Answered by committee

Yes, [<SC1>](#) also applies to Skills Matches. The first, second, and third [<SC1>](#) Violations received by a Team at an event in any Match type should be recorded as Minor Violations. The fourth and all subsequent [<SC1>](#) Violations received by the Team at that event should be considered Major Violations and Disqualifications. For a Skills Match, a Disqualification results in a zero score for that Skills Match.

In your provided example, the team receiving an [<SC1>](#) Violation in their Finals Match has not yet exceeded three [<SC1>](#) Minor Violations, so the [<SC1>](#) violation received in the Finals Match should be a Minor Violation.

Note: We acknowledge that many events do not record Minor Violations that occur in Robot Skills Challenge Matches due to event and staffing logistics, although we recommend that they be recorded alongside Teamwork Match Violations whenever possible.

## 1977: Double Match Loading Clarification / Illegal Match Loading in Skills

28-Feb-2024

SG6 RSC1

I have read all the Q&As, so I know that this question has been answered, but there are still disagreements among experienced referees about what the Q&As mean. The last two weekends I have attended two signature events that were refereed by two different sets of very capable referees. One event ruled that a previous match load has to be released

from the robot before introducing a second match load. The second event ruled that you could match load into your robot, then match load a second triball onto a slapper or catapult before the previous match load was released from the robot. In the first signature event, teams were eventually DQ'd after so many violations, including the described double match loading. At the second signature event, the described double match loading was accepted as legal and no violations were given. I want to make it clear that neither event considered it a violation to match load while possessing a non-match loaded triball.

I'm seeking clarification so we can be our best for the students and find consistency across events.

According to Q&A number 1778:

....The intent of this addition is to prohibit actions such as the following: ...Loading a second Match Load onto a rapid-fire Robot before the Robot has released the previous Match Load, even though they were each individually "Possessed" for a fraction of a second and may not have technically met the definition of "Possession"

Question #1: Does Q&A 1778 indicate that a second match load should not be introduced until the previous match load has been released from the robot? If so, would there be a differentiation between the three scenarios:

1. Match loading onto a catapult or slapper, then match loading a second triball onto a catapult or slapper before the previous triball has been released?
2. Loading a triball into the intake of the robot, then loading a triball onto the slapper or catapult before the previous match load has been released from the intake?
3. Loading a triball into the intake of the robot, then loading a second triball into the intake of the robot before the previous match load is released.
4. Dropping a second triball down a "slide" on the robot before the previous match load has fallen off of the slide.

Question #2: If any of the scenarios above happen during a skills match (or teams match load without touching the match load bar) and triballs are scored without the team descoring them before the match is over, which of the following should happen:

1. The team should be disqualified (according to Figure 3 flow chart under "Violations" in the General Definitions) from the skills match and receive a zero since the violation was match affecting and therefore is considered a major violation according to the "Violation Note" under <RSC1>.
2. Instead of disqualifying the team and giving them a zero, the referee can remove the number of triballs that were illegally match loaded from the red zone then score the match.
3. Instead of disqualifying the team and giving them a zero, the referee can remove the number of triballs that were illegally match loaded from the red goal then score the match.
4. Or is there another option?

Thank you for your clarification.

### Answered by committee

Question #1: Does Q&A 1778 indicate that a second match load should not be introduced until the previous match load has been released from the robot?

Yes. All of your examples are specifically prohibited by the portion of [Q&A 1778](#) you quoted above.

Question #2: If any of the scenarios above happen during a skills match (or teams match load without touching the match load bar) and triballs are scored without the team descoring them before the match is over, which of the following should happen (scenarios 1-3)?

We believe our response to [Q&A 1815](#) answers this question, and specifies that an event may choose any of these options; if it does not, please feel free to rephrase and re-submit.

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## 1862: Potential match load loophole in skills

8-Jan-2024

SC3 SC4 SG6 RSC1

Our team recently competed at a competition and we have some concerns about how rules at the skills challenge were being interpreted, and to our knowledge the rules have been interpreted in the same way at other competitions, including at the Hollywood Blockbuster Signature Event. To start let us get some context as to which specific rules we are concerned about.

First is [Q&A 1177](#). The phrase “Two Drive Team Members loading in rapid succession, such that two incoming Match Loads (or hands) are never past the field perimeter at the same time” makes it clear that a team is not permitted to have more than one match load crossing the field perimeter at a time and doing so while introducing a match load into a match would be considered a violation of rule [<SG6>](#). In the context of skills matches this would involve the note on rule [<RSC1>](#)

*Violation Note: In the Robot Skills Challenge, the standard definition of Match Affecting does not apply, since there is no winner and loser. When evaluating whether a rule Violation should be classified as a Major or Minor Violation in the context of this criteria, the term “score affecting” can be substituted for “Match Affecting”. A Violation is considered “score affecting” if it resulted in a net increase of that Team’s score at the end of the Match.*

This would mean that if a team illegally match loaded a triball during a skills match and the same triball was scored at the end of the match it would be considered “score affecting” thus escalating to a Major Violation resulting in a score of 0 points for the skills match.

From here we can address our concern. This is how the rules have been interpreted:

If a team scores using an illegally introduced match load, they could be given the opportunity to rectify their violation and not have it be a “score affecting” result if the team uses the robot to take the illegally scored triball and descore it by putting it into an unscored state.

Essentially the logic boils down to “descore any illegal triballs to deescalate the offense from score affecting to a minor violation.” Here are some scenarios where this may apply:

Scenario 1: A team illegally match loads 2 triballs which land within the red offensive zone. The robot then removes 2 triballs from the red offensive zone either by placing them into the blue offensive zone or any match load zone. Thus the triballs in question will have moved from a scored state into a descored state.

Scenario 2: A team illegally match loads 2 triballs which land within the red offensive zone. The robot then removes 2 triballs from the red offensive zone and places them into a part of the field where they do not count for points. However, the team then proceeds to take the exact same triballs and scores them into the red offensive zone again. Thus the triballs in question will have moved from a scored state to an unscored state and back to a scored state.

Scenario 3: A team illegally match loads 2 triballs which land in the red offensive zone. The robot then makes physical contact with the triballs and drives away. Per rules [<SC3>](#) and [<SC4>](#) the triballs in question briefly would not have been considered scored if a robot of the same alliance color (in the case of skills this is red) is touching them. Thus the triballs in question will have moved from a scored state to an unscored state and back to a scored state.

What penalties, if any, would a team receive in any of these given scenarios? Our team hopes that this interpretation of the rules is not valid to begin with, however we wanted a clarification so we can best prepare for future events. Thank you!

#### Answered by committee

We believe that this is addressed by our answer to [this similar Q&A post](#). If it is not, please feel free to rephrase and re-submit.

## 1770: Skills Field and Appendix A Questions

15-Nov-2023

RSC1

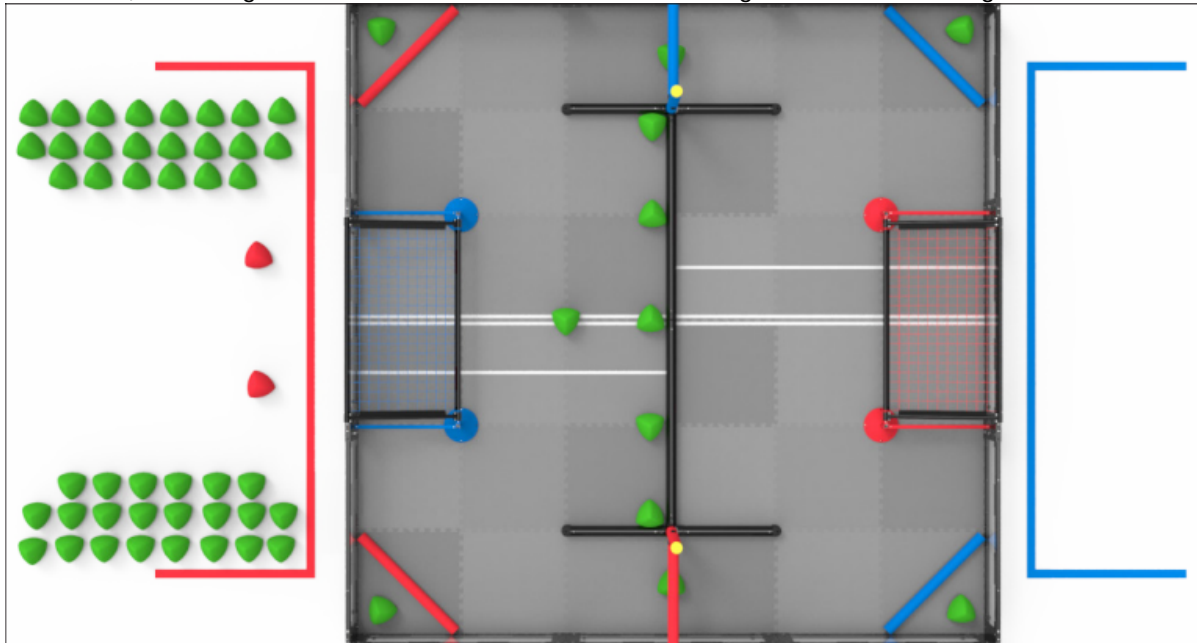
Hello,

In Appendix B of the game manual, where it shows the skills field, it says:

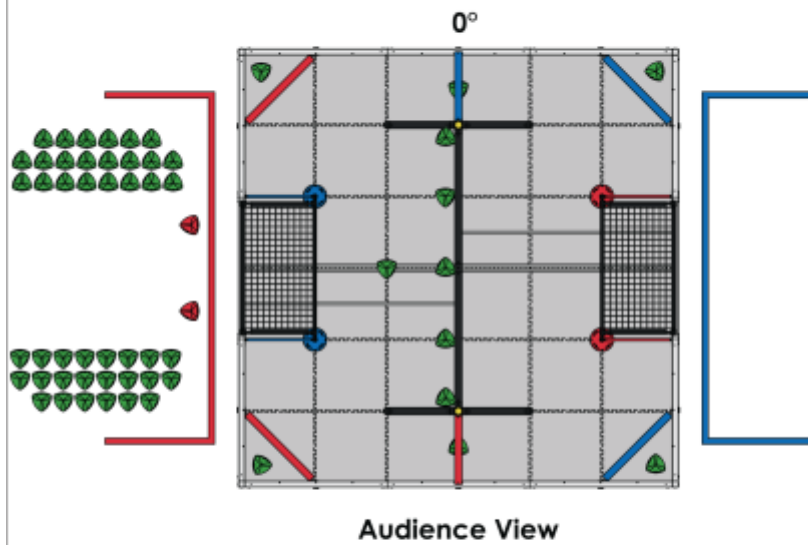
The pre-match placement of the twelve (12) Triballs on the [skills] field will be in non-scored positions as shown [in the first attached image]

This is reflected on page A8 of the game manual, which is the second attached image. However, on page A20, it shows the skills field as having 3 of the triballs in the Red Offensive Zone, where they would be scored. This is shown in the 3rd image. So, should the skills field be the one used: the one with triballs in the Red Offensive Zone, or the one without triballs in the Red Offensive Zone?

Also, I found some possible errors in Appendix A: On page A15, it shows the elevation bars as having 2 triballs under them when there should be one or none. This is the fourth image. On page A16, it shows 7 triballs in front of the Match Load Zone, which might make it hard to tell what is 30 inches long. This is the fifth image.

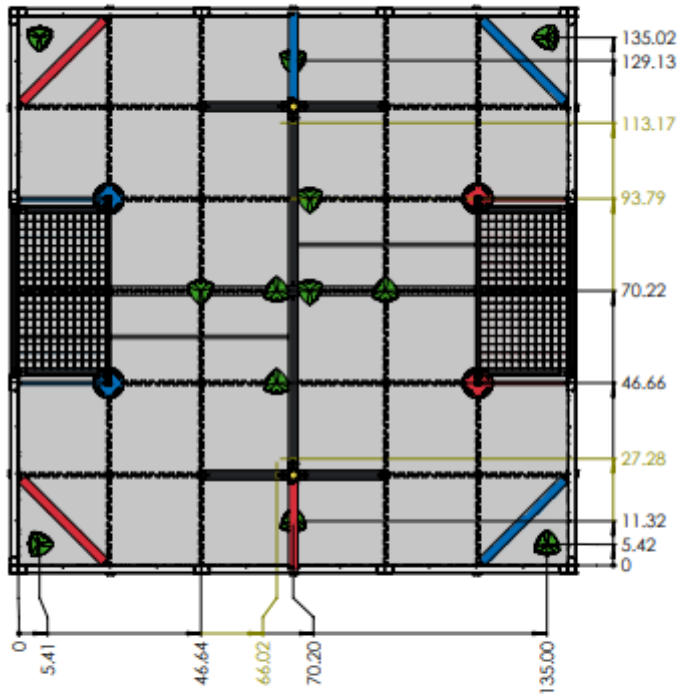


## Reference Object Placement Skills Layout Image:



|                                                                                     |                                                 |                               |
|-------------------------------------------------------------------------------------|-------------------------------------------------|-------------------------------|
|  | Description 2023-2024 Game Object Placement (3) |                               |
|                                                                                     | Smp No. 276-8354-000 Field Specifications       |                               |
|                                                                                     | Competition VRC 2023-2024                       | Sheet 3 of 15                 |
|                                                                                     | Revised 6/23/2023                               | ALL DIMENSIONS ARE IN INCHES. |

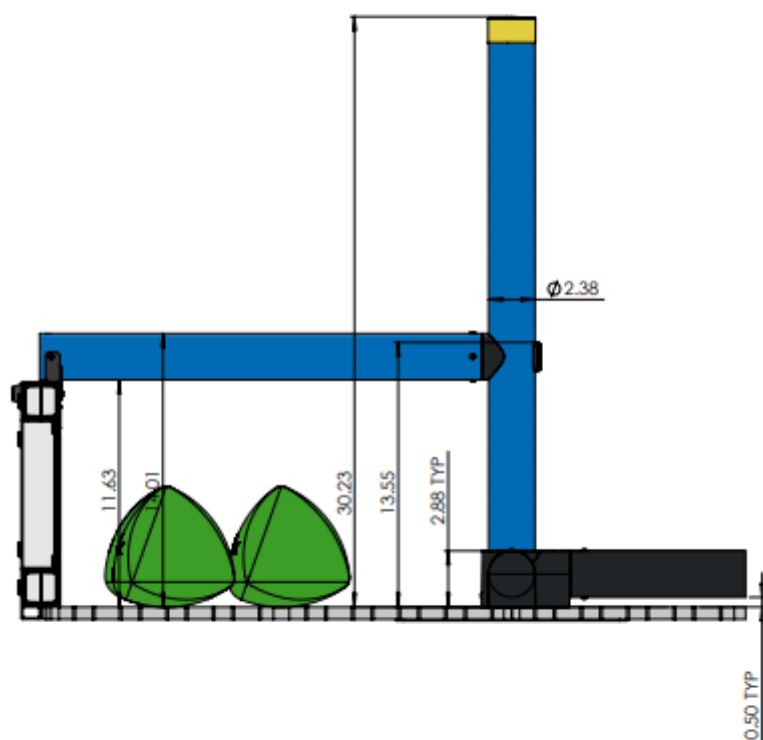
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|                                                                                     |                                                 |                               |
|-------------------------------------------------------------------------------------|-------------------------------------------------|-------------------------------|
|  | Description: 2023-2024 Game Specifications (10) |                               |
|                                                                                     | File No: 276-8354-000 Field Specifications      |                               |
|                                                                                     | Competition: VRC 2023-2024                      | Sheet 15 of 15                |
|                                                                                     | Revised: 6/23/2023                              | ALL DIMENSIONS ARE IN INCHES. |

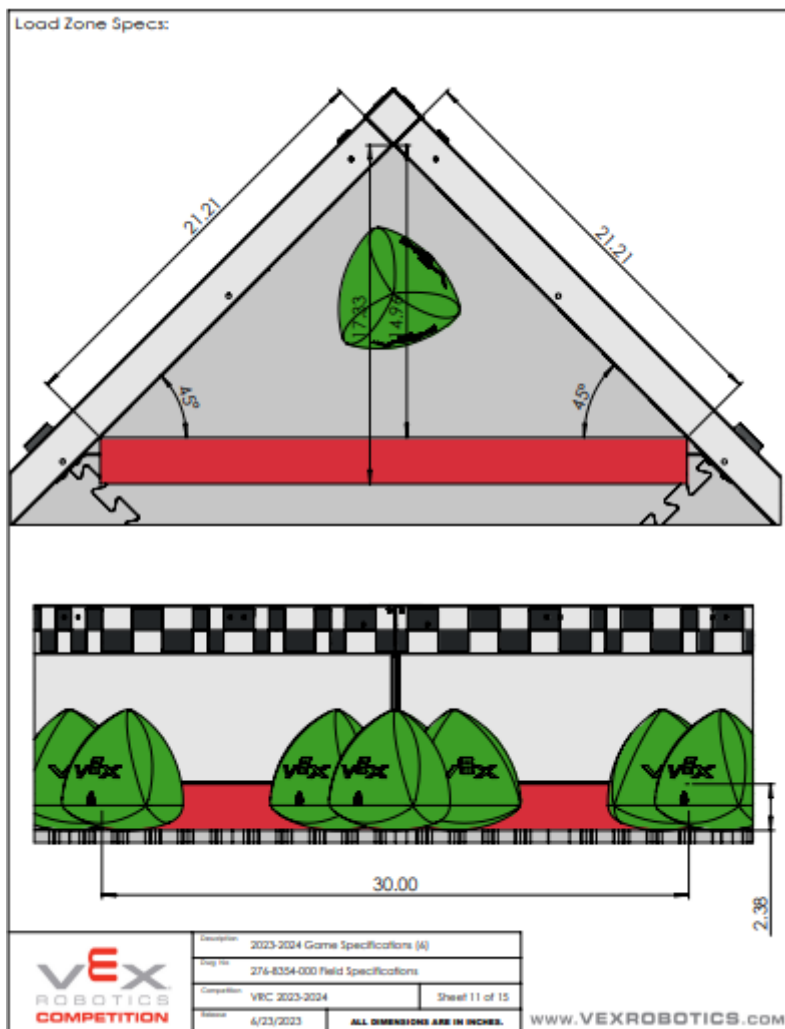
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# Barrier Specs:



|             |                                   |                               |  |
|-------------|-----------------------------------|-------------------------------|--|
| Description | 2023-2024 Game Specifications (S) |                               |  |
| Doc No      | 276-8354-000 Field Specifications |                               |  |
| Competition | VRC 2023-2024                     | Sheet 10 of 15                |  |
| Release     | 6/23/2023                         | ALL DIMENSIONS ARE IN INCHES. |  |

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### Answered by committee

Page A20 should reflect the skills layout that is shown on page A8, and will be corrected in an upcoming game manual update.

The other images in Appendix A you've referenced show specifications and relative sizes of objects and elements on the field, and are not intended for use in field setup.

## 1766: <SG8>, <RSC1>, and Skills

13-Nov-2023

SG8 RSC1

### <SG8>

In a robot skills challenge (both driver and autonomous) what is the appropriate penalty if a team violates SG8?

Scenario 1: The team breaks the plane of the blue goal while pushing in the red alliance triballs. However, this is done in a way where the violation is incidental and accidental, and the team has the ability to score the red alliance triballs even if there was no violation.

Scenario 2: The team breaks the plane of the blue goal with no change of scoring, and the violation has no effect on the score and outcome of the match.

Thank you[Example Image]

### Answered by committee

Please review the [Q&A Usage Guidelines](#) before posting, specifically point 2, "Read and search existing Q&As before posting." We believe the following previously answered post answers your question; if it does not, please feel free to rephrase and re-submit. <https://events.vex.com/VRC/2023-2024/QA/1737>

## 1737: Double Zoning and Entering the Opposing Alliance's Goal during Skills Challenge

31-Oct-2023

SG8 RSC1

Hello, There are several skills routes where the robot pushes the red triball into the blue goal. While pushing the red triball into the blue goal, a part of their robot also enters the blue goal. As there are no opposing robots to create a situation of double zoning, are teams allowed to go under the blue goal, as [RSC1](#) states that all normal match rules apply which would include [SG8](#)? If they do go under the blue goal to push in a red triball, is this score affecting which results in a 0 for the skill run?

### Answered by committee

Thank you for your question! Because there is no an opponent in a skills Match, rule [SG8](#) does not apply in Driving Skills Matches or Autonomous Coding Skills Matches. Robots are free to break the plane of either Goal at any time in skills Matches. This will be reflected in an upcoming game manual update.

## 1525: Actions after Skills Stop Time Signal

6-Jun-2023

RSC1

At events which do not have a V5 Robot Brain or the TM Mobile App available for Robot Skills Challenge field control, Drive Team Members and field staff must agree prior to the Match on the signal that will be used to end the Match early. • As noted in the definition of Skills Stop Time, the moment when the Match ends early is defined as the moment when the Robot is "disabled" by the field control system. • The agreed-upon signal must be both verbal and visual, such as Drive Team Members crossing their arms in an "X" or placing their V5 Controller(s) on the ground. • The signal must be given by a Drive Team Member who is standing in the Alliance Station. • It is recommended that Drive Team Members also provide verbal notice that they are approaching their Skills Stop Time, such as by counting out "3-2-1-stop."

Are actions that take place in the short time period between the agreed-upon signal and the field being disabled subject to Minor and/or Major Violations if rules are broken?

### Answered by committee

It is impossible to provide a blanket answer beyond what is written in the Game Manual that encompasses all possible hypothetical events. If you have a more specific question, please feel free to rephrase and resubmit.

## 1365: Robot Skills Clarifications

5-Jan-2023

SC2 RSC1 RSC2 RSC3 RSC4 RSC5 RSC6

[<RSC7>](#) Here are a couple of questions regarding running teams during a skills match. As per the update on November 1, teams are supposed to be disqualified for coming into contact with anything outside of the field during endgame.

1. How do we mark team as *disqualified* during a skills match? As of December, Tournament Manager does not include an option to disqualify a team during a skills match. The definition of disqualification says that "A Team that receives a Disqualification in a Driving Skills Match or Programming Skills Match receives a score of zero (0) for that Robot Skills Match" Do I simply modify their score to be zero on everything?
2. Also, does the definition of breaking the field perimeter include the top of the field walls, or only the outside? (Would a team be in violation of S2 if a part of their robot is touching the top of the field wall, but not the outside perimeter?)
3. How strict are we supposed to be regarding the expansion rule before endgame (e.g., 18" exactly or 18" +/- 1")? Many teams may have intake rollers that break 18" during operation. There were also some teams with string that would sway outside of the 18" during driving. (One team also had a piece of metal partially detach and stick outside of 18"). Should we keep a sizing tool at the skills field to show teams what part of their robot would violate the 18" rule during operation?
4. Being able to eyeball the size of a robot on the field is slightly subjective and might cause problems with newer volunteers. What is the best method for teaching them how to spot a violation?
5. Finally, how do we resolve a dispute of a robot going oversize and entering endgame early? Depending on how strict we are supposed to be with the expansion limit, this will be a point of conflict. As per the manual, "The Head Referee has final authority regarding all Robot rules". Is this only for the designated Head Referee for the event, or does this include everyone that has been certified as a Head Referee by REC?

### Answered by committee

Thank you for your questions.

1. How do we mark team as *disqualified* during a skills match?

The Scorekeeper should record a score of 0 for the Skills Match.

2. Also, does the definition of breaking the field perimeter include the top of the field walls, or only the outside? (Would a team be in violation of S2 if a part of their robot is touching the top of the field wall, but not the outside perimeter?)

Rule [<S2>](#) specifies that a Robot that comes in contact with the outside face of the Field Perimeter is in Violation of the rule. It does not address or include the top edge of the Field Perimeter.

3. How strict are we supposed to be regarding the expansion rule before endgame (e.g., 18" exactly or 18" +/- 1")?

**Any** horizontal expansion beyond 18"x18" prior to the Endgame is a Violation of rule [<SG4>](#), including swaying or dragging strings, flexible intakes that cause the Robot to expand beyond 18" while intaking a Disc, and partially detached Robot components that protrude or drag beyond the 18" size limit. When determining the correct penalty, the Head Referee must consider the clauses and Violation Notes of [<SG4>](#) as well as any steps the Team takes to remedy the Violation. Having a sizing tool available to the Head Referee at the Field is always a good idea.

4. Being able to eyeball the size of a robot on the field is slightly subjective and might cause problems with newer volunteers. What is the best method for teaching them how to spot a violation?

If your Head Referee and Scorekeeper Referees are available to help with Robot Inspection, it can provide hands-on experience and understanding of Robot sizing.

5. As per the manual, “The Head Referee has final authority regarding all Robot rules”. Is this only for the designated Head Referee for the event, or does this include everyone that has been certified as a Head Referee by REC?

**The Head Referee for the event** (or, in the case of an event with multiple Head Referees, the Division or the Match) is the one person with final authority regarding all Robot rules and Match play. Other Referees may provide information about what they saw during a Match, and may advise the Head Referee as requested, but all rulings are based on the judgment of the Head Referee and must be made by the Head Referee.