

Q&A

VRC 2022-2023: Spin Up

Tagged: RSC2

Welcome to the official VEX 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 VRC Spin Up 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 VRC Spin Up rules questions.

- For event, registration, or other competition support questions, please contact your [REC Foundation Manager](#).
 - For VEX technical support, contact support@vex.com or sales@vex.com.
- For game questions, suggestions, or concerns outside of specific and official rules questions, contact GDC@vex.com.

Setup of Risers' Crossbeams on playing Field

16-Jan-2021

RSC2

Do the risers have to be set up with the cross beam exactly at 90 and 180 degrees to the field, or can it be in any crossbeam orientation as long as the riser is located correctly overall? The manual states that the risers are positioned "as shown in the diagram below" but does not mention the crossbeams orientation specifically.

It has been brought to my attention that the robot "grip" of the riser is affected slightly based on whether the crossbeam is exactly at 90/180 or not.

This comes into play especially with autonomous programming since the robot interfaces a bit differently depending on the cross beams starting position crossbeam-degree-orientation and there is no way to respond to this autonomously if the setup is different with respect to the crossbeams:

<RSC2> Skills Field Layout. For each Skills Match, the Field will be setup as shown in the diagram below. All of the Goals are in the same locations and only the Risers have been rearranged on the Field.

skills_field_setup_png

skills_field_setup_jpg.jpg

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Answered by committee

Please see this similar Q&A post, which we believe answers your question. If not, please feel free to rephrase and re-submit.

<https://www.robotevents.com/VIQC/2020-2021/QA/689>

Similarly, this is also discussed in the relevant VIQC Referee Training video:

<https://www.youtube.com/watch?v=ytyoRqxDjnE>

One Preload must be placed per <SG4> in skills

28-Jan-2024

RSC2

In RSC2, One Preload must be placed per <SG4> in skills. It says clearly the word "MUST". However, in SG4, If a Team does not wish to use their Preloads, or if a Robot is not present for their Match, then the Preloads may be used as Match Load Triball. So I am confused whether both the two red balls in skills can be used as match load, or one of them must be placed on the field. Thanks.<RSC2>

Answered by committee

In Robot Skills Matches, both Preload Triballs can be used as Match Loads if the Team wishes to do so.

The relevant portions of <RSC2> and <SG4> read as follows:

<RSC2> [...] c. Teams may use the two (2) red Alliance Preloads as follows: i. One Preload must be placed per <SG4>. ii. The second red Alliance Triball may be placed in any non-scored position in the Blue Offensive Zone and not touching the Robot, or may be used as a Match Load per <SG6> and <RSC3>.

<SG4> [...] If a Team does not wish to use their Preloads, or if a Robot is not present for their Match, then the Preloads may be used as Match Load Triballs in accordance with <SG6>.

The first Triball can be thought of as "the normal Preload", and must abide by all portions of <SG4>. This includes the portion which gives the option to use it as a Match Load instead. The second Triball can be thought of as "the extra Skills Preload", and must abide by the separate criteria listed in <RSC2>.

<RSC2> Actions Permitted when Moving Between Alliance Stations

5-Feb-2023

RSC2

Note the bold portion in the rule quoted below.

<RSC2> The Team may utilize fourteen (14) Match Load Discs, within the guidelines set forth by <SG6>.

[...]

i. At any point during the Match, one (1) Drive Team Member is permitted to move between the two (2) Alliance Stations **for the purpose of introducing Match Load Discs**. There may never be more than one (1) Drive Team Member outside of the Alliance Station in which the Team began the Match.

Scenario:

A team is in the middle of a driver skills run. All 3 Drive Team Members started in the Red Alliance Station. A Drive Team Member wishes to move to the Blue Alliance Station. The questions below are about this Drive Team Member.

1. Can they move to the Blue Alliance Station and stay there without placing any Match Loads?
2. If they move to the Blue Alliance Station and use up every Match Load from this area, are they allowed to stay in the Blue Alliance Station?

3. While in the Blue Alliance Station, can they look at Rollers closer to the Blue Alliance Station to check if they're scored?
4. While walking towards the Blue Alliance Station, are they allowed to stop halfway so that they're at a location that's not in either Alliance Station?
5. Can they walk halfway towards the Blue Alliance Station, check if a Roller is scored, and then walk back to the Red Alliance Station?

Thank you for your time.

Answered by committee

1. Can they move to the Blue Alliance Station and stay there without placing any Match Loads? 2. If they move to the Blue Alliance Station and use up every Match Load from this area, are they allowed to stay in the Blue Alliance Station? 3. While in the Blue Alliance Station, can they look at Rollers closer to the Blue Alliance Station to check if they're scored?

Yes. All of these are acceptable applications of point b.i. of rule [<RSC2>](#) and are allowed.

4. While walking towards the Blue Alliance Station, are they allowed to stop halfway so that they're at a location that's not in either Alliance Station? 5. Can they walk halfway towards the Blue Alliance Station, check if a Roller is scored, and then walk back to the Red Alliance Station?

No. A Drive Team Member may move between the Alliance Stations, but they cannot stop to interact with either the Field or other Drive Team Members along the way. Drive Team Members must ensure that they are not blocking the non-Alliance-Station sides of the Field, which must remain open for safety and event volunteers.

Can the Vision sensor be used to sense a disc on the loader in Programming Skills?

31-Jan-2023

G10 SG6 RSC2

Can the vision sensor be used to sense whether a disc has been placed on the loader in programming skills?

Rule G10 states that:

<G10> Autonomous means "no humans." During the Autonomous Period, Drive Team Members are not permitted to interact with the Robots in any way, directly or indirectly. This could include, but is not limited to: Triggering sensors (including the Vision Sensor) in any way, even without touching them

And rule SG6a states:

Match Load Discs may only be introduced once the Driver Controlled Period has begun

But in the programming skills section, RSC2 Note allows the use of Match load discs during Programming, but also references SG6

Note: This rule applies to both Driving Skills Matches and Programming Skills Matches.

The Team may utilize fourteen (14) Match Load Discs, within the guidelines set forth by <SG6>.

My team would like to sense, during Programming Skills, when the disc has been placed on the loader to then run part of their program that does not violate any other match load/robot interaction as per SG6. Is placing a disc on the loader "triggering the sensor", or is this acceptable use of the sensor during play (just like using the sensor to "see" discs on the field)?

Answered by committee

As you quoted in your question, rule <G10> prohibits Drive Team Members from interacting with the Robots during an Autonomous Period, including triggering sensors.

Placing a Disc on the Match Loader to trigger a sensor on the Robot is a violation of <G10> and is not allowed.

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.