

Q&A

VEX IQ Robotics Competition 2024-2025: Rapid Relay

Tagged: RSC3

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 or sales@vex.com.
- For game questions, suggestions, or concerns outside of specific and official rules questions, contact GDC@vex.com

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3020: Pins for loading

6-Jan-2026

RSC3 SG6

Is it legal for the Loader to hold multiple Pins in one hand or arm and load them one at a time with the other hand granted the other pins are not breaking the plane of the field (SG6), or must the Pins waiting to be loaded remain on the floor at all times?

For Skills matches, do the Pins need to be set up exactly as shown in Figure RSC3-1 (including the color order and not stacked), or can the Loader rearrange or stack them in a different color order before the match starts?

Thank you!

Answered by committee

There is no requirement that Pins remain on the floor until they're Loaded, and there's no restriction on how many Pins a human Loader may hold at one time.

Driver Stations must begin each Match with the correct number and colors of Pins, but there is no required arrangement of those Pins. The human Loader(s) can rearrange those Pins however they wish within the area of the Driver Station, before and during the Match.

3000: Skills Auton Starting Size

19-Dec-2025

RSC3 SG1

<RSC3><RSC3>, "the Robot and Field are set up the same as for a Head-to-Head Match (e.g., the Robot must meet the requirement of <SG1><SG1>)" <RSC3><RSC3>

b. "The robot must start the Robot Skills Match in a legal starting position for the red Alliance."

Just wanted to clarify that teams are to be in legal starting position, based on requirements of SG1, the height and width of the robot should be measured from the field tiles while starting the Skills Match. If propped up on a preload or the parking barrier, it needs to be in legal starting position (18"x18"x18") as placed before beginning of the skills match.

1. For example, a robot is placed on top of a preload or on top of the barrier and placed so it is inside the Parking Zone. The robot must be in legal starting position (18"x18"x18") from the tiles to the top of the robot, and would include the preload or barrier underneath the robot?
2. Also, are there any limits on robots starting a skills match upside down or placed on its side?

Thank you!

Answered by committee

There is no requirement that a Robot start the Match in contact with the Field tiles, and no requirement that the Robot be measured from the Field Tiles to the top of the Robot.

If the Robot fits inside the 18" cubic starting size, it doesn't matter exactly where that Robot is (e.g., on or off of the Field Tiles) if it meets all requirements of <SG1>. It also doesn't matter whether the Robot is right-side-up, sideways, or upside down. Deciding which side is "up" is for the Team to define and implement.

2928: Are pins required to have their top notches aligned with the field in exactly the manner shown in field layout images?

18-Nov-2025

RSC3 SG1

<RSC3><SG1>[<FO>] (<https://www.vexrobotics.com/mix-and-match-manual#fieldover>)

When setting up the pins for either teamwork or skills matches, must each pin be horizontally rotated exactly like the game manual images show? In other words, do the pin notches have to all be aligned with the black lines on the field floor, or is the rotation of the pins irrelevant?

I haven't seen any robots yet that rely on the pin notches to be oriented in a particular way, but it is conceivable that some teams' autonomous code might expect the pin notches to be oriented a particular way.

Another consequence of this requirement is that field resets take additional time to make sure all pins are rotated correctly.

Answered by committee

Thanks, Cory, for your question.

Rule <T5> will be expanded in the December 4 game manual update to reflect that the rotation of Pins is not specified. If a Pin is within tolerance, either on the Field or on a Starting Pin Support, it should not be adjusted before the Match. This change is effective immediately.

2801: Color Blindness Concerns

22-Sep-2025

RSC3 T6

<RSC3><T6>

I have a potential participant this year that has color blindness and has expressed hesitation about joining this year due to this limitation. Would it be possible for us to use sharpie or light colored paint patterns to help him better be able to differentiate the different color in pins during competitions?

Answered by committee

Note: This answer was revised by the GDC on October 3, 2025.

Thanks again for this question, Team 42655A!

When choosing colors and shades for the Mix & Match Pins, we worked with designers to specifically minimize issues with the known range of color blindness types, but it seems there is still a chance of some confusion in some specific cases. We appreciate your raising this concern.

You're welcome to mark your own Team's Pins however you like, but at this time those markings aren't an approved modification for use during competitions (see rule <T6>) unless they're required by an approved accommodation request.

If a Student needs an accommodation for color-blindness, a teacher, coach, or parent/guardian can request that through the process outlined in [this article in the RECF Library](#).

2771: Starting Position for Skills

4-Sep-2025

RSC3 SG1

[<RSC3><RSC3>](#) We were doing a scrimmage and a team pointed out that according to SG1 & RSC3, there is no specified rule saying they can't start fully in the park zone. They were able to position their robot in a legal start position so that they were already parked, started skills, and called stop time as soon as the match started. I couldn't find any specific ruling against this, so it seems to me this is a free 15 points. Is there a rule I've blanked on, or is this an allowed strategy for now?

[<SG1><RSC3>](#)

Answered by committee

Currently, there is no rule preventing a Robot from starting a Skills Match in a Parked position (i.e., meets all [<SC4>](#) criteria).

Note that [<RSC2>](#) clause E was revised in version 2.0 of the Game Manual. To earn points for a Parked Robot, the Robot must now move during the Skills Match, in addition to meeting the previous requirements.

- e. The Team will earn points for a Parked Robot if the Robot has moved during the Match, is within the red Alliance Park Zone, and meets all criteria of rule [<SC4>](#) at the end of the Match.

2727: Skills Match Preload and Driver Station

20-Jul-2025

RSC3 RSC4

Question about Skills matches:

1. Can the team choose which colour preloaded pin to use (e.g. red or blue), or does it have to be red?
2. Where is the Driver Station for Skills? Does the driver have to stay on the red side, or can they move around to the blue side as well?
 - o If the driver has to stay on the red side can the loader/ second driver move out of the red side to give direction and offer advice to the driver?

Answered by committee

Thank you for your questions. Rule [<RSC3>](#) will be clarified in the next game manual update to specify that the Robot receives one red Pin as a Preload in a Robot Skills Challenge Matches.

Regarding moving around the Field during a skills Match, clause D of rule [<RSC4>](#) reads,

Drive Team Members must remain in the red Driver Station during Driving Skills Matches, except when legally interacting with their Robot per rule [<GG10>](#).

This rule applies to all Drive Team Members in a Driving Skills Match.

2145: Skills Challenge Positioning Clarification

21-Sep-2024

[<RSC3>](#)

Per <RSC3> Parts (a) and (b) seem to conflict with each other in wording.

Can you please clarify which zone is the "Pickup Zone" and which area is the "Loading Station"? (a) states " ... anywhere in Starting Zone 1 (ie., the one closest to the Pickup Zone)" (b) states " ... Robots must begin in the Starting Zone 1 (ie., the one closest to the Loading Station)"

In this case, is the "Pickup Zone" referring to behind the Goal Wall where the Loaders would "pickup the ball for reloading?" Or does it refer to the zone where robots can pick up the balls from the field?

Apologies if the wording is clear but my brain is conflating the two zones inaccurately.

Answered by committee

As shown in Figure PZ-1, the Pickup Zone is located on the same end of the field as the Goal Wall. As shown in Figure LZ-1, the Load Zone contains the Loading Station, which is on the opposite side of the field from the Goal Wall.

[<RSC3>](#) correctly denotes the locations of Starting Zones 1 and 2 (shown in Figure SZ-1) relative to the Pickup Zone and Load Zone.

2109: Waiting to place the 2nd ball in Robot Skills

25-Aug-2024

According to [<RSC3>](#), during Skills setup:

In addition to the Preload, Teams may place a second Ball anywhere in Starting Zone 1 (i.e., the one closest to the Pickup Zone) to begin the Match.

We see two possible interpretations:

1. Mandatory: the team **must** (implicit) place the second ball and it **may** be placed anywhere in the Starting Zone, or
2. Optional: the team **may** choose *not to place the second ball* at match start, possibly waiting until sometime after the timer starts - or even never. If so, it would be good to clarify whether the 2nd ball would start Loader-controlled: to be loaded Rapidly or not depending on whether the Loader chooses to place the ball during a Rapid Load period.

Motivation for inquiry: We have a team that wants to delay placing the second ball until after the match timer starts, and they want to confirm that it's OK for the Loader to hold onto the 2nd ball on match start in order to wait for an autonomous routine to move their robot to a desired location first.

As a side note, the Head Ref Certification Test includes a question in Unit 7 that asks, "How many Balls begin the Match on the Robot or on the Field for a Robot Skills Challenge Match?"

The accepted answer is: "2; one on the Robot, and one in Starting Zone 1"

If placing the 2nd ball at Match start is optional, then the question should be slightly updated.

Answered by committee

If the Team chooses not to begin a Robot Skills Challenge Match with a second Ball pre-placed in Starting Zone 1, as allowed by clause A of rule [<RSC3>](#), that Ball may be Loaded during the Match using the options provided in rule [<RSC4>](#).

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.