

## VEX Robotics Competition In the Zone – Q&A Summary

### Overview

The official [VEX Robotics Competition In the Zone Game Manual](#) is the primary source for guidance on how VRC In the Zone should be played. If clarification is needed, teams can ask for official interpretations in the official [VRC Question & Answer Forum](#).

Responses given in the Q&A forum are considered official rulings from the VEX Game Design Committee and should be treated with the same significance as a rule written in the game manual itself. **The Q&A Forum is the only source for official rulings and clarifications.**

This summary is intended to be a categorized compilation of frequently asked or precedent-setting questions. It will not contain all questions that are asked, and it will be updated periodically throughout the season as more questions are posted, so be sure to check back for the latest updates before refereeing an official event or posting a new question.

**This summary assumes that you have read the VRC In the Zone Game Manual. This document is a supplement, not a replacement, for the official Game Manual and Q&A Forum.**

### Robot Starting Position

*Game Manual References: <SG1>, <G7>*

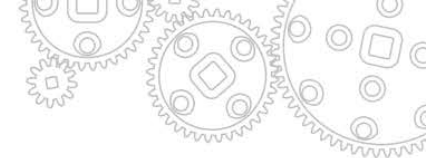
The only starting restriction is that each Robot must be placed such that it is touching the Alliance's Starting Bar, not touching any Scoring Object other than those permitted by <SG2>, and not touching another Robot at the beginning of each Match. The Starting Bar is defined as the ~1" (25.4 mm) pipe that separates the 5 Point Zone and the 10 Point Zone.

- <https://www.vexforum.com/index.php/29288-answered-robot-in-5-pnt-zone-at-start>
- <https://www.vexforum.com/index.php/28751-answered-starting-placement>
- <https://www.vexforum.com/index.php/28508-answered-starting-position-clarification>
- <https://www.vexforum.com/index.php/29812-answered-robot-placement-in-game>

The use of autonomous aligning aids is legal, so long as you don't delay the Match.

- <https://www.vexforum.com/index.php/28333-answered-autonomous-aligning-aids>





## Robot Expansion

*Game Manual Reference: <SG14>*

The horizontal limit imposed by <SG14> is a point-to-point maximum width, not a vertical cylinder.

- <https://www.vexforum.com/index.php/28672-answered-sg14-ambiguous-wording>

If a Robot can theoretically or mechanically expand further than the limit imposed by <SG14>, they will pass inspection, but will need to be diligent to avoid expanding too far during a Match.

- <https://www.vexforum.com/index.php/27570>
- <https://www.vexforum.com/index.php/28850-answered-sg-14>
- <https://www.vexforum.com/index.php/30138-answered-clarification-on-sg14>

Momentary or incidental violations of <SG14> will result in a warning. Repeated or intentional violations should result in a Disqualification.

- <https://www.vexforum.com/index.php/28736>
- <https://www.vexforum.com/index.php/28794>

A Robot that has fallen over is still subject to <SG14>'s expansion limit. In the event of a tipped Robot that is wider than 36", referees are advised to take factors into consideration such as if the tip was the result of a defensive maneuver, if the tipped Robot resulted in a Match Affecting block of the opposing Alliance, and/or any previous warnings given to either Alliance.

- <https://www.vexforum.com/index.php/28113>
- <https://www.vexforum.com/index.php/28245-answered-clarification-on-sg7-and-g12>

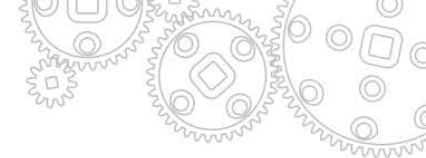
## Cone Possession

*Game Manual Reference: <SG9>*

Incidentally driving through or plowing Cones that are in a Robot's path (with a flat or convex portion of the Robot) is legal.

- <https://www.vexforum.com/index.php/28118-answered-sg9-question>
- <https://www.vexforum.com/index.php/27573>
- <https://www.vexforum.com/index.php/28096-answered-sg9-question>
- <https://www.vexforum.com/index.php/28968-answered-moving-cones>
- <https://www.vexforum.com/index.php/29739>





Having concave portions of a Robot is not illegal. However, using concave portions of a Robot to control the movement of multiple Cones at the same time is a violation of <SG9>.

- <https://www.vexforum.com/index.php/27676-answered-sg9-and-intakes>
- <https://www.vexforum.com/index.php/27726-answered-further-clarification-of-possession>
- <https://www.vexforum.com/index.php/27680>
- <https://www.vexforum.com/index.php/29097-answered-funneling>
- <https://www.vexforum.com/index.php/29609>

Cones that are fully nested on an upright Goal do not count towards the Possession limit. Thus, if a Robot is carrying a Mobile Goal with Cones on top of it, they can Possess (1) "additional" Cone.

- <https://www.vexforum.com/index.php/27645-answered-clarification-on-possession>
- <https://www.vexforum.com/index.php/28108>

Possession is defined as carrying, holding, or controlling the movement of a Cone in a Robot. "Accidental" Possession, such as a Cone that is stuck in a Robot mechanism, is still Possession.

- <https://www.vexforum.com/index.php/27942>
- <https://www.vexforum.com/index.php/29389>

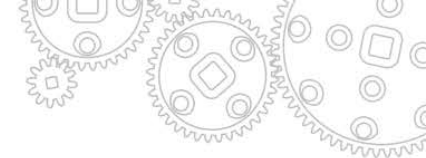
Holding stacked Cones that are not nested on a Goal is considered Possession of multiple Cones.

- <https://www.vexforum.com/index.php/27554>
- <https://www.vexforum.com/index.php/27739>
- <https://www.vexforum.com/index.php/27816>
- <https://www.vexforum.com/index.php/28163>

Cone "hoarding" refers to the act of intentionally plowing multiple Cones to a specific location of the field, even with a flat/convex portion of a Robot, such that they are kept away from the opposing Alliance. Referees should use two criteria to check if hoarding has occurred: 1) Pushing multiple Cones at once; 2) Actively keeping those Cones away from the opposing Alliance.

- <https://www.vexforum.com/index.php/28369-answered-sg9-hoarding-definition>
- <https://www.vexforum.com/index.php/28974-answered-sg9-hoarding-clarification>
- <https://www.vexforum.com/index.php/29486-answered-sg9-not-hoarding>
- <https://www.vexforum.com/index.php/30345-answered-hoarding-goals-and-cones>
- <https://www.vexforum.com/index.php/30563-answered-clarify-hoarding>





## What is a “Stack”?

*Game Manual Reference: Definition of “Stacked”, <SG9>*

Knocked over = not Stacked. Slightly tilted or upright = Stacked.

- <https://www.vexforum.com/index.php/27552>
- <https://www.vexforum.com/index.php/28099-answered-definition-of-upright-and-tilted>
- <https://www.vexforum.com/index.php/27847>
- <https://www.vexforum.com/index.php/28246-answered-clarification-on-stacked>

Due to this logic, manipulating a Mobile Goal with multiple Cones in a horizontal orientation would be considered a violation of <SG9>.

- <https://www.vexforum.com/index.php/27885>
- <https://www.vexforum.com/index.php/28014-answered-at-what-point-is-a-goal-tipped>
- <https://www.vexforum.com/index.php/28437>

Cones that are fully nested on an upright Goal do not count towards the Possession limit. Thus, Robots can contact Cones that are Stacked without violating the Possession limit, but those Cones will not count for points at the end of the Match.

- <https://www.vexforum.com/index.php/28115>
- <https://www.vexforum.com/index.php/27562>
- <https://www.vexforum.com/index.php/28036-answered-supporting-stacked-cones>
- <https://www.vexforum.com/index.php/29082-answered-about-sg9>
- <https://www.vexforum.com/index.php/29970>
- <https://www.vexforum.com/index.php/30812-answered-tipped-base-with-stacked-cones>

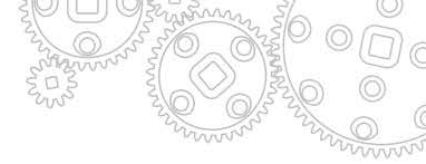
Cones that are Stacked on a Mobile Goal that is not considered Scored (such as one that is being contacted by a Robot, or one that is not in a Scoring Zone) are still considered Stacked.

- <https://www.vexforum.com/index.php/28980-answered-stack-on-a-touched-mobile-goal>
- <https://www.vexforum.com/index.php/29586-mobile-goal-dependent-scoring-clarification>

Nudging fully nested Cones, such as to fix an unstable Stack, is not considered Possession.

- <https://www.vexforum.com/index.php/30612-answered-interesting-sg9-question>





## Scoring Mobile Goals in Zones

*Game Manual Reference: Definitions of "Scoring Zones" and "Scored"*

The definition of Scored does not include any requirements for the Mobile Goal in question to be upright or unsupported.

- <https://www.vexforum.com/index.php/28852-answered-tipped-mobile-goal-in-zones>
- <https://www.vexforum.com/index.php/29417-answered-goal-scoring>

If there are multiple Mobile Goals in the 20 Point Zone, then the Mobile Goal with the most Cones on it is considered Scored. If the Mobile Goal with fewer Cones is contacting the 10 Point Zone, then it is worth 10 points. If it is not contacting the 10 Point Zone, it does not count for any points.

- <https://www.vexforum.com/index.php/27578>
- <https://www.vexforum.com/index.php/28244>
- <https://www.vexforum.com/index.php/28316>
- <https://www.vexforum.com/index.php/28420>
- <https://www.vexforum.com/index.php/28843>

Scored Note 3 (regarding Supporting Scoring Objects) only applies if the Mobile Goal is not contacting any Scoring Zones.

- <https://www.vexforum.com/index.php/27849>
- <https://www.vexforum.com/index.php/28522>
- <https://www.vexforum.com/index.php/28652>

## Highest Stacks

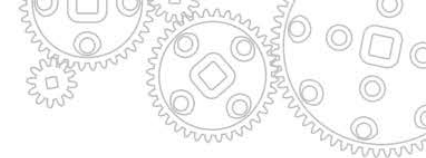
*Game Manual Reference: Definitions of "Highest Stack", "Highest 5 Point Zone Stack", etc.*

The Highest Stack score does apply during the Autonomous Period.

- <https://www.vexforum.com/index.php/27558-answered-autonomous-scoring>
- <https://www.vexforum.com/index.php/27846-answered-autonomous-mobile-goal>

The Highest 5 Point, 10 Point, and 20 Point Stacks only apply to Scored Mobile Goals.

- <https://www.vexforum.com/index.php/27860-answered-clarification-on-highest-stack>
- <https://www.vexforum.com/index.php/28629-answered-clarification-on-highest-stack>



If a given Scoring Zone has a tied Highest Stack (or no Stacks at all), then neither Alliance receives the Highest Stack scores.

- <https://www.vexforum.com/index.php/27709-answered-highest-stack-bonus-clarification/0>
- <https://www.vexforum.com/index.php/28714-answered-quick-question-on-highest-stack>

## Interaction with Opposing Stacks

*Game Manual Reference: <SG5>*

Causing Cones to no longer be Stacked on opposing Mobile Goals is always illegal.

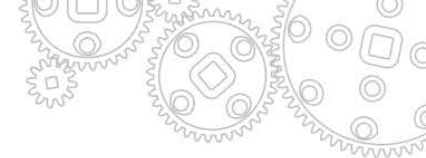
- <https://www.vexforum.com/index.php/27980-answered-blocking-autoloader-with-mobile>
- <https://www.vexforum.com/index.php/28170-answered-covering-mobile-goals>
- <https://www.vexforum.com/index.php/28263-answered-sg5-un-nesting-but-not-removing>
- <https://www.vexforum.com/index.php/28260-answered-clarification-on-descoring>
- <https://www.vexforum.com/index.php/28365-answered-sg5-clarification>
- <https://www.vexforum.com/index.php/28490-answered-clarification-on-sg5>
- <https://www.vexforum.com/index.php/27738-answered-implication-of-blocking-ruling>
- <https://www.vexforum.com/index.php/27979-answered-pinning-trapping-robots-with>
- <https://www.vexforum.com/index.php/30226-answered-5-point-zone-defensive-actions>

Preventing an opponent from Stacking Cones by “covering” their Stack is legal. Contacting an opponent's Stacked Cones does not cause them to be de-scored. That is, Stacked Note 2 only applies to Stacked Cones of an Alliance’s own color.

- <https://www.vexforum.com/index.php/28467-answered-counted-stacks/0>
- <https://www.vexforum.com/index.php/30973-answered-stack-prevention>
- <https://www.vexforum.com/index.php/28240-answered-sg5-sg6-and-stacked-note-2>







## Interaction with Opposing Mobile Goals

*Game Manual Reference: <SG6>*

Grasping, grappling, or attaching to Field Elements or opposing Mobile Goals is illegal. Other synonyms for illegal actions would include latching onto, anchoring to, gripping, pinching, clamping, lifting, or carrying. However, pushing, encompassing, tipping, covering, or otherwise passively manipulating the Mobile Goals (without "grasping") is legal.

- <https://www.vexforum.com/index.php/29037-answered-definition-of-grasping-sg6>
- <https://www.vexforum.com/index.php/30573-answered-question-about-said-field-element>

Tipping:

- <https://www.vexforum.com/index.php/27897-answered-sg6-question>
- <https://www.vexforum.com/index.php/27830-answered-delta-iii-mobile-goal-questoin>
- <https://www.vexforum.com/index.php/30351-answered-mobile-goal-tipping>
- <https://www.vexforum.com/index.php/30937-answered-mobile-goal-tipping-robots>

Encompassing / pushing:

- <https://www.vexforum.com/index.php/28931-touch-multiple-sides-of-an-opposing-teams>

Pushing versus picking up and carrying:

- <https://www.vexforum.com/index.php/28807-answered-another-request-for-sg6>
- <https://www.vexforum.com/index.php/28859-answered-confusion-over-two-rulings>
- <https://www.vexforum.com/index.php/27571-answered-possessing-opposing-mobile-goals>

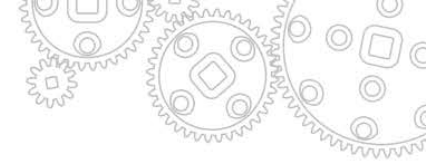
Pushing / gathering / hoarding:

- <https://www.vexforum.com/index.php/28516-clarification-of-zones-and-scoring>
- <https://www.vexforum.com/index.php/28013-answered-moving-an-opponent-s-mobile>
- <https://www.vexforum.com/index.php/27694-answered-hoarding-opposing-mobile-goals>
- <https://www.vexforum.com/index.php/30148-answered-hoarding-opponents-mobile-goals>

Covering / encompassing:

- <https://www.vexforum.com/index.php/27704-answered-dropping-cages-on-goals>
- <https://www.vexforum.com/index.php/28170-answered-covering-mobile-goals>
- <https://www.vexforum.com/index.php/30179-answered-cage-bot-possession>
- <https://www.vexforum.com/index.php/30165-answered-cage-bot-possession>





## Other Defensive Interactions

*Game Manual References: <SG4>, <SG10>, <G12>, <G13>*

Scenario: A Red Robot is defending the Blue Scoring Zones, and is pushed into the 10 Point Zone by a Blue Robot. If the Blue Robot is attempting to score (i.e. moving to score a Mobile Goal or stack Cones), then referees should err on the side of the offensive robot and the Red Robot would be in violation of <SG10>. However, if Blue was solely pushing the Red Robot in the interest of drawing a penalty (i.e. not even holding a Mobile Goal or Cones), then <G13> would apply.

- <https://www.vexforum.com/index.php/27574-answered-blocking-opponents-from-entering>
- <https://www.vexforum.com/index.php/29565-definition-of-the-10-point-zone>
- <https://www.vexforum.com/index.php/30101>
- <https://www.vexforum.com/index.php/30331>
- <https://www.vexforum.com/index.php/30331>

There are no rules implying Robot protection from defensive strategies around the Loader. However, interfering with the opposing Drive Team Members is always illegal.

- <https://www.vexforum.com/index.php/28110-answered-updates-to-sg7-in-regard-to-vexu>
- <https://www.vexforum.com/index.php/29481-answered-clarification-on-preventing>
- <https://www.vexforum.com/index.php/28290-answered-sg3-a-question-change>

<G12> applies to destructive strategies, not just destructive actions.

- <https://www.vexforum.com/index.php/29331-answered-attempt-to-break-a-rule>

Trapping, and <SG4>, refer to any act that restricts an opposing Robot to a small portion of the field without an avenue for escape.

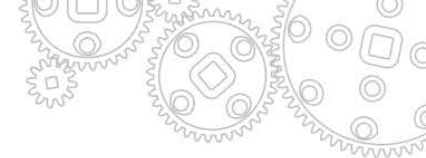
- <https://www.vexforum.com/index.php/28746-answered-clarification-on-inhibiting>
- <https://www.vexforum.com/index.php/28747-answered-clarification-on-pinning-and-sg15>

Robots attempting solely defensive strategies, such as isolating an opponent's Mobile Goals or blocking Scoring Zones, do not have the "protection" against destructive maneuvers that <G12> offers to Robots that are playing offensively. Thus, Teams who choose to undergo solely defensive strategies should be prepared to withstand vigorous interaction from offensive robots.

- <https://www.vexforum.com/index.php/30472-answered-entanglement-g12-g13-r3>
- <https://www.vexforum.com/index.php/30944-answered-legality-of-cagebot-counter>
- <https://www.vexforum.com/index.php/31186-answered-clarification-on-g12>







Passive defense is still defense.

- <https://www.vexforum.com/index.php/30044-answered-sg5>
- <https://www.vexforum.com/index.php/30469>

Most rule violations in the VEX Robotics Competition only result in a Disqualification if the violation is Match Affecting (i.e. affects the outcome of the Match). To determine whether a violation is Match Affecting, referees should look at the scoring impact of the action. This could mean direct effects (e.g. 12 de-scored Cones) or other gameplay obstructions (e.g. permanently blocking the 20 Point Zone).

- <https://www.vexforum.com/index.php/29920-answered-sg10-passive-vs-active-defense>
- <https://www.vexforum.com/index.php/30144-answered-sg5-and-g12>
- <https://www.vexforum.com/index.php/30186>
- <https://www.vexforum.com/index.php/31103-answered-pin-or-trap-question>

## Robot Skills Challenge

*Game Manual Reference: Appendix B – The Robot Skills Challenge*

In a Robot Skills Match, all Goals, Zones, Parking Tiles, and Starting Bars are considered to be the same color. Robots may Score Goals in any color of Zone for points. Up to two (2) Mobile Goals may be Scored in 20 Point Zones – one (1) per each color of 20 Point Zone.

- <https://www.vexforum.com/index.php/27990-answered-robot-skills-scoring-the-same-or>

There are no Highest Stacks in the Robot Skills Challenge.

- <https://www.vexforum.com/index.php/29277-answered-height-bonus-in-skills>

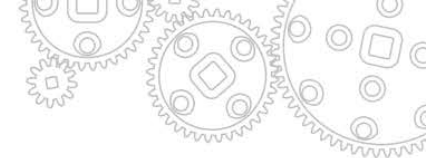
## Robot Construction and Non-Functional Decorations

*Game Manual References: <R7>, <R15>*

Functional 3D printed parts are illegal.

- <https://www.vexforum.com/index.php/27683-answered-3d-printing-not-allowed-again>
- <https://www.vexforum.com/index.php/28327-answered-r7-d-l-3d-printed-custom>
- <https://www.vexforum.com/index.php/29794-answered-3d-printed-parts>
- <https://www.vexforum.com/index.php/29731-answered-3d-printed-wire-clip>
- <https://www.vexforum.com/index.php/29890-answered-commercially-ordering-a-3d-print>





"Any commercially available screw, nut, and/or washer" generally means ANY screw, nut, and/or washer. However, not all threaded cylinders are screws, not all threaded fasteners are nuts, not all disc-shaped spacers are washers, so when in doubt please request a clarification. The intent of <R7> is to allow teams to purchase their own commodity hardware, without introducing additional functionality not found in standard VEX equipment.

- <https://www.vexforum.com/index.php/28455-answered-r7-c-regarding-flanged-nuts>
- <https://www.vexforum.com/index.php/28712-answered-legality-of-rod-coupling-nuts>
- <https://www.vexforum.com/index.php/29520-answered-rule-r7-c-regarding-legal-washers>
- <https://www.vexforum.com/index.php/30629-answered-r7c-and-washers>
- <https://www.vexforum.com/index.php/30647-answered-legal-vex-screws>

"Identical to a legal VEX part" can sometimes mean "identical to a slightly modified legal VEX part". However, this is not a blanket rule, so when in doubt please request a clarification.

- <https://www.vexforum.com/index.php/28741-answered-vex-iq-shafts-for-vrc>
- <https://www.vexforum.com/index.php/27728-answered-custom-spacers>
- <https://www.vexforum.com/index.php/29356-answered-legality-of-nylon-spacers>

Metric equivalents of Imperial dimensions for teams outside of the US are usually legal.

- <https://www.vexforum.com/index.php/29018-answered-r7k-is-3mm-nylon-rope-legal>

Components that only function outside of a Match are still considered "functional".

- <https://www.vexforum.com/index.php/27838-answered-can-non-functional-decorations>
- <https://www.vexforum.com/index.php/28517-answered-pressure-gauge-as-decoration>

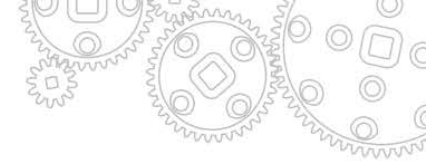
Motors cannot be used as non-functional decorations. However, labeling or decorating motors in a non-functional way is permissible.

- <https://www.vexforum.com/index.php/28495-answered-vrc-motor-casings-and-motor-limit>
- <https://www.vexforum.com/index.php/28986-answered-r15-r7-laser-engraving-motor>
- <https://www.vexforum.com/index.php/30689-answered-what-is-considered-a-motor>

Superficial additions to the VEXnet Joystick are legal if they do not include any physical or electrical modifications to the original Joystick itself.

- <https://www.vexforum.com/index.php/30246-answered-screwing-controllers-together>
- <https://www.vexforum.com/index.php/30397>
- <https://www.vexforum.com/index.php/30398>
- <https://www.vexforum.com/index.php/30412>





Team Identification Plates must be placed on opposing sides of the Robot, and the Alliance color must be abundantly clear to head referees.

- <https://www.vexforum.com/index.php/30321-answered-r19-question>
- <https://www.vexforum.com/index.php/29933>

Modifications to a Robot's Subsystem 3 are allowed during a competition, provided that the Robot has been inspected or re-inspected in all possible configurations.

- <https://www.vexforum.com/index.php/31018-answered-removing-a-subsystem-r1>

