

Q&A

VRC 2023-2024: Over Under

Tagged: SC3

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 Over Under 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.

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2166: Threshold for Scored Rings (SC3)

30-Sep-2024

SC3

In all of the diagrams in the game manual, scored rings are down past the flexible top of the stakes. Does the flexible top count as part of the stake that the ring can encircle (SC3) or does it need to go past that portion of the stake to count? Thanks.

[<SC3>](#)

Answered by committee

Per rule [<SC3>](#), a Ring is considered Scored on a Stake if it is "encircling" any part of the Stake, which by the game manual's definition of "Stake" includes both the pipe and flexible top. The additional guidance from [<SC3>](#)'s red box also applies:

In the vast majority of common scenarios, a Scored Ring will be fully supported by the Stake, other Scored Rings, and/or the Stake's associated base (i.e., Mobile Goal, field wall, or Ladder). Although this support can be used as a visualization tool when judging edge-case Rings, it is not explicitly required. Another visualization tool is that if a gentle "shake test" would result in the Ring falling anywhere other than further onto its Stake, then it is most likely not Scored (this test does not apply to tipped Mobile Goals).

2126: Game piece rebounding out of goal after being scored

7-Sep-2024

SC3 SG3

From [<SC3>](#), a ball is scored when it passes through the target. This would imply that if the ball is still scored if it were to rebound out after fully passing through the target.

1. is this implication correct for scoring behaviour
2. if it is considered scored, what would be the procedure for this ball. Is it to be treated as any other ball in c. of [<SG3>](#)

Answered by committee

Thank you for your question. A Ball that passes through a Target and then bounces back out into the playing field does not count as a Scored Ball, and the Ball remains in play. This will also be added to rule [<SC3>](#) in the next game manual update.

2100: Contacting Rings in Skills

15-Aug-2024

SC3 RSC3

SC3 states:

<SC3> A Ring is considered Scored on a Stake if it meets the following criteria: a. The Ring is not contacting a Robot from the same color Alliance as the Ring. b. The Ring is not contacting a gray foam tile. c. The Ring is “encircling” a Stake. In this context, “encircling” means that any part of the Stake is at least partially within the volume defined by the inner edges of the Ring. Each Ring can only be counted for points once, even in cases where the Ring qualifies as Scored on multiple Stakes. If multiple Stakes are encircled by the same Ring, Top Rings will not be awarded for those Stakes. Intentionally causing a Ring to be Scored on multiple Stakes will, at minimum, receive a Minor Violation. d. The Stake does not exceed its total permitted number of Rings (see definition of Stake). In the event of too many Rings on a Stake, the “highest” Rings will be removed.

RSC3 states:

<RSC3> Robots must start the Robot Skills Match in a legal starting position for the red Alliance. * All Drive Team Members must remain in the red Alliance Station for the duration of the Match. * Robots must meet all of the criteria listed in rule <SG1>. * Teams may use one (1) red Alliance preload as described in rule <SG5>. * The two (2) blue Alliance preload Rings are not used in Robot Skills Matches. * Rule <SG10> does not apply, and Teams may freely use the blue Alliance wall Stake. * Rule <SG11> does not apply.

The skills section never explicitly states that the team plays as if they are on the red alliance. If a robot ends a skills run contacting red rings that would otherwise be considered scored, are those rings scored? Similarly, if a robot ends a skills run contacting a blue ring that would otherwise be considered scored, is that ring scored?

Answered by committee

Thank you for your question! The criteria in [<SC3>](#) apply to all Rings in a skills Match, regardless of color. We will also clarify this in the next game manual update.

2083: Can I reload immediately after scoring

4-Aug-2024

SC3 SG4

According to SC3, the ball can be scored by passing through the goal, while according to SG4, the ball can be considered 'loaded' if it scores or leaves the field. Does this imply that loading can occur after the ball has passed through the goal rather than after it has landed? [<SC3><SG4>](#)

Answered by committee

As described in clause A of rule [<SG4>](#), the 'next' Ball can be Loaded after a previous Ball has been Scored or has left the Field. As described in rule [<SC3>](#), a Ball is considered to have been Scored when it

... is no longer in contact with a Robot and has fully passed through a Target (i.e., from the “outside” of the Goal Wall structure into the “inside” of the Goal Wall).

There is no requirement that a Scored Ball land in the Pickup Zone before the next Ball is Loaded.

2079: SC3, sub A - end of autonomous clarification

31-Jul-2024

SC3

[<SC3>](#)

In rule sc3 subsection A it states that a ring is not scored if colored ring is being touched by the same alliance, this counts at the end of a match but does it count during the end of autonomous

Answered by committee

Rule [<SC3>](#) (the criteria for Rings Scored on Stakes) applies during all parts of a Match, including the Autonomous and Driver Controlled Periods.

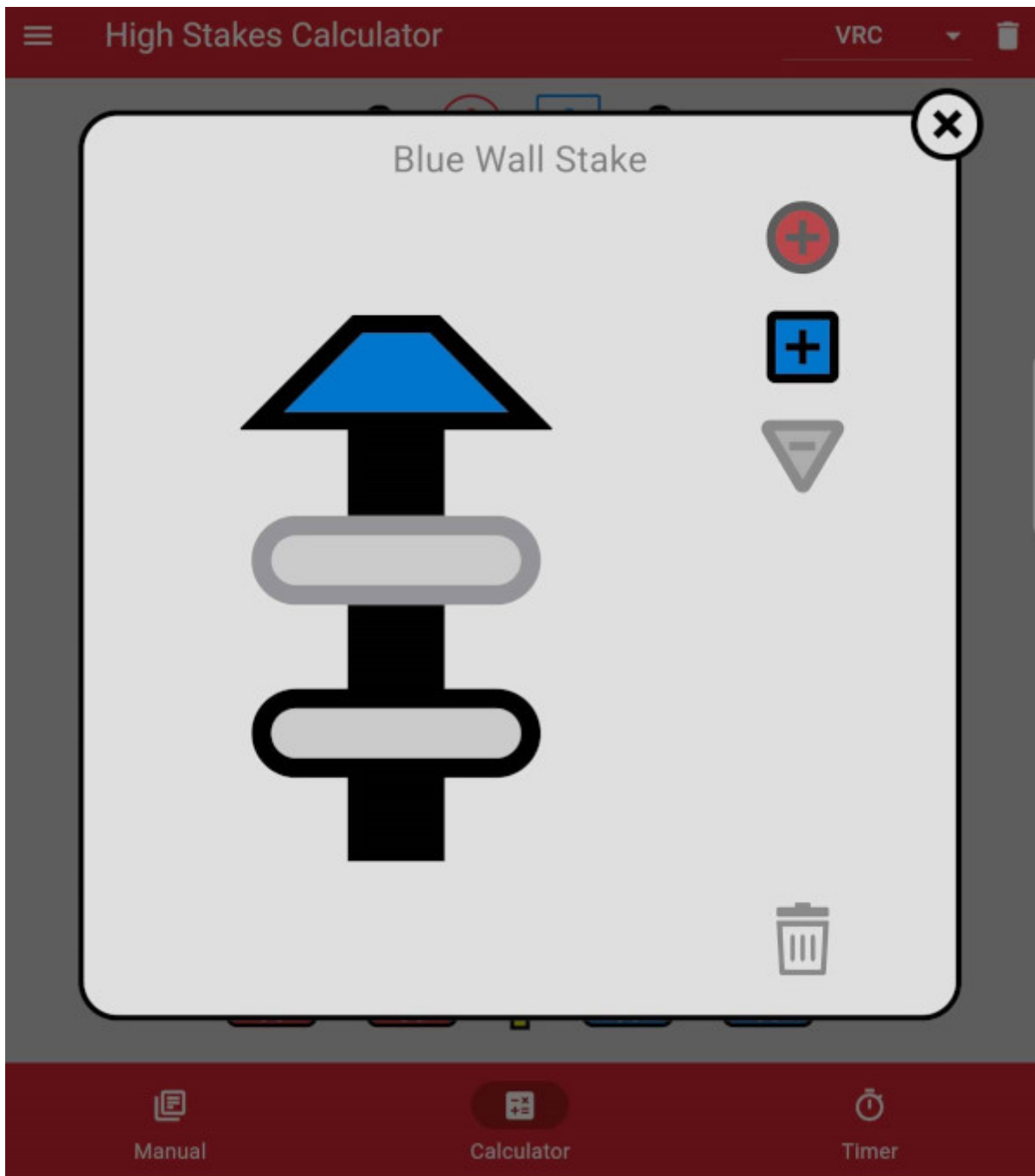
2060: SC3: Opposing colour ring on alliance wall stake

12-Jul-2024

SC3 SG10

Can you clarify what should happen when an opposing colour ring is placed on an alliance wall stake.

Currently, the V5RC app does not allow this to happen - for example the red plus icon (+) is greyed out for the blue alliance wall stake, and does not do anything when pressed.



However, [<SC3>](#) and [<SG10>](#) do not prohibit a red robot placing a blue ring on the red alliance wall stake. Therefore we should assume it is legal.

Should the alliance wall stakes be scored as in the same way as neutral stakes at the end of the match?

Answered by committee

Can you clarify what should happen when an opposing colour ring is placed on an alliance wall stake.

If a Ring of the opposing color ends the Match in a Scored position on an Alliance Wall Stake, that Ring should not be considered as Scored, and will not earn points for either Alliance (it will still, however, count toward the maximum number of 2 rings that can be placed on an Alliance Wall Stake). If it is the furthest Scored Ring from the Stake's base, the next-lowest Scored Ring on that Stake should be checked against rule [<SC4>](#) to see if it meets the criteria for Top Ring status.

If a Team Scores a Ring on their opponent's Alliance Wall Stake, it is a Minor or Major Violation of rule [<SG10>](#).

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.

1681: Robots contacting Blocks in a Goal transitively

8-Oct-2023

SC3

In some ways, this question is an extension of matters raised by:

- Q1676: [Touching Blocks after they have been Scored](#)
- Q1680: [Many implications of Robot parts falling into a Goal](#)

If a Match ends with a Robot still partially inside a Goal, there are some unclear matters.

Rule [<SC3>](#) is clear:

2. A Block is considered Scored in a Goal if...The Block is not contacting any Robots.

Thus, any Block contacting the Robot does not get counted. However:

1. What about Blocks contacting the Robot transitively? For example, Block A touching the Floor, Block B on top of A, the Robot touching only Block A. Since Block A is not considered Scored, we're interpreting this as Block B also not Scored, since the transitivity gets "broken" by an "invalid" Block. However, if Block A and C are both touching the Floor, and Block B is touching both A and C, then...yes? Shouldn't C and B be Scored, despite the Robot touching A and transitively/indirectly touching C and B? Or does the referee have to carefully determine which Blocks are in the transitive "chain" and which ones are not? And then calculate all Bonuses as if the chain of Blocks were gone?
2. What about Height bonuses? Again, if a Robot is touching (even slightly and immaterially) a Block, that Block and any blocks transitively touching it (this part is not 100% clear?) are also treated as if they were not in the Goal, right? Thus Height is calculated solely based on Blocks that are in no way touching or transitively/indirectly touching the Robot? This seems most fair since otherwise teams may exploit this to ensure a Height bonus by using the Robot to help raise the Blocks. This also makes Score calculation tricky for Height bonus: would you have achieved Height 3 if the robot were not present in the Goal?
3. What about Uniform bonuses? The touched Block clearly should be excluded from any Scoring. What about transitively touching Blocks? This has an interesting implication...strategy-wise. Suppose a team accidentally drops a purple Block into a Goal with all green Blocks. Clock says 2 seconds. You can opt to partially park (+5) or, even better,....drive to the non-Uniform Goal and reach in to touch the one purple Block. Per [<SC3>](#), the Driver has strategically invalidated the purple Block, thus earning a Uniform bonus for that Goal (+10). If we also add transitively touching Blocks as invalidated, then the Robot merely needs to touch a green block that transitively touches the purple Block, potentially risking invalidating the entire set of scored Blocks - although this scenario seems improbable in the wild.

Thanks for your consideration.

Answered by committee

If a Match ends with a Robot contacting a Block which would otherwise be considered Scored, then that Block is considered not Scored, per [<SC3>](#). That is the only Block which is considered not Scored; there is no mention of transitive contact in this evaluation.

One thing that may help scorekeepers and Head Referees is to physically remove any Blocks from the Goal that are being contacted (assuming that this can be done without disturbing other Scored Blocks). This will clearly indicate to all Teams and spectators the final state of the Goal.

With that visual in mind...

1. What about Blocks contacting the Robot transitively?

Transitive contact is irrelevant. If they are not contacting the Robot, then they are still considered Scored.

2. What about Height bonuses?

The Height bonus should be evaluated once any Blocks that were being contacted by the Robot are removed.

3. What about Uniform bonuses? The touched Block clearly should be excluded from any Scoring.

Correct.

Suppose a team accidentally drops a purple Block into a Goal with all green Blocks. Clock says 2 seconds. You can opt to partially park (+5) or, even better,....drive to the non-Uniform Goal and reach in to touch the one purple Block. Per <SC3>, the Driver has strategically invalidated the purple Block, thus earning a Uniform bonus for that Goal (+10).

Correct.

1532: <SG8> De-scoring of triballs

6-Jun-2023

SC3 SG8

Figures 28-31 mentions goals being open for 'De-scoring' , and triballs being 'safe', words which are not otherwise defined in the game manual. However <SG8> only mentions 'breaking the plane' of the goal:

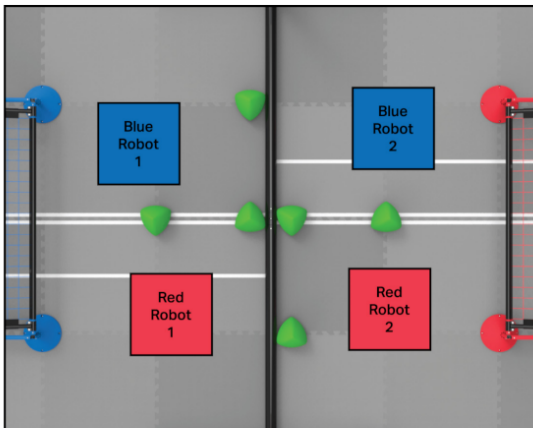


Figure 28: One Robot from each Alliance in their respective Offensive Zones; Triballs in Goals are safe.

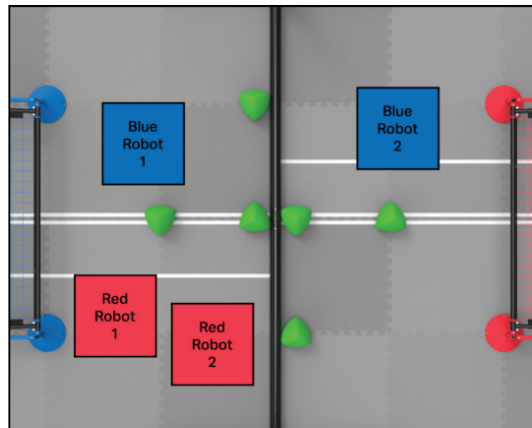


Figure 29: Both Red Robots are in the Blue Offensive Zone; Red Goal is open for de-scoring by a Blue Robot.

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<SG8> Stay out of your opponent's Goal unless they are Double-Zoned. During the time when an Alliance meets the definition of Double-Zoning, opposing Robots are permitted to "break the plane" of the Double-Zoning Alliance's Goal, such as to remove Triballs.

It is possible to cause a triball to no longer be scored <SC3> without the robot breaking the plane of the goal. Is this legal when the opposing robots are not double zoning?

Answered by committee

Figures 28-31 mentions goals being open for 'De-scoring' , and triballs being 'safe', words which are not otherwise defined in the game manual. However <SG8> only mentions 'breaking the plane' of the goal:

This is correct. Encroaching on the space within an opponent's Goal ("breaking the plane") is the primary physical action that a Head Referee will be watching for to determine whether an SG8 Violation has been committed.

Non-defined mentions of "de-scoring" and Triballs being "safe" are meant to communicate the overarching intent behind SG8. This intent is to provide some level of protection for the space inside of Goals, and any Triballs

contained in that space.

It is possible to cause a triball to no longer be scored [<SC3>](#) without the robot breaking the plane of the goal. Is this legal when the opposing robots are not double zoning?

There are no rules explicitly preventing the action of causing a Triball to no longer be Scored in a Goal when not in a Double-Zoning situation.

However, as explained above, this is one of the intents of SG8. Therefore, any actions which directly or indirectly de-score Triballs from a Goal should be expected to see heavy levels of scrutiny from Head Referees. Interacting with an opponent's Goal in any way is an inherently defensive action, so Teams attempting such strategies should not expect any "benefit of the doubt" if they involve judgment calls relating to rules such as [<S1>](#), [<S3>](#), [<G3>](#), [<G6>](#), [<G7>](#), [<G15>](#), [<G17>](#), and/or [<SG5>](#).

1509: SC3; SC4: Are triballs legally scored in the goal also scored as being in the offensive zone

23-May-2023

SC3 SC4

The way the manual is currently written has a ball legally scored in the goal also legally scored in the offensive zone. This appearst to mean each triball legally in the goal is worth 7 points, 5 for the goal and 2 for the offensive zone..

From the definitions of goal and offensive zone:

Goal – The Alliance-colored, netted structure on either side of the field, one red and one blue, into which Triballs can be scored for points. As a Field Element, the term "Goal" refers to the net and all supporting structures / hardware (e.g. PVC pipes and plastic bases). For the purposes of scoring, the "Goal" refers specifically to the three-dimensional volume bounded by a vertical projection of the outermost PVC pipes onto the field and below the surface of the net.

Offensive Zone – One of two halves of the field, divided by the Barrier. See Figure 20. • Each Alliance has an Offensive Zone. An Alliance's Offensive Zone is on the side furthest from their Alliance Station and closest to that Alliance's colored Goal. • Each Offensive Zone consists of the gray foam tiles on one side of the Barrier. It is not a 3-dimensional volume. • The Long Barrier is not considered to be in either Offensive Zone. • The Match Load Zones are not considered to be part of either Offensive Zone.

There is a list of areas explicitly excluded from the definition of offensive zone, but the goal tiles are not among that list and the accompanying image shows the tiles under the goal to be colored as part of the offensive zones. Now the scoring rules:

SC3 A Triball is considered Scored in a Goal if it meets the following criteria: a. The Triball is not contacting a Robot of the same color Alliance as the Goal. b. At least two (2) corners of the Triball are within the Goal (i.e., are under the Net and have "broken the plane" of the outer edge of the PVC pipes that define the Goal volume).

SC4 A Triball is considered Scored in an Offensive Zone if it meets the following criteria: a. The Triball is not contacting a Robot of the same color Alliance as the Offensive Zone. b. The Triball is contacting the gray foam tiles within the Offensive Zone. Note: Offensive Zone scoring is based on contact with the gray foam tiles in each Offensive Zone. In the case of any close calls, referees may use a "paper test" (i.e. gently slide a piece of paper under the Triball) to determine which Offensive Zone it should be scored in. If the Triball is contacting both Offensive Zones, then it is not considered Scored in either Zone. See Figure 23.

Finally, I don't see anything in any of the other scoring rules that the triball must be exclusively scored as either in goal or in the offensive zone, therefore a triball legally scored in the goal is 7 points, not just five.

Is this the correct interpretation?

Answered by committee

Thank you for your question! The next version of the game manual will clarify that a Triball that is considered Scored in a Goal is not also considered Scored in that Goal's Offensive Zone.

1343: Scoring Disc at the Fence

14-Dec-2022

SC3

[<SC3>](#)

At the end of the match, if a disc is at the Fence, but is partially in the playing field and the 2 Point Zone (similar to Disc E in Figure 11 and 12), would we consider this disc to be worth 2 points by following the similar procedure as Disc E or would we not score this disc as it has not cleared the Fence completely?

Answered by committee

Thank you for your question! As described in rule [<SC2>](#), any Disc that has "broken the plane" of the 2-Point Goal Zone and is extending even slightly beyond the black Fence Line should be considered Scored in the 2-Point Goal Zone.

1299: SC3a - Definition of 'supported' by a Robot

15-Nov-2022

SC3

GDC,

SC3 a. states:

SC3 A Disc is considered Scored in the Low Goal for the Alliance corresponding to the color of the adjacent Barrier if it meets the following criteria: a. Not fully supported by a Robot of the same color Alliance as the Low Goal.

Figure 15 in the 2.2 game manual shows disc H being fully supported as an example.

Figure 15 in the 2.2 game manual shows disc I being scored while touching the grey tile, but leaning on a robot of the same color.

What about a disc that moves with a robot (IE mostly in an intake, or in the claw of the bot in the picture), but is touching the grey tile of the low goal? Previous seasons have had definitions of the term "supported" that meant moved with the robot, but could still be touching the tile. Can you please clarify this edge case in between H & I? Does supported mean not touching a tile at all? Or does it mean move with the robot but can be touching a tile?

Thank you for your time and consideration.

Answered by committee

Thank you for your question! In most cases, a "fully supported" Disc as described by rule [<SC3>](#) will not be touching a Field Tile (e.g., Disc H in Figure 15 of the Game Manual) and will be easy to identify. However, there are ways that a Disc can be touching a Field Tile while still being supported entirely by the Robot—for example, a Disc that is solidly inside a Robot's intake while also being in contact with a Field Tile. If the Head Referee were to hypothetically

move the Robot and the Disc were to move along with the Robot rather than falling to the Field Tile, the Disc should be considered fully supported by the Robot.

Note that the Head Referee should only move a Robot if it is absolutely necessary and only with extreme care to avoid affecting other Scored objects. In most cases, the Head Referee should be able to make this call without moving a Robot.

1289: <SC3> Disc Scoring in Low Goal - stacked discs

9-Nov-2022

SC3

Rule <SC3> A Disc is considered Scored in the Low Goal for the Alliance corresponding to the color of the adjacent Barrier if it meets the following criteria: a. Not fully supported by a Robot of the same color Alliance as the Low Goal. b. At least partially contained within the vertical projection of the Low Goal (i.e., "breaking the plane" of the Low Goal). c. Not contacting any field tiles outside of the Low Goal. d. Not contacting the Net. e. Not contacting the High Goal, or any of the supporting structures underneath the High Goal. Note: Discs which are Scored in a High Goal may not also count as being Scored in a Low Goal.

REFERENCE FIGURE 15

QUESTION - if disc is stacked on top of a scored disc in the low goal (with the bottom disc scored affirmatively in either a-e in above), what does a stacked disc on top of this = scored or un-scored? Figure 15th is not showing an example of this instance.

[<SC3>](#)

Answered by committee

Thank you for your question. As described in rule [<SC3>](#), a Disc must be **at least partially contained within the vertical projection of the Low Goal**. There is no requirement that a Disc be in contact with a Field Tile inside the Low Goal, so the "stacked Disc" in your scenario would be considered Scored in the Low Goal, providing it meets all of the criteria listed in rule [<SC3>](#).

1201: SC3 & RSC3 - Low Goals and discs on different colored robots

20-Sep-2022

SC3 Robot Skills Challenge

GDC,

I'd like to get clarification on a potential scoring situation related to a robot in possession of a disc that ends a match inside a low goal for skills.

Rule SC3 states the following with item a. included:

<SC3> A Disc is considered Scored in the Low Goal for the Alliance corresponding to the color of the adjacent Barrier if it meets the following criteria:

a. Not fully supported by a Robot of the same color Alliance as the Low Goal.

This implies that if the robot in figure 15 was Red instead of blue that disc H would count as scored.

Rule RSC3 states the following:

<RSC3> In Robot Skills Matches, Teams play as if they are on a "neutral" Alliance. Robots may freely move about the field, utilize any Loader, score in any Goal, and manipulate any Roller.

And the Robot Skills Challenge Scoring states:

A Team's score at the end of a Robot Skills Match is calculated by combining the scores that would have been awarded to the red and blue Alliances. For example, all Discs that end the Match in either High Goal are worth 5 points each, regardless of which side of the Field the Robot starts on.

If a Robot on a skills run ends a match in a low goal while holding a disc as shown in figure 15 H, how is it scored? It seems like the skills robot being neutral (per RSC3) makes it a different color than the color of the low goal (per SC3), so the disc should be scored, whichever low goal the robot is in.

Thank you for your time and consideration.

Answered by committee

The final paragraph of this answer has been revised for clarity and accuracy.

This has been addressed in the October 4, 2022 Game Manual Update.

High and Low Goals should both be considered on the same "neutral" Alliance as the Robot in question. The only scoring locations that are color-specific are the Rollers, as noted in RSC5.

Therefore, a Robot in either Low Goal is considered "in the same color Alliance as the Low Goal", and any Discs they are **fully supporting** should not be considered Scored.