

Q&A

VRC 2021-2022: Tipping Point

Tagged: Field Setup

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 Tipping Point 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 Tipping Point 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.

959: Conflict Between G19 and Figure 20

7-Dec-2021

G19 Field Setup

In the December 7th game manual update Version 2.2 G19 states "Mobile Goals should always be oriented such that the vision target found on the "point" of the heptagon Base, and the rotation of all outer "points", resembles Figure 20."

In Figure 20 both alliance goals on the AWP lines are shown as "pointed up" from the audience perspective. However the red box states "The Alliance Mobile Goals that begin on the AWP Line are "pointing towards" the neutral zone. The orientation described in the red box is consistent with other images throughout the game manual and Appendix A. Which is the correct orientation?"

Answered by committee

Thank you for bringing this to our attention. This was an error in the initial upload of the v2.2 document that has since been rectified. Figure 20 is now consistent with G19 and the other images throughout the manual.

958: Orientation of Tall Neutral Goal

7-Dec-2021

G19 Field Setup

Renders of the field throughout the game manual and its appendices show the tall neutral goal with the point with the vision target facing toward the audience. The object placement CAD in Appendix A shows the point with the vision target facing away from the audience. Given the specifics stated in G19, if Figure 22 is correct then the object placement in Appendix A must be incorrect. Which is the correct orientation?

Answered by committee

The v2.2 Game Manual update included the following “red box” addition to rule <G19>. We sincerely apologize for any inconvenience and confusion caused by this inconsistency.

Prior to version 2.2 of the Game Manual (released December 2021), there have been conflicting interpretations of the correct Mobile Goal rotation in the official game documentation. The layout defined in Figure 20 above, and Appendix A, in version 2.2 (or later) of the Game Manual is the only correct variation. This layout takes precedent over any other variations found elsewhere, such as other figures, websites, videos, etc that were created prior to December 2021.

Here are some ways to visualize the correct orientation, using the V-shaped vision target as the “front” of the heptagon, and the rectangular vision target as the “back” of the heptagon:

- The Alliance Mobile Goals that rest on the Platforms are “pointing towards” their respective Platform
- The Alliance Mobile Goals that begin on the AWP Line are “pointing towards” the Neutral Zone
- The outer two Neutral Mobile Goals are ”pointing towards” the field perimeter walls
- The center Neutral Mobile Goal is “pointing up”, when viewed from the audience perspective, or “pointing left” when viewed from the red Alliance Station

930: G19 Tall Neutral Mobile Goal Orientation

15-Nov-2021

G19 Field Setup

There have been multiple Q&As asking about the placement of the Tall Middle Neutral Mobile Goal and its orientation. The 2 Q&As ([826](#) & [881](#)) that have been answered have contradicting answers and I would like a definitive answer for this.

Answered by committee

The v2.2 Game Manual update included the following “red box” addition to rule <G19>. We sincerely apologize for any inconvenience and confusion caused by this inconsistency.

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928: GPS Strip adhesive velcro strip failures - use of magnets allowable?

14-Nov-2021

Field Setup

It is discouraging to find that the Velcro strips provided by VEX fail within a couple of hours after start of the event. Reports from EPs and teams is that this is fairly widespread.

Foster recommends using magnets as an alternative, such as these sold on Amazon: <https://www.amazon.com/Anpro-Industrial-Magnets-11-Refrigerator-Projects/dp/B072HV6NLB>

Team 41442A provides an example of it in practice. Magnets are placed on the black squares of the strip.



Would this be permissible?

thank you!

Answered by committee

No, this would not be legal for use in official competitions.

Other alternative forms of non-magnetic attachment, such as [Dual Lock](#), would be permissible.

1041: Contact Field Element for determination of balanced platform - Driver station post, field monitors

6-Feb-2022

Scoring Field Setup

Field Element – The foam field tiles, field perimeter, white tape, Platforms, and all supporting structures or accessories (such as **driver station posts, field monitors**, etc). Balanced - A Platform state. A Platform is considered Balanced if all of the following criteria are met at the end of a Match:

1. The Platform is roughly parallel to the field.
 2. Both flat surfaces of the Platform hinges are contacting the Platform base, as shown in Figure 7.
 3. Robots and / or Scoring Objects contacting the Platform in their Alliance Home Zone **are not also contacting any other Field Elements**, such as foam field tiles or the field perimeter. a. For the purposes of this definition, contact is considered "transitive" through other Robots and Scoring Objects. For example, as shown in Figure 9, contact with a Mobile Goal that is resting on top of the field perimeter would not satisfy the definition of Balanced.
- Field Specifications shows where the driver station posts can be mounted, is this position considered the "correct" mounting location and should be followed by all events? If so, and if the driver station posts is mounted at a "incorrect" location, would robot/scoring objects in contact with the driver post still counts as contact and thus making the platform unbalanced?
 - If the above is true, does the driver station post need to be mounted at the location specified in field specifications if the field is raised? This could affect robot design as some teams may design to carry mobile goals on the side of the robot which would be above the field perimeter and breaking the plane of the field but still be balanced, and seeing an "unexpected location" of driver station post at the event may not give enough times for teams to adapt design. Also it could cause some "would be balanced if the driver station post is elsewhere" matches.
 - Field Specifications doesn't show a place to mount field monitors. Some events choose to put monitors outside the field, not utilizing the bracket VEX sells and is **NOT** attached to the field. Does the use of mounting hardware affect whether the monitor counts as part of the field, or does **any** monitor displaying tournament manager treated as part of the field? If it is mounted at an unexpected location around the platform and robot/scoring objects are in contact with the field monitor, would that be considered contact and thus making platform unbalanced?

Link:<https://www.youtube.com/watch?v=u7hNGMBGxUw>

For example, in the above event, the driver station post is mounted in the middle of the platform, different than in the field specification, which increases the chance teams' robot/scoring objects robots carry could contact the driver station post.

Answered by committee

Field Specifications shows where the driver station posts can be mounted, is this position considered the "correct" mounting location and should be followed by all events?

Yes, just as all other field setup attributes shown in Appendix A. The specific placement of the Driver Station Posts is intentional, to limit the risk of interference with Platforms.

If so, and if the driver station posts is mounted at a "incorrect" location, would robot/scoring objects in contact with the driver post still counts as contact and thus making the platform unbalanced?

Technically, yes. However, this could also be considered a Match Affecting "field fault", as described in G20, at the discretion of the Event Partner and the Head Referee. In this case, the incorrectly assembled field should be rectified, and the Match replayed.

If the above is true, does the driver station post need to be mounted at the location specified in field specifications if the field is raised? This could affect robot design as some teams may design to carry mobile goals on the side of the robot which would be above the field perimeter and breaking the plane of the field but still be balanced, and seeing an "unexpected location" of driver station post at the event may not give enough times for teams to adapt design. Also it could cause some "would be balanced if the driver station post is elsewhere" matches.

This concern is addressed by the following passage from Appendix A:

Field components may vary slightly from event to event. This is to be expected; teams will need to adapt accordingly. It is good design practice to create mechanisms capable of accommodating variances in the field and game pieces.

To answer your specific question: the decision whether or not to use the Driver Station Posts is considered an acceptable possible variance from event to event. Teams should be prepared to adapt accordingly.

Field Specifications doesn't show a place to mount field monitors. Some events choose to put monitors outside the field, not utilizing the bracket VEX sells and is NOT attached to the field. Does the use of mounting hardware affect whether the monitor counts as part of the field, or does any monitor displaying tournament manager treated as part of the field?

A display monitor is only considered a Field Element if it is attached to the field, either utilizing the official bracket or something similar. If it is not attached to the field, then it should just be considered something "outside of the field", like a wall. The following related Q&A would then apply:

<https://www.robotevents.com/VRC/2021-2022/QA/888>

If it is mounted at an unexpected location around the platform and robot/scoring objects are in contact with the field monitor, would that be considered contact and thus making platform unbalanced?

Yes. Unlike the Driver Station Posts, there is no defined location for any field monitors to be attached to the field, as they can vary from event to event. We would strongly advise against placing any field monitors directly near the Platforms.