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APPENDIX

The Programming Skills Challenge

Overview

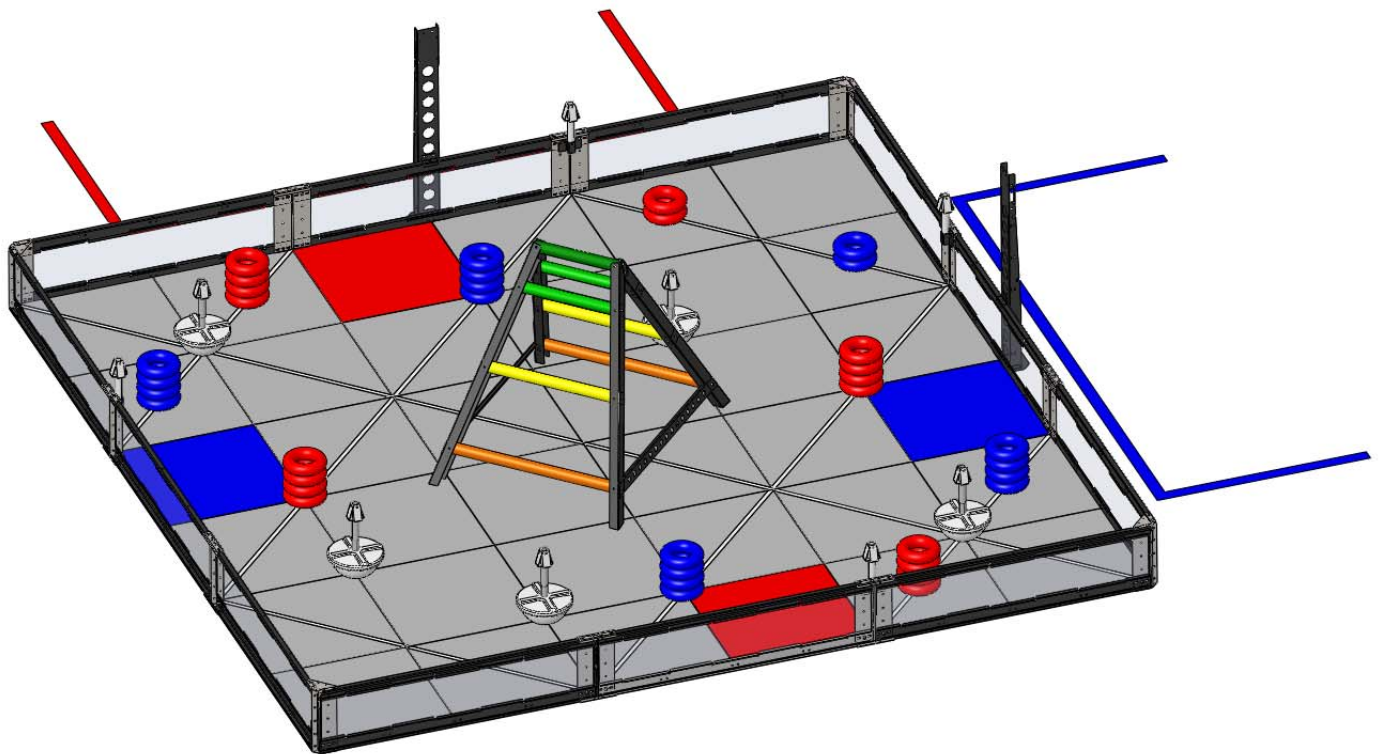


This section describes the Programming Skills Challenge of *VEX Round Up*.

Please note that the Programming Skills Challenge may not be offered at all tournaments. Please check with your local event organizer, or www.robotevents.com for more information.

Programming Skills Challenge Description

In this challenge teams will compete in 1:00 long matches in an effort to score as many points as possible. These matches will be entirely autonomous. The playing field will be set up identically to that of a normal VEX Round Up tournament match.



Note: The Robot Skills Challenge, The Programming Skills Challenge and normal VEX Round Up tournament matches use the same field setup! (Please see "The Game" section of the manual for further information on field setup)

Programming Skills Challenge Definitions

Please note that all definitions from “The Game” section of the manual apply to the Programming Skills Challenge, unless otherwise specified.

Programming Skills Match – A *Programming Skills Match* consists of a 1:00 *autonomous period*. There is no *driver controlled period*.

Programming Skills Owned - A *goalpost* is said to be *owned* by a *robot* if there is a *tube* of any color scored on said *goalpost*.

Programming Skills Challenge Rules

Please note that all rules from “The Game” section of the manual apply to the Programming Skills Challenge, unless otherwise specified.

<PSC1> At the beginning of each *programming skills match*, the *robot* must be placed such that it is touching any one of the colored *alliance starting tiles* and not touching any *tube* other than those permitted by <PSC2>.

<PSC2> Prior to the start of each *programming skills match*, each team will have two (2) *tubes* available to preload into their *robot*. A *tube* is considered to be legally preloaded if it is touching the *robot* and not touching any *field element* or *tube* that is already on the field.

<PSC3> Robots can score any tube, regardless of color.

Programming Skills Challenge Scoring

All scoring is the same as in a regular VEX Round Up match.

- A *tube* that is scored upon a *goalpost* is worth two (2) points.
- A *goalpost* that is *programming skills owned* is worth five (5) points.
- A *robot* that is *low hanging* from the *ladder* is worth ten (10) points.
- A *robot* that is *high hanging* from the *ladder* is worth twenty (20) points.

Programming Skills Challenge Format

- The Programming Skills Challenge is an optional event. Teams who do not compete will not be penalized in either the main tournament, or the Robot Skills Challenge.
- Teams will play *programming skills matches* on a “first come, first serve” basis.
- Teams will be guaranteed a minimum number of *programming skills matches*, to be determined by the event organizers
- Teams may also be limited to a maximum number of *programming skills matches*, to be determined by the event organizers

Programming Skills Challenge Rankings

- For each *programming skills match* teams are awarded a score based on the above scoring rules.
- Teams will be ranked based on their highest *programming skills match* score, with the team with the highest score being declared the Programming Skills Challenge Winner.
- In the case where two teams are tied for the highest score, the tie will be broken by looking at both teams' next highest *programming skills match* score.
- If the tie cannot be broken (i.e. both teams have the exact same scores for each *programming skills match*), the next tie-breakers will be based on the following criteria in each team's highest scoring *programming skills match*. The tie-breakers are as follows (in order):
 - Did the robot *high hang*
 - Did the robot *low hang*
 - Number of *goalposts programming skills owned*
 - Number of *tubes scored upon goalposts*
- If the tie still isn't broken, events may choose to allow teams to have one more deciding match or both teams will be declared the winner.

Programming Skills Challenge Heads-Up Match

The following method will be used to determine the Programming Skills Challenge Winner at certain events, including the 2011 VEX Robotics World Championship.

- The top two teams from the Programming Skills Challenge Rankings will advance to a final heads-up match.
- Each team will perform one (1) *programming skills match*, with the 2nd place team performing first or with both teams performing simultaneously on separate fields.
- This *programming skills match* will be a final opportunity for both teams to beat the high score posted in earlier rounds, if neither team beats or matches the previous high score, the holder of the previous high score will be declared the Programming Skills Challenge Winner.
- If one or both teams beat the previous high score, the team with the highest score in the "Heads-Up Match" will be declared the Programming Skills Challenge Winner.
- In the case of a tie for highest overall score, the tie will be broken by looking at the second highest score for both teams. (This process of looking at the next highest score will continue until the tie is broken, or all matches have been exhausted).
- If the tie cannot be broken, two winners may be declared, or a new match may be played.