

# B

APPENDIX

## The Robot Skills Challenge

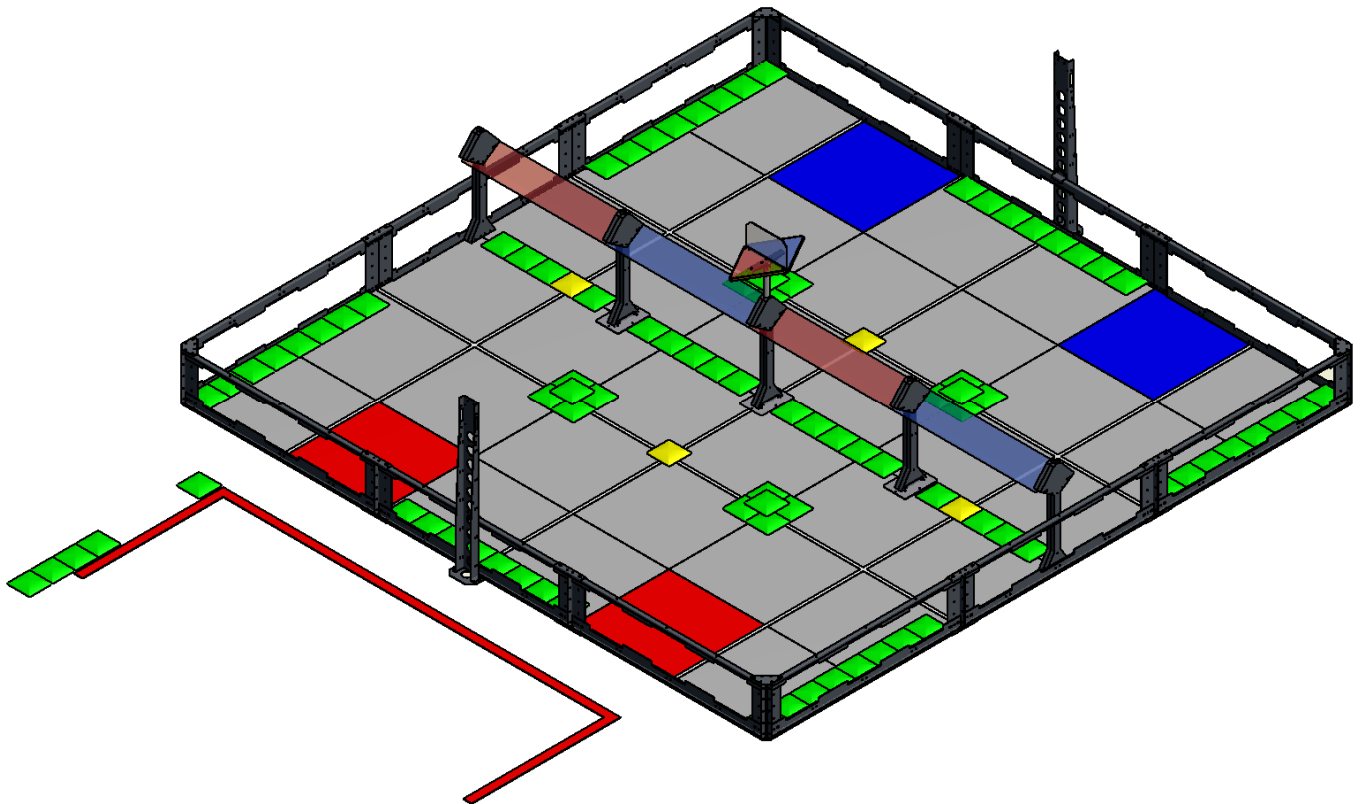
### Overview

This section describes the Robot Skills Challenge of *VEX Sack Attack*.

*Please note that the Robot Skills Challenge may not be offered at all tournaments. Please check with your local event organizer, or [www.robotevents.com](http://www.robotevents.com) for more information.*

## Robot Skills Challenge Description

In this challenge teams will compete in sixty (60) second long matches in an effort to score as many points as possible. These matches will be entirely driver controlled. The playing field will be set up identically to that of a normal VEX Sack Attack tournament match.



**Note: The Robot Skills Challenge and the Programming Skills Challenge use the same field setup!**  
(Please see "The Game" section of the manual for further information on field setup)

## Robot Skills Challenge Definitions

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

*Robot Skills Match* – A *Robot Skills Match* consists of a sixty (60) second *Driver Controlled Period*. There is no *Autonomous Period*.

*Robot Skills Match Loads* – The five (5) *Sacks* available to be loaded at any time during a *Robot Skills Match*. Of these *Robot Skills Match Loads*, only one (1) *Sack* may be used as a *Robot Skills Preload*.

*Robot Skills Preload* – The one (1) *Sack* each team may load into their *Robot* prior to each *Robot Skills Match*. An unused *Robot Skills Preload* becomes a *Robot Skills Match Load*.

*Robot Skills Parked* – A robot is considered to be *Robot Skills Parked* if it is touching one of its own *Alliance Starting Tiles* at the end of the *Match*, and has left the *Alliance Starting Tile* during the *Robot Skills Match*.

## Robot Skills Challenge Rules

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

<**RSC1**> At the beginning of each *Robot Skills Match*, the *Robot* must be placed such that it is touching any of the colored *Alliance Starting Tiles*, not touching any *Scoring Objects* other than those permitted by <**RSC2**>, and not touching any other foam field tiles.

<**RSC2**> Prior to the start of each *Robot Skills Match*, each team will have one (1) *Sack* available as a *Robot Skills Preload*. A *Scoring Object* is considered to be legally preloaded if it is touching the *Robot* and not touching any *Field Element*.

<**RSC3**> *Robot Skills Match Loads* may be introduced on any *Alliance Starting Tile*.

<**RSC4**> *Drivers* and *Coaches* may interact with their robots as specified in <**SG5**> of Section 2 – The Game

<**RSC5**> In a *Robot Skills Match*, all *Goals* are considered to be the same color for purposes of any rules or definitions.

- a) *Robots* will only earn points for being *Robot Skills Parked* on an *Alliance Starting Tile* of the same color as the one they started on.

## Robot Skills Challenge Scoring

**All scoring is the same as in a regular VEX Sack Attack match.**

- A *Sack Scored* in a *Floor Goal* is worth one (1) point.
- A *Sack Scored* in a *Trough* is worth five (5) points.
- A *Sack Scored* in a *High Goal* is worth ten (10) points.
- A *Bonus Sack Scored* in a *Floor Goal* is worth six (6) points.
- A *Bonus Sack Scored* in a *Trough* is worth ten (10) points.
- A *Bonus Sack Scored* in a *High Goal* is worth fifteen (15) points.
- A *Robot* that is *Robot Skills Parked* at the end of the match receives ten (10) points

## Robot Skills Challenge Format

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

## Robot Skills Challenge Rankings

- For each *Robot Skills Match* teams are awarded a score based on the above scoring rules.
- Teams will be ranked based on their highest *Robot Skills Match* score, with the team with the highest score being declared the Robot 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 *Robot Skills Match* score.
- If the tie cannot be broken (i.e. both teams have the exact same scores for each *Robot Skills Match*), the next tie-breakers will be based on the following criteria in each team’s highest scoring *Robot Skills Match*. The tie-breakers are as follows (in order):
  - Number of *Bonus Sacks* points
  - Number of points *Scored* in the *High Goal*
  - Number of points *Scored* in the *Trough*
  - Number of *Parking* points earned
- 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.

## Robot Skills Challenge Heads-Up Match

The following method will be used to determine the Robot Skills Challenge Winner at certain events, including the 2013 VEX Robotics World Championship.

- The top two teams from the Robot Skills Challenge Rankings will advance to a final heads-up match.
- Each team will perform one (1) *Robot Skills Match*, with the 2<sup>nd</sup> place team performing first or with both teams performing simultaneously on separate fields.
- This *Robot 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 Robot 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 Robot 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.