



Inspection Guidelines

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Appendix 1 – Robot Inspection Guidelines

A1.1 – Overview

This section describes Robot Inspection for the Magbot Mayhem competition. It also lists the inspection definitions and inspection rules.

A1.2 – Description

The *robot* will be required to pass a full inspection before being cleared to compete. This inspection will ensure that all *robot* rules and regulations are met. Initial inspections will take place during team registration/practice time. A copy of the official “Robot Inspection Sheet” is located at the end of this guide. The “Robot Inspection Sheet” should be used as a guide to pre-inspect the robot.

A1.3 – Definitions

Robot – An operator controlled and/or autonomous programmed vehicle designed and built by a Magbot Mayhem team to perform specific tasks while competing. The robot can be constructed using only “Official Vex” components and additional components approved for the competition. No other parts will be allowed on the robot. Prior to participating in the competition, each *robot* will be required to pass an inspection.

Robot Sizing Box – A box used during *robot* inspection which has interior dimensions 18 inches (45.72cm) wide by 18 inches (45.72cm) long by 18 inches (45.72cm) high. The *robot* must fit within the box without exerting ANY force on the box walls or ceiling. (i.e. the robot cannot be held inside the constraints by the box itself) to pass inspection.

Robot Identification Flag – A flag mounted on the *robot* used to identify the alliance of the robot during the match. The flag color is either red or blue. The *Robot Identification Flag* is defined as the flag tube and the flag. The flag tube dimensions are .250” OD x .200” ID x 8.250” length with a triangular flag 4” high x 6” wide.

A1.4 – Inspection Rules

- <11>The team’s *robot* must pass inspection before being allowed to compete in Qualification Rounds. Noncompliance with any *robot* design or construction rule may result in disqualification of the robot at an event.
- <12>The Official Team Number must be displayed on the *robot* prior to inspection as defined in the Robot section of the manual.
- <13>*Robot* construction is constrained by the number of Official Vex Components a team may use as defined in the Robot section of the manual.
- <14>The maximum size of the *robot* for starting a Qualifying or Elimination Match is 18 inches (45.72cm) wide by 18 inches (45.72cm) long by 18 inches (45.72cm) high. The *robot* must fit within a *Robot Sizing Box*. The *robot* must be self-supporting while in the *Robot Sizing Box*.

- <15>The starting configuration of the *robot* at the beginning of a match must be the same as a *robot* configuration inspected for compliance, and within the maximum allowed size.
- <16>*Robot* designs having more than one possible starting configuration, the largest possible configuration must be used during size inspection.
- <17>When a team makes a modification to improve performance or reliability of their *robot*, the team may request a re-inspection of their robot by an Inspector.
- <18> Inspectors evaluate *robots* to insure each *robot* has been designed to operate and function safely. The *robot* must be designed for safe operation and handling. Specific safety rules and limitations apply to the design and construction of a *robot*.
- <19>A *robot* is deemed successfully inspected when all items listed on the “Robot Inspection Sheet” have been recorded as passed by an Inspector.
- <110>Each *robot* must include a mounting device to securely hold the *Robot Identification Flag* throughout an entire match. Specific regulations can be found in Section 4.2. <R12>
- a. The *Robot Identification Flag* mounting device may not extend outside the *Robot Sizing Box*.
 - b. The *Robot Identification Flag* may extend outside the *Robot Sizing Box*.
 - c. It is permissible for the *Robot Identification Flag* orientation to change during the match.
 - d. The *Robot Identification Flag* should hold the flag securely whether on the wall or floor.