MRCA Community Robot design competition rules

All entries must be submitted by February 25th 2023

Purpose:

The purpose of this competition is to design an ease to build Robot for newcomers that will be downloadable from the MRCA website (www.midwestrobotcombat.com) for free. We hope the winning bot will lower the barrier to entry while creating a fun experience for any newcomer.

General Rules:

1. At a minimum, each entrant needs to include all files needed to make the robot (STL, DXF, PDF), a picture/render of the robot, and a bill of materials including purchase location and price.
2. All contestants must be from the midwest of the United States.
3. All entries must be fall under the Antweight 1 lb class
4. All robots must follow MRCA robot construction guidelines.
MRCA Robot Construction Specifications v1.1.docx
5. While it is ok to use components that you sell (such as motors or speed controllers), completed kitbots will not be considered for entry.
6. The winning bot will have all files needed for manufacture available for download for free by anyone as long as the MRCA webpage/organization exists.
7. MRCA Board members/ EOs are allowed to enter but are not allowed to judge on their own robot.
8. For any questions please contact us at MidwestRobotCombatAssociation@gmail.com
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9. All entries to be submitted by DM on discord or using the email directly above.

Judging guidelines:

Grading: done on a 1-10 scale over 3 categories by 3 Judges for a maximum total of 30 points per judge.

Overall design:

This category has to do with the overall competitiveness and completeness of your design

1 point- Design is lacking components and/or may not work
2-4 points- Design will work but will not be competitive or shows little promise of making it through 2 matches.
5-9 points- Design will be competitive and with decent driving could go 2-2 or better

10 points- Looks like a potential tournament winner

Ease of Assembly:

This category is all about building difficulty, it is important to remember this robot needs to be made for someone who has not competed or only competed with kitbots.

1 point- Design can't be assembled in any realistic way or has an incomplete BOM
2-4 points- Design is difficult to assemble (too small of an electronics bay, requires customization of multiple components, ect…) and does not provide assembly instructions
5-9 points- Design is easy to assemble using minimum part customization, assembly instructions are included.
10 points- design uses no or minimal part customization, has detailed assembly instructions and a build along video.

Manufacturability:

This category is about component manufacturability. Someone new to this does not need to be scared off by sticker shock or a daunting complicated build.

1 point- design requires impossible to make/buy components
2-4 points- design requires advanced tools or an overly expensive custom made part (wire edm drum, machined shell, ect…)
5-9 points- design requires few if any simple to order laser cut parts, parts can be made with simple hand tools (drill, jigsaw, razor, nothing special that most homes have) or a 3d printer.
10 points- all parts are off the shelf and requires few if any extra operations

In the event of a tie, the winning bot will be decided by a MRCA board member's vote

Prizes:

1st: We will pay for all components of your bot to be constructed along with waiving entrance fee for any event in the MRCA 2023 season.* $

2nd: Free year of MRCA competition entrance for the 2023 season*.

3rd: 1 free MRCA Competition entrance*

** you will still need to sign up for the event*
$ if the robot is built and all components are purchased before the end of the event, then you must be able to send all receipts for reimbursement. This does not include the purchase of a new or used radio and/or receiver.