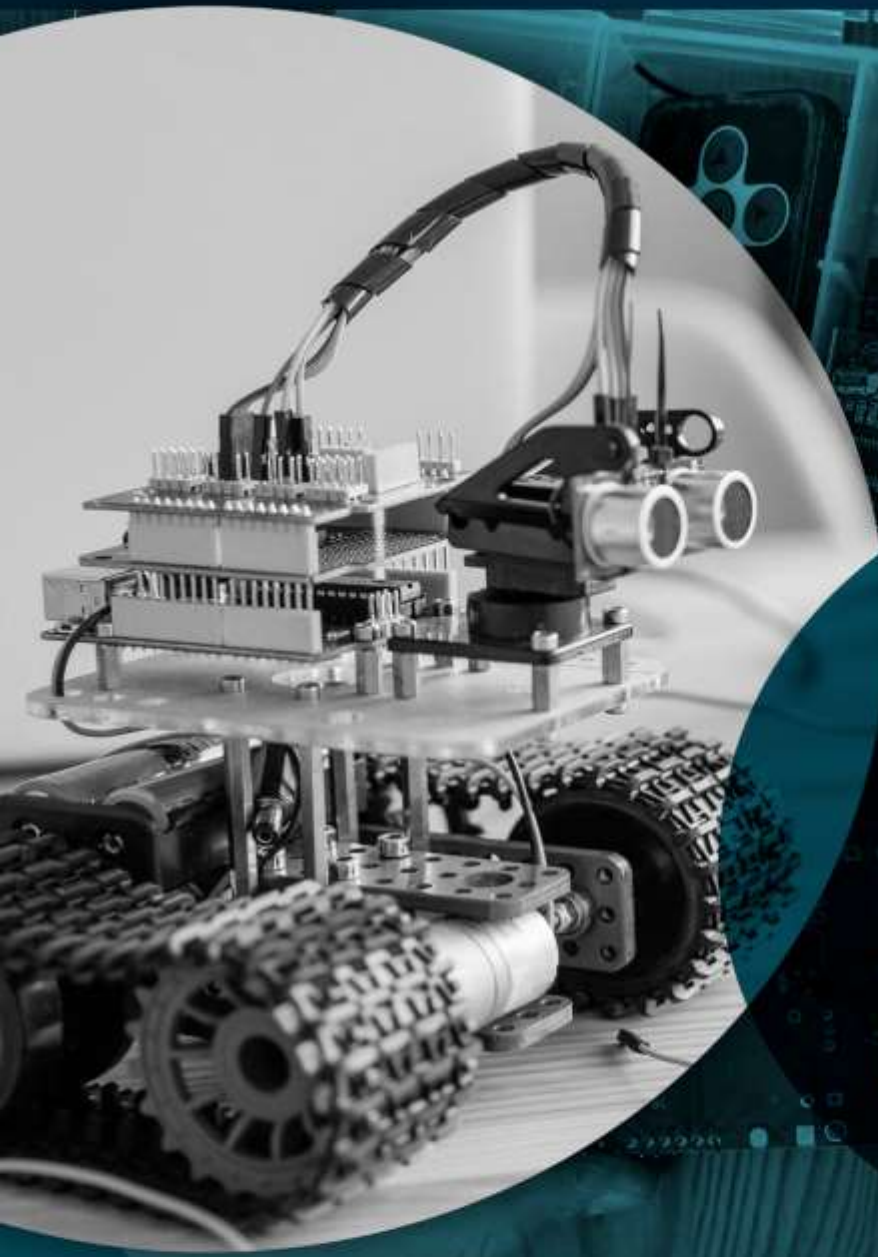


# Rules and Regulations



## 1.0 Introduction

### 1.1 LETHALBOTS

The LethalBots tournament is an exciting competition that celebrates and promotes community creativity by demonstrating the potential of robotic innovation. Participants compete by building and battling their own custom-designed robots, demonstrating engineering talents and innovative techniques. This event not only recognizes the creativity of its designers but also develops a sense of community among enthusiasts. By throwing these dangerous robots against one another, the tournament gives an exciting venue for scientific acumen and inventiveness to shine, pushing the limits of robotic capabilities.

### 1.2 Event Safety

Safety must be a top priority throughout every phase—design, construction, testing, shipping, competition, and maintenance—to protect people, the surrounding environment, and the robot itself. A safe design is built on a foundation of common sense and awareness, guided by established safety protocols.

### 1.3 Basic Definitions

#### 1.3.1 Robot

The term *'Robot'* refers to the battle robot that has been selected to participate in the tournament potentially.

#### 1.3.4 Judges

A group of three or more individuals who collectively decide the winner of each match and the overall tournament.

#### 1.3.5 Steward

Officials from Lethalbots will be responsible for conducting investigations and enforcing rules and regulations.

#### 1.3.6 Referee

Lethalbots officials will be responsible for conducting matches in accordance with procedures and enforcing rules and regulations.

### 1.3.7 Team/Competitor

The team or competitors are considered as the individuals involved in the design, construction, operation, or support of the competing robot in the tournament.

### 1.3.8 Operator

One or two member that can be operate the robot during the match.

### 1.3.9 Alternate

One person selected as the backup for a team member.

## 1.4 Documents and Information Sources

All the rules and regulations will be provided in the *'Tournament Rules'* documents.

## 2.0 General Tournament Rules

### 2.1 Minors and Restrictions

Individuals under 18 years old are considered "Minors." Minors can participate as team members only if accompanied by a legal guardian.

### 2.2 Teams

#### 2.2.1 Team name

Choosing a team name for a robot competition is critical to creating your team's identity. The team name should be acceptable and pronounceable, representing your group's passion and objective.

#### 2.2.2 Team Size

The team can have a maximum of three members, including alternates. Each individual must only belong to one team. A team leader is required, who will handle all communications before, during, and after the tournament.

#### 2.2.3 Bot name

Teams can have another name for their robots. If not, the team name will be automatically transferred to the robot.

#### 2.2.4 Team Registration

The team leader is responsible for registering the team members, including the robot.

### 2.3 Team Responsibilities

Teams are required to adhere to the instructions given by Lethalbots officials. Participation in meetings, inspections, and other mandatory events is essential. Additionally, teams must always wear the tag provided by the officials.

### 2.4 Pre-Match Readiness

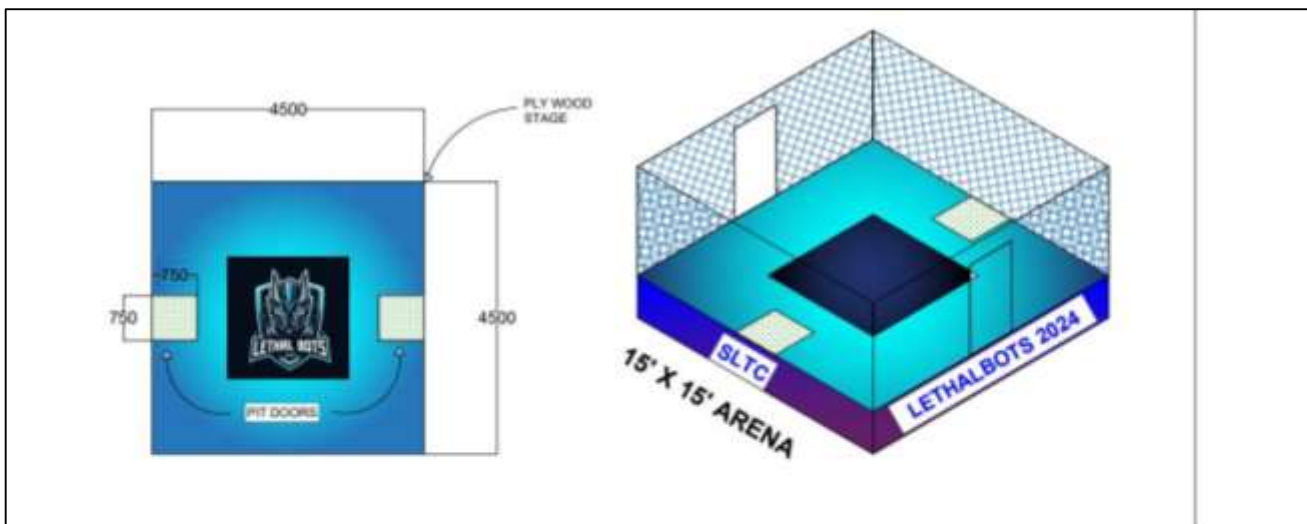
Teams must ready the robots and show up 15 minutes early to the gathering point before the match.

### 2.5 Disqualification

If a team does not adhere to the rules or instructions set by the officials, the officials reserve the right to disqualify the team at any point during the tournament.

## 3.0 Arena and Preparation/Testing Area Rules

### 3.1 Arena



TITLE: <b>LETHALBOTS ARENA</b>		Project No:		Checked:	
DRAWN: <b>Anuradha Charith</b>	BY	Scale:	Units: <b>MM</b>	Drawn:	Date: <b>19/09/24</b>

### 3.1.1 Size

The arena will be a 15 feet x 15 feet square area.

### 3.1.2 Arena Bed

The arena floor will be made from (Plywood).

### 3.1.3 Trap Zones

There will be two pits in the arena.

### 3.1.5 Arena Access

Members and participants will not be permitted to enter the arena once the match begins. Only authorized individuals may re-enter after the referee and/or officials confirm it is safe.

## 3.2 Allowed Areas

### 3.2.1 Safe Zone

All team members, except for the operators, must remain behind the safety line.

### 3.2.2 Operator Area

Only the operators are allowed to stay in the operator area.

### 3.2.3 Team Allowed Areas

Team members not participating in the competition must remain outside the safety line. During battles or testing, team members will not be permitted to stay in any area occupied by other teams.

## 4.0 Remote Control Radio Use

### 4.1 Restrictions

4.1.1 The transmitter should satisfy the design rules.

### 4.2 Control

4.2.1 Only the operators in the operating area will be allowed to control the robot during the battle.

## 5.0 Safety Rule

### 5.1 Safety Checks/ Inspections

Lethalbots officials who are assigned to the checks will thoroughly inspect the safety of the robot's design and operation. If any safety-related issues were notified, officials have the power to disqualify the team from the competition. If the team disagrees with the officials' decision, the team has the right to request a review within 15 minutes after the match. Which will be carried out by the stewards.

### 5.2 Second Inspection by Lethalbots Officials

Before the competition's semi-final stage, a mandatory secondary inspection will be conducted by assigned Lethalbots officials. This inspection will ensure that all competing robots are in compliance with the technical specifications, safety standards, and any modifications made after previous rounds. This inspection aims to verify that no unauthorized alterations have been made to the robots and that they remain safe for competition. Any robot failing the inspection may be subject to penalties, disqualification, or forced modifications to meet the required standards.

### 5.3 Act of Safety Breach/Damage

Any act of breaching safety rules by any member of the team will follow with immediate disqualification. This includes damaging or trying to damage people/arena or any other property. Turning on the weapons in restricted areas or any other breach of safety rules.

### 5.4 Calibrations

1. One additional minute before the game period is given for the calibration of the robot.
2. Calibrations can only be done by the robot through external adjustments of the robot.
3. Therefore, program changes or hardware part replacements are not allowed.
4. If a team fails to finish calibrating within this one minute, that team will be disqualified.

## 6.0 Match Rules

### 6.1 Match Format

There will be 2 Rounds. All the matches will be held in the double-elimination format. Matches shall be 3 minutes long of active fight time, exclusive of any time-outs.

### 6.2 Double elimination bracket

In a **double-elimination bracket** for robot battles, each robot gets two chances before being completely eliminated. Here's how it works:

1. **Two Brackets (Winners and DEFEATED):** All robots start in the **Winners Bracket**. If a robot loses a match, it moves to the **Defeater's Bracket**. A second loss in the Loser's Bracket results in elimination.
2. **Progression:** Robots in the Winners Bracket continue advancing toward the finals by winning matches. Robots in the Losers Bracket must keep winning to stay in the tournament.

### 6.3 Termination/Timeout

If a judge or referee has a valid reason to stop a match before the time limit, they may do so. They can then select whether or not to continue the contest. A timeout causes the clock to pause. Operators may seek one timeout throughout the match for a valid reason. However, judges have the right to grant or deny these requests. Additionally, teams are prohibited from repairing or replacing robots or their components during the stoppage.

### 6.4 Winners

#### 6.4.1 Choosing criteria

The last robot standing will be automatically chosen as the winner. If more than one robot manages to stay intact till the end, the winner will be decided according to the marking scheme.

If a match does not satisfy any of the states of losing, the match will be either decided with marks or a coin toss depending on the situation.

### 6.4.2 States of Loosing

- Damaged - Robot/Segment/Child bot that is damaged to the death.
- Technical Knock Out - The robot that has power indicators on but cannot move anymore for 15 sec.
- Idle - robot that stayed still at the starting box for more than 1 minute.
- Surrender - Competitors can surrender and withdraw from the match at any time.
- Stuck - Robot stuck at any part of the arena for one minute.
- Disqualification - The robot is disqualified from the match/tournament.
- **If you are stucked or Hold the other opposition more than 15 seconds you get the penalty.**

If the opponent attack while a countdown, the countdown timer will be reset.

### 6.4.3 Marking Scheme

	Description	Points
Aggression	How actively the robot attacks effective hits to the other	5 points
Defense	How to defend from getting hit.	3 points
Bot Control	The ability to maneuver the robot effectively	3 points
Damage	The robot caused most damage to the opponent robot/s.	5 points

- Only the total allocated points will be awarded to the teams in the match.
- Only one team or the other will be awarded the points in a match. (ex: total of 5 points for the aggression will be awarded only to one robot between the match players)



## 6.4 Control

Only the operators in the operating area will be allowed to control the robot during the battle.

## 6.5 Prohibited Equipment

Any kind of signal jammers, distracting methodologies, harmful devices, equipment, or materials are prohibited at the event premises.

Select competitors can use inflammable equipment only for the final battle and semifinal.

- ❖ Note – Competitors must be responsible for any kind of damage during the final battle.

## 6.6 Damaged robots

### 6.6.1 Activation/Deactivation

Competitors must be able to deactivate any damaged robot with minimal physical interaction of the robot from any side other than the bottom and weapon-facing Side. At least two (2) competitors must be qualified to carry out activation-deactivation procedures.

### 6.6.2 Removal from the arena

Officials will take the necessary actions to remove damaged robots from the arena as safely as possible after a match. All robots must be deactivated before a person enters the arena. Robots must be deactivated before picking up from the arena.

## 6.7 Late Arrivals

- Late comers will be moved to a penalty match before being added to the main bracket.
- Losers of the Penalty matches will be eliminated from the tournament.

## 7.0 Tournament

### 7.1 Tournament Roles

#### 7.1.1 Judges

- Judges will be responsible for allocating marks for matches and awards.
- Judges will decide who the winner of unclear matches was.
- Judges have the right to suspend or disqualify any team at any time.
- Judges have the right to overrule any stewards' decisions.
- The judges' decisions will be final and cannot be contested.

### 7.1.2 Stewards

Stewards are responsible for verifying the team's eligibility to a match and compliance with rules.

Stewards investigate referees' requests regarding potential rule breaches, team-requested reviews, and appeals. Stewards have the right to suspend or disqualify any team at any time. If they have an acceptable reason, stewards can request referees to stop or pause a match at a time.

### 7.1.3 Referees

- Referees are responsible for inspecting the robot before the match and confirming its eligibility.
- Referees are responsible for the starting and ending of the match.
- Referees are responsible for confirming the safety of the arena before someone enters the arena.
- Referees can pause a match anytime if they have an acceptable reason. Each robot in the arena will have a referee near the operator area to ensure the timeouts are counted properly, and teams are instructed properly.

## 8.0 Robot Design Rules

### 8.1 Weight

The competition will be conducted with a maximum weight of **15 Kg** of the robot.

### 8.2 Robot Construction Rule

- The dimension of the robot must be within 45cm x 45cm x 45cm (length x width x height)
- The robot must have an internal power supply; external power supplies are not permitted. Additionally, the voltage between any two points inside the robot must not exceed 24V.
- No internal combustion engine will be allowed for any of the robot's operations.
- Robots must be singular in form. The robot should not split into two or more units.
- Secondary robots or self-propelled devices that detach themselves from the main robot will not be permitted.
- The robot should have a clearly indicated **START** switch. ( it can be controller) Once the robot is switched on, it should be able to be controlled by the participant.

- The robot may not, under any circumstances, present a hazard to the judges, spectators or the opposing operator(s).
- Robots with signal jamming functionality are not allowed.
- The robot can't damage the arena surface the protective fence around the arena, or the combat instrument operating inside the arena.
- Liquids cannot be used in any combat strategy. If any substance comes from a robot that, in the judging panel's opinion, cannot be completely cleaned after combat, the robot will be declared ineligible.
- Radio controlled robots should be able to operate in a way to avoid radio frequency conflict or have a digital transmitter capable of non-conflicting frequencies (or an R/C tether combination).
- The organizing committee will not be responsible for any damage that occurred to any participating robot before, during, and after the competition.
- All entries must conform to the general rules of the facility and the event.
- All robots will be subjected to a technical inspection prior to combat. Failure to disclose operating principles will be grounds for immediate disqualification.
- Judges have the right to restrict any function of the robot if it's deemed excessively hazardous.

#### Notice:

The judge's decision on any matter would be final and cannot be contested. The rules may change at any time with specific notice to you. Any changes made to the rules will be published as a revision on the top of the rules document with a revision number. Contestants acknowledge and agree that it is their responsibility to read, understand, and comply with all rules provided by the officials. Contestants are allowed to contact Lethalbots officials at any time via the given communication methods for clarification of the rules.