



WILD SOCCER

Pool Event, Open-To-All

Points: 50

KILLER EDGE is the ultimate battle between wild robots on soccer field with new weapons. This time the robots will not only play soccer, but will have to bring balls in the soccer arena from **Wild** arena using an All-Terrain Vehicle (ATV). More the number of balls supplied by your ATV more are the chance to score a goal and earn points.

IMPORTANT RULES

1. A team consists of students from same pool.
2. Each team can have a maximum of 6 participants on stage at the time of the event.
3. **Each team will have a representative (out of six present on the stage) who is the ONLY person allowed to speak to the referee and ask him to stop the game or report any issue. No person other than this will be entertained by the referee.**
4. The organizers reserve the right to change the rules as they deem fit.
5. Judges decision will be final and binding to all.

GAMEPLAY

Overall the gameplay is divided into 2parts i.e. ATV (Wild) and Soccer.

ALL TERRAIN VEHICLES (ATV)

BOT SPECIFICATIONS

- Robot may be wired or wireless .In case of wired robot wire must be slack during its complete run.
- Maximum allowed weight for the wireless bot including the weight of the batteries should be 20Kg at all times during the game play.
- Wireless module will not be provided by the club.
- Maximum allowed weight for the wired bot excluding the weight of the batteries should be 15Kg at all times during the game play.
- **The robot should not be more than 500mm*500mm*500mm (length*breadth*height) in size at start of every round on ATV arena gameplay.**
- Verdict of the match referee will be final in case of any dispute.

GENERAL RULES

- Total of 5 obstacles will be there in WILD Zone.



- 1st and the last obstacle will be same in every match.
- Remaining 3 obstacles may change in every match.
- There will be a pit just before the last obstacle, where the balls can be stored.
- If the ball goes out of the wild zone due to the actions of ATV itself, ATV will start from the start line.
- You are not allowed **to touch your ATV once it** has started a run in arena, unless until told by any of the referee.
- If you touch your ATV in Wild zone at any obstacle, you will have to begin the ATV run again from the start line.

PENALTY

- Any kind of tampering with the arena will lead to subtraction of 100 points.

SOCCER

BOT SPECIFICATIONS

- The robot should not be more than 400mm*400mm*300mm (length*breadth*height) in size at start of every match gameplay.
- Height of all the bots can be extended up to 400mm after the start of match.
- All soccer bots should not be more than 8kgs in weight.
- Teams have to show and declare ALL of their bots before their first match itself.
- No major changes in the weapon system etc. would be allowed after the above mentioned declaration.

Verdict of the match referee will be final in case of any dispute.

GENERAL RULES:

- A maximum of 2 bots can be inside the arena from any team. Other than these 2, a maximum of 1 bot can be kept as substitute.
- All the 3 bots should be wireless.
- Any team must not block the entire goal post, there should be a space of 20 cm space at all times.
- The total playing time between two teams would be of 10 minutes, divided into two rounds of 5 minutes each.
- Robo wars is also allowed simultaneously only in arena (i.e. any bot can fight with any other using any means)
- Goal will be considered only if the ball crosses the goal line.



- Holding the ball is not allowed by any means.
- Bot should not get the ball more than half of the diameter into the bot by any means.
- Any team lifting and carrying the ball, using adhesive techniques to hold the ball or any other unfair means will be disqualified.
- Dead bots are not allowed.
- All bots will be checked at the start of every round that they are moving. In case of any discrepancy, referee will decide that the bot is moving or not.
- At start from center bots should be at least 50cm away from the ball in the center.
- The game should not be stopped until the referee blows his whistle
- Allowed:
 1. Hitting OR Kicking OR Thrashing OR Flipping the other bot.
 2. Completely demolishing any other bot.
- Full part of bot cannot cross the goal line.

WARNINGS

1. **Robot moves before blowing the whistle.**
2. Ball lifted by one robot (w/o touching ground) and other team's bot not touching the ball.
3. Touching (any kind of interruption) the bot w/o asking referee or entering the arena without the permission of referee.
4. If the ball goes more than 7cm inside any of the bots.
5. In case of any discrepancy referee's decisions would be final.

Penalty

1. Second warning is a penalty.
2. During penalty shoot-out, Goal-keeper should not move before the striker touches the ball during an ongoing penalty.
3. Total penalty time is 1 minute to score a goal.
4. Bots playing in the penalty should have played in that match till that time.
5. Only team having the penalty can score the goal in penalty shoot-out.

Note: In case of any disputes, the decision of the organizers would be final and binding to all.

Weapons Systems

- Robots can have any kind of cutters, flippers, saws, lifting devices, spinning hammers etc. as weapons.
- Use of pneumatics and hydraulics are allowed.
- Pneumatics Robot can use pressurized non-inflammable gases to actuate pneumatic devices. Maximum allowed outlet nozzle pressure is 8 bars.



- Hydraulics Robot can use non-inflammable liquid to actuate hydraulic devices e.g.cylinders.
- In any case of use of weapons, the total dimension of robot should not increase the given specification during use of weapon.
- Nothing should be thrown out of robot during the game. In case of anything breaking from the robot, it should be completely removed from the robot before continuing with the game.

Following exceptions and limitations:

- Liquid projectiles.
- Any kind of inflammable liquid.
- Flame-based weapons.
- Any kind of explosive or intentionally ignited solid or potentially ignitable solid.
- High power magnets or electromagnets.
- Radio jamming, tazers, tesla coils, or any other high-voltage device

Mobility

- All robots must have easily visible and controlled mobility in order to compete.
- Flying is not allowed.

Robot Control Requirement

- Soccer robots must be radio controlled.
- Tethered control is not allowed.
- All robot radio systems must have a way to change frequencies or coded channels to prevent radio conflicts (i.e. if you are using 4 frequencies you need to have 2 more alternate frequencies readily available).
- If you are using a home built control system, or a control system not covered here, you must first clear it with the coordinators.
- Toy radio systems are allowed at this event.

POINTS

- **The team which scores maximum points in the match would be declared as winner of that match.**

ATV

- Every obstacle will have certain amount of points which will be awarded only if the bot crosses that particular obstacle completely.



- You can skip maximum of one obstacle during a run on ATV arena, but you will lose the point of that particular obstacle.
- NO point will be awarded if the bot is not able to put the ball in the soccer arena.
- **No points will be awarded for partial clearance of any obstacle/obstacles.**
- In all there will be 5 obstacles in the ATV arena which will have a maximum of 30 points.

WILD SOCCER

- 50 points for scoring a goal by the ball brought by your own ATV.
- 30 points for scoring a goal by the ball brought by opponent's ATV.

ARENA

- A maximum of one ball per team is allowed inside the Soccer arena.
- No points will be awarded for putting the ball in the soccer arena if already there is a ball in the arena.
- The soccer field size would be 4m x 2.5m. The goal post will be placed outside the 4m mark.
- Height of goal post will be 0.5m. The ball will be a simple smooth plastic ball with weight in grams (negligible) and diameter 15 cm.
- Balls of both the pools will be of different colors.
- Final ATV arena will be displayed only few days before the event.

TIME OUT AND BREAK

- Only one time-out of 2 minutes is allowed in every half with the permission of referee.
- Match will start irrespective of the conditions of bot after the 2 minutes timeout.
- 5 minutes break between two half.
- Match will start irrespective of the conditions of bot after the 5 minutes break.

IN CASE OF TIE AFTER 1ST TWO ROUNDS, RESULT OF THE MATCH WILL BE DECIDED ON THE FOLLOWING BASIS (ARRANGED IN THE PRIORITY ORDER)

1. **THERE WILL BE A 3 MINUTE OF NORMAL SOCCER MATCH.(bots which have already played in that match)**
2. **3 PENALTY SHOOTOUT OF 1 MINUTE EACH. .(bots which have already played in that match)**
3. **SUDDEN DEATH OF 2 MINUTES. .(bots which have already played in that match)**
4. **NO OF POINTS SCORED BY ATV.**

Batteries and Power

- Each team must have batteries to power their wireless bots.



- The battery will be taken into consideration for the measurement to be made for the machine dimension and the weight.
- The only permitted batteries are ones that cannot spill or spray any of their contents when damaged or inverted.
The maximum allowed potential difference between any two points in the bot is 36 volts.
- Voltage must not exceed 36 volts between any two terminals on the bot.

Caution:

- In case of high torque motors a maximum of 12 volts is allowed across its terminal. If you exceed that there are very high chances that motor will burn
Spring, Pinning and Lifting
- Any large springs used for drive or weapon power must have a way of loading and actuating the spring remotely under the robots power.
- Any flywheel or similar kinetic energy storing device must not be spinning or storing energy in anyway unless inside the arena or testing area.

SUGGESTED WIRELESS MODULES

PS2 Wireless Module

- Each team will be provided with two and only two PS2 module for controlling their wireless bot.
- Each team will be provided with a black box 10 minutes prior to the match. Teams should not open it in any case .Any team found doing this will be immediately disqualified.
- From the black box wires will be coming out. Teams will have to connect their motors etc. with this. The black box will contain PS2 wireless module. It will be able to control maximum of 4 motors in both directions.
- There will be tutorial on the PS2 Wireless Module whose timings will be informed later.
- Each team will be tutored on how to use the module before the match.
- Team should check it before using it.

COMPONENTS PROVIDED BY THE CLUB (Default Set)

- 6 high torque motors with compatible wheels.
- Wireless controller at the time of event.
- Each pool has to submit Rs.8000 to the robotics club.

NOTE:

1) Points Tally

- Winning = 4 points.
- Draw = 2 points each pool.



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- Loosing = 0 points.
- 2) In case of equal no. of points. Final judgment will be done on the basis of distance covered by an ATV in a specified time.

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