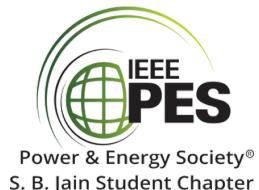
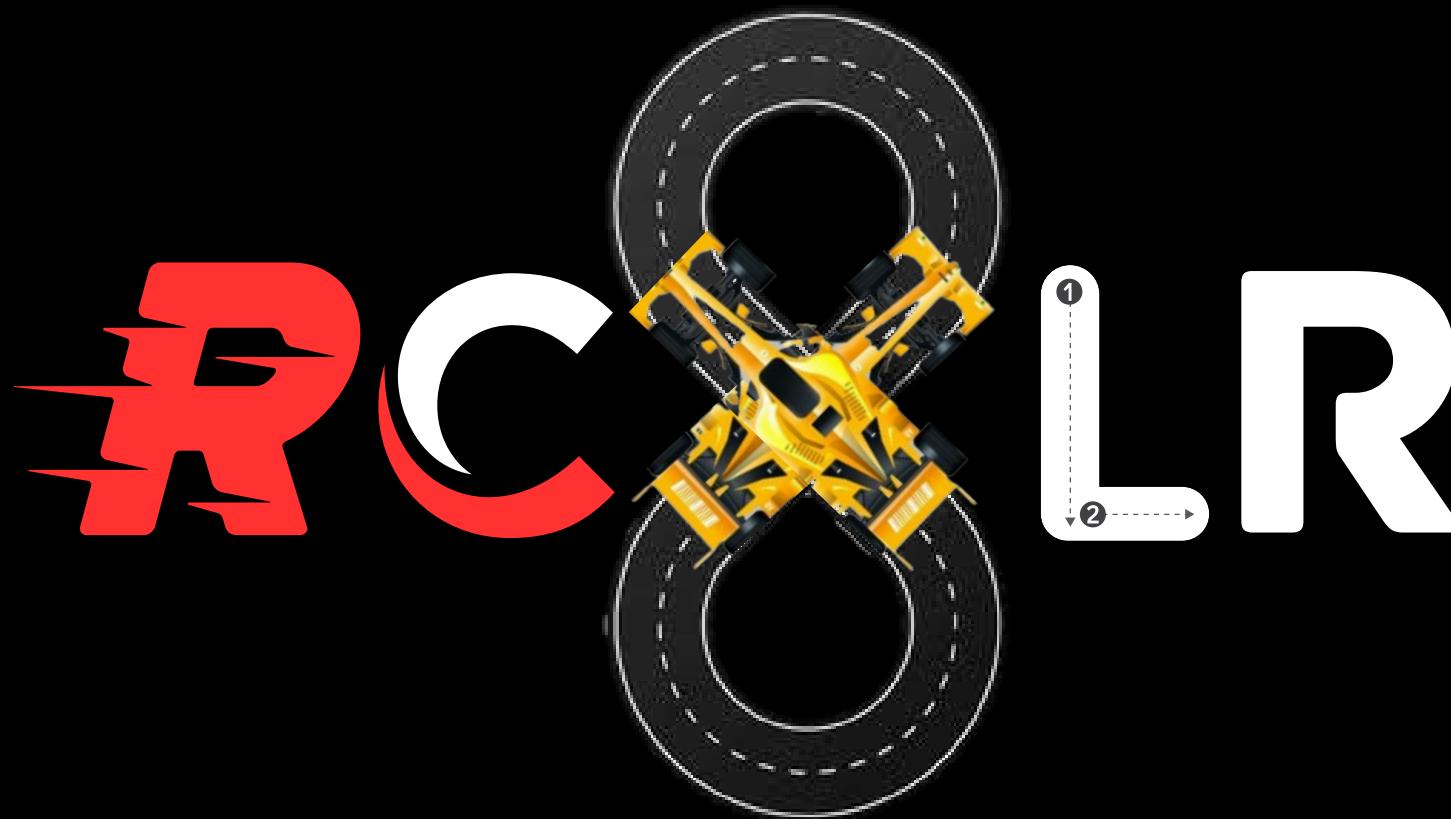




S.B. Jain Institute
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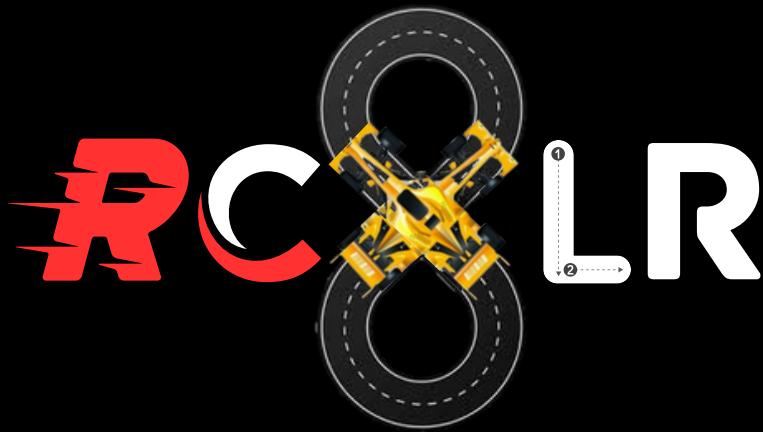


Power & Energy Society®
S. B. Jain Student Chapter



RULE BOOK

RC RACING BOT

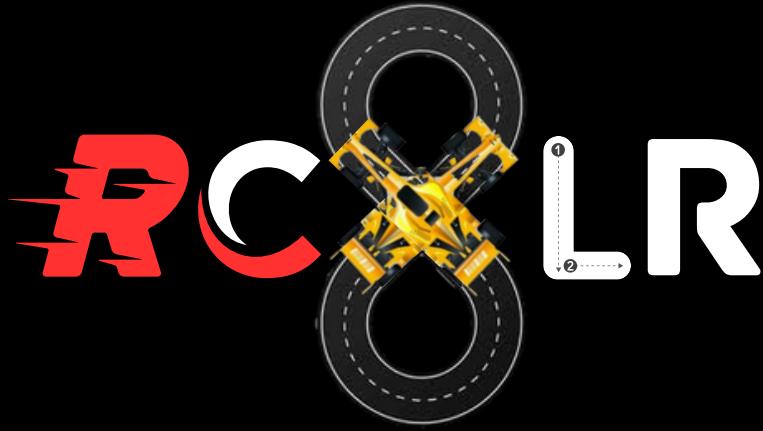


RULES FOR ROBO RACE :

- **THE ROBOTS BUILD BY GIVEN SPECIFICATION'S WILL BE ALLOWED FOR GAME.**
- **THE ROUNDS WILL BE DECIDED ACCORDING TO GROUPS PARTICIPATED.**

RULES & REGULATIONS

- **THE CHALLENGE IS TO BUILD YOUR OWN WIRELESS BOT WITHIN THE SPECIFIED DIMENSIONS IN ORDER TO ACHIEVE THE MAXIMUM SPEED TO BEAT OTHER BOTS ON THE GIVEN TRACK AND REACH THE FINISHING LINE IN MINIMUM TIME.**
- **THE TEAM SHOULD NOT CONSIST OF MORE THAN 4 MEMBERS.**
- **ROBORACE CHALLENGE IS PLAYED BY 3 TEAMS IN ONE GO, WITH EACH TEAM CONSISTING OF 1 WIRELESS BOT.**
- **ONLY WORKING BOTS WILL BE ALLOWED**
- **THE ROBOT SHOULD NOT DAMAGE THE ARENA.**

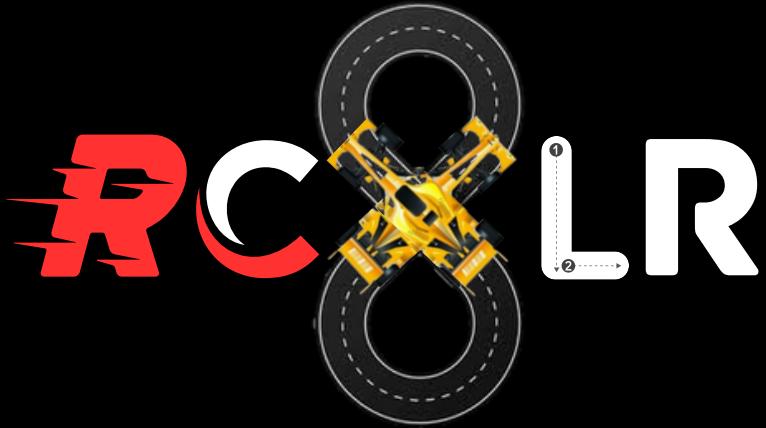


ROBO RACE BOT

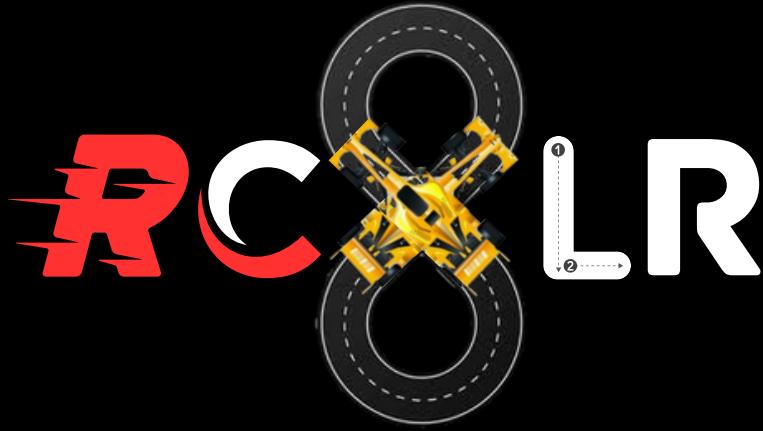
BOT MUST FIT INSIDE A BOX OF 30CM LENGTH, 30CM WIDTH AND 40CM HEIGHT AT ANY POINT IN TIME.

MAXIMUM WEIGHT SHOULD NOT BE MORE THAN 5KGS INCLUDING BATTERY, HOWEVER A TOLERANCE OF 5% IS ACCEPTABLE IN WEIGHT. PARTICIPANTS NEED TO ENSURE:

- **BATTERIES MUST BE SEALED, IMMOBILIZED ELECTROLYTE TYPE (GEL CELL, LITHIUM, NICAD, OR DRY CELLS).**
- **THE ELECTRIC VOLTAGE ANYWHERE IN THE MACHINE SHOULD NOT BE MORE THAN 12V DC AT ANY POINT IN TIME FOR EACH ROBOT.**
- **THE BOT MUST NOT EMIT INFRARED LIGHT. HOWEVER, OPTICAL SENSORS (E.G. INFRARED-DISTANCE-SENSORS) MAY BE USED IF THEY DO NOT AFFECT OTHER BOTS. TEAMS MAY USE RF MODULE BUT MUST ENSURE THAT RF MODULE SHOULD HAVE FUNCTION TO CHANGE DIFFERENT FREQUENCIES/CHANNELS AND NOT AFFECT OTHER BOTS.**

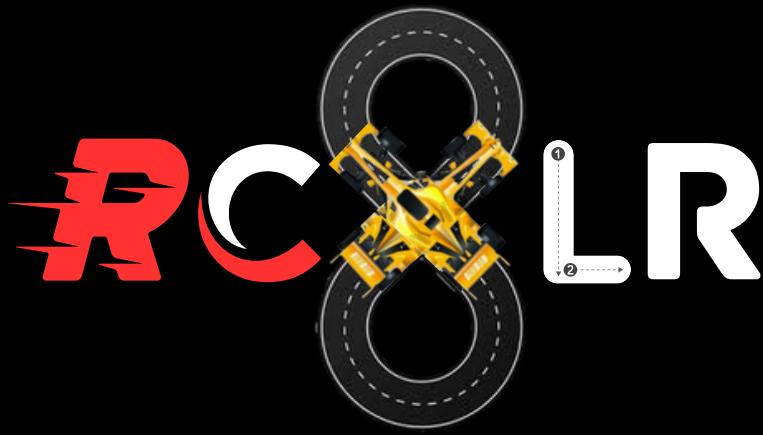


- **IF A TEAM CLAIMS THAT THEIR ROBOT IS AFFECTED BY THE OTHER TEAM'S ROBOT IN ANY WAY THEY MUST SHOW PROOF/EVIDENCE OF THE INTERFERENCE. ANY INTERFERENCE MUST BE CONFIRMED BY A REFEREE IF A CLAIM IS PLACED BY THE OTHER TEAM.**
- **THE ROBOT CAN BE AUTONOMOUS OR MANUALLY CONTROLLED USING A REMOTE-CONTROL SYSTEM.**
- **ROBOTS MUST BE CONSTRUCTED AND PROGRAMMED IN A WAY THAT THEIR MOVEMENT IS NOT LIMITED TO ONLY ONE DIRECTION AND MUST MOVE IN ALL DIRECTIONS.**
- **ANY ROBOTIC PARTS/BUILDING MATERIAL CAN BE USED UNTIL THE ROBOT MEETS THE ABOVE SPECIFICATIONS AND IF THE DESIGN AND CONSTRUCTION ARE PRIMARILY THE ORIGINAL WORK OF THE TEAM AS READY-MADE ROBOTS ARE NOT ALLOWED TO COMPETE IN THE COMPETITION.**



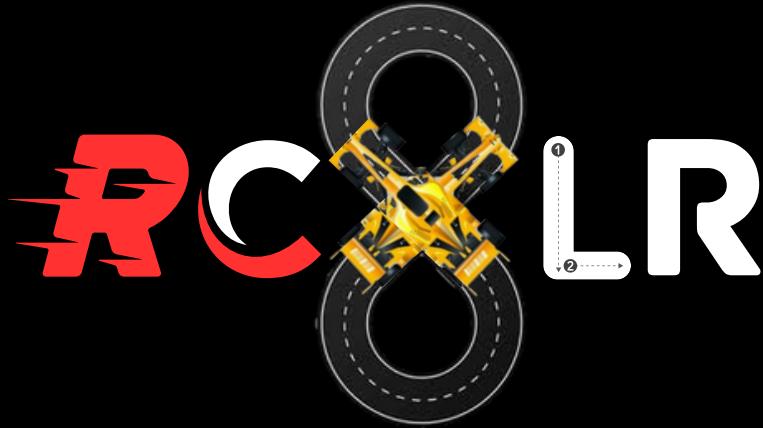
ROBO RACE RACING TRACK:

- **THE RACING TRACK HAS 3 BOT LANES OF A TOTAL LENGTH OF 80-100 FEET (APPROXIMATELY) WITH A DIMENSION OF 32X24 SQF ARENA. AT STARTING POINT, EACH BOT LANE WOULD BE 40CM APPX AND TRACK WOULD BE 120CM WIDE. AT CERTAIN CHECKPOINTS BEFORE THE HURDLES, TRACK CAN BE 80CM WIDE. THE SURFACE AND COURSE LINE MAY HAVE UN-EVENNESS AS WELL AS DIFFERENT HURDLES WILL BE THERE ON THE RACE TRACK TRYING TO SLOW DOWN THE BOT. PREDEFINED OBSTACLES FOR THE COMPETITION WILL INCLUDE SWITCH BRIDGE, SPEED BREAKERS, MARBLE PIT, SLIPPERY PATH, ROTATING TING DISC, CURVE RAMP DOWN, SEESAW, ETC.**

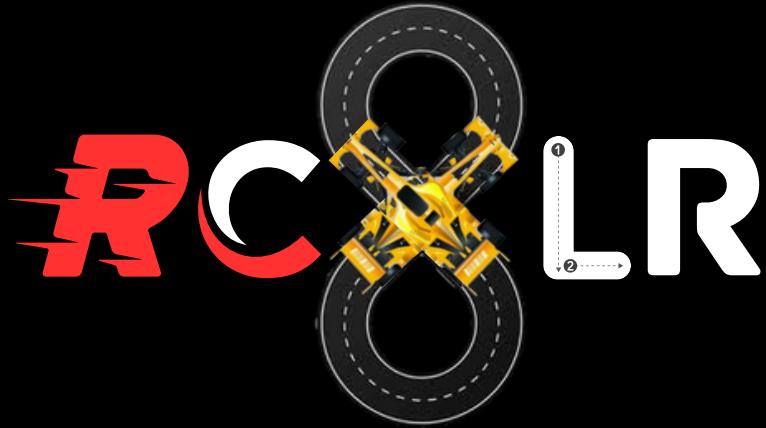


ROBO RACE GAMEPLAY

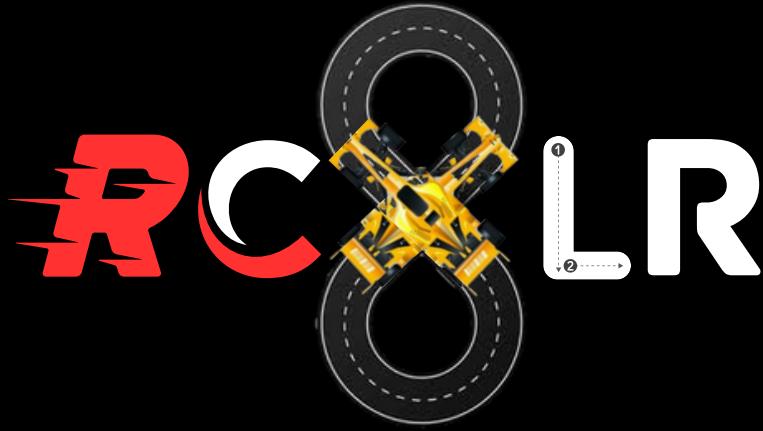
- **THE ROBOT MUST START BEHIND THE STARTING MARK AND IS CONSIDERED TO HAVE CROSSED THE FINISHING LINE. BOT MUST BE MANUALLY CONTROLLED, AND IT SHOULD BE CAPABLE OF TRaversing OVER DIFFERENT TERRAIN AND HURDLES WITHOUT GOING OUTSIDE THE TRACK. THE COMPETITION AREA HAS A SPECIAL PLACE DEFINED FOR THE ROBOT'S OPERATION (HEREAFTER COMPETITION FIELD). THERE WOULD BE MULTIPLE ROUNDS IN COMPETITION UNTIL TOP 3 WINNING TEAMS ARE SELECTED. RACING TRACKS FOR EACH ROUND CAN BE CHANGED.**
- **FIRST ROUND: MINIMUM 3 RACING BOTS WOULD BE PLAYING IN EACH ROUND. TEAM SCHEDULE WOULD BE ANNOUNCED BEFORE COMPETITION DAY. IF 1 BOT IS MISSING IN FIRST ROUND, 2 OTHER BOTS WOULD BE COMPETING IN RACE. IF 2 BOTS ARE MISSING, PRESENT ONE BOT WOULD BE DECLARED WINNER FOR THAT ROUND.**



- **EACH ROUND WOULD HAVE MAXIMUM 8 MINUTES RACING TIME AND 2 MINUTES FOR READINESS. READINESS TIME WILL NOT BE INCLUDED IN RACING TIME. BOT REACHING FIRST TO FINISH LINE, WILL BE DECLARED WINNER FOR RESPECTIVE ROUND.**
- **THERE WOULD BE RESTART POINTS AFTER EVERY 5 FEETS APPX. IF BOT LOSE THE TRACK OR STUCK UP OR STOP FUNCTION, BOT OPERATOR CAN CHECK THE BOT AND RESTART FROM PREVIOUS POINT. ANY TIME USED TO ADJUST THE ROBOT BETWEEN RUNS IS INCLUDED IN THE 8 MINUTES**
- **ALL BOTS ARE EXPECTED TO CROSS ALL HURDLES ON THE TRACK.**



- **EACH RUN WILL START FROM THE STARTING POINT. THE OPERATOR MAY ABORT A RUN AT ANY TIME. EACH TEAM WILL GET MAXIMUM 3 CHANCE TO TOUCH THE BOT IN EACH ROUND. IF AN OPERATOR TOUCHES THE ROBOT DURING A RUN, THE TEAM WILL START FROM THE PREVIOUS CHECKPOINT. IF A ROBOT HAS ALREADY CROSSED THE FINISH LINE, IT MAY BE REMOVED AT ANY TIME WITHOUT AFFECTING THE RUNTIME OF THAT RUN.**
- **DURING RUN, TEAM MAY CHANGE BATTERY OR FIX MINOR TECHNICAL ISSUES.**
- **THE RUN TIMER WILL START WHEN THE FRONT EDGE OF THE ROBOT CROSSES THE START LINE AND STOPS WHEN THE FRONT EDGE OF THE ROBOT CROSSES THE FINISH LINE.**
- **IF THERE IS A TIE, BOTH BOTS WILL BE SELECTED FOR NEXT ROUND.**

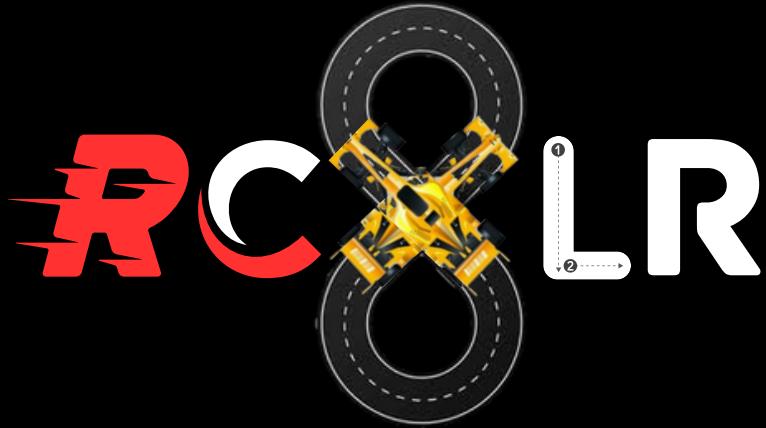


QUALIFYING ROUND :

- QUALIFYING ROUND: THERE CAN BE MULTIPLE QUALIFYING ROUNDS, DEPENDING UPON NUMBER OF TEAMS COMPETING. IN EACH ROUND, MINIMUM 1 TEAM WILL BE QUALIFIED FOR NEXT ROUND WHOSOEVER REACHES TO FINISH LINE FIRST AS WELL AS WITHIN 8 MINUTES TIMELINE.**

FINAL ROUND :

- ELIMINATION IN QUALIFYING ROUND WILL GO ON UNTIL LAST 3 TEAMS ARE LEFT. FINAL ROUND WOULD HAPPEN AMONG LAST 3 TEAMS AND 1ST, 2ND WINNER AND RUNNER UP WILL BE DECIDED AS PER PERFORMANCE OF TEAM IN FINAL ROUND.**



NOTE:

- PRIZES WILL BE TRANSFER IN YOUR ACCOUNT WITHIN 15 DAYS AFTER EVENT VIA NEFT.
- Rules can be change as per the availability during the event.

Misconduct - Teams must exhibit respectful conduct at all times. Officials may remove participants from the Match or event for infractions or violations of the Code of Conduct.