

# CODEAVOUR 7.0

## INTERNATIONAL

### Track 3 - Robo Soccer League

#### Rules and Regulations



Score with Skills, Win with Code

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## 1. Robo Soccer League- Build.Code.Compete

Get ready for the thrill of **Robo Soccer League** in Track 3 of Codeavour 7.0 International. Build and code your robot in **PictoBlox**, take the controls, and battle on the field to score goals and defeat your rivals. It's fast, fun, and the ultimate mix of gaming, coding, and robot sports.

### 1.1. **Get Started:**

- 1.1.1. **Design and build** your Soccer Robot.
- 1.1.2. **Code** it in **PictoBlox**.
- 1.1.3. **Connect wirelessly** and **drive manually** from your phone/ laptop/ tablet/ Quarky.
- 1.1.4. **Compete head-to-head**, score goals, and climb the leaderboard.

### 1.2. **Skills you'll sharpen:**

Robo Soccer helps you be creative, code with confidence, and design better robots while playing fair. At Codeavour International, you practice real 21st-century skills, feel the thrill of robot sports, and grow through structured learning, teamwork, and hands-on innovation.

- 1.2.1. **Coding:** Logic, control flows, real-time decision making.
- 1.2.2. **Robotics:** Sensors, actuators, drivetrain, wireless control.
- 1.2.3. **Engineering Skills:** Mechanical design, reliability, rapid iteration.
- 1.2.4. **Strategy & Planning:** Game tactics, teamwork, adaptation under pressure.

## 2. Eligibility, Team Composition & Identification

### 2.1. **Age requirements:**

- 2.1.1. **Elementary:** 7-10 Years
- 2.1.2. **Junior:** 11-14 Years
- 2.1.3. **Senior:** 15-18 Years
- 2.1.4. **Mixed-age teams** compete in the **oldest member's category**.
  - a. *Example:* two Junior + one Senior ⇒ **Senior**.

*NOTE: All the participants must meet the age group and team size criteria. Category is based on **age**, not school grade.*

### 2.2. **Team Structure:**

- 2.2.1. **Members: 2–3 students** per team. All must fit the chosen age category.
- 2.2.2. **Mentor/Coach: Exactly 1 adult (18+)** responsible for conduct, safety, and logistics.
  - a. May **advise between** matches/time-outs; must **not operate** the robot or device during live play.
  - b. Must ensure the team follows safety and event rules.
- 2.2.3. **One-team rule:** No person (student) may register for more than one team in the event.

### 2.3. Robot and Team Sharing:

Team members and robots must not be shared across teams.

- 2.3.1. **Active/Build robot limit:** Maximum two robots on the field at any time; a third robot may be kept as backup.
- 2.3.2. **Inspection:** Only robots that pass inspection and receive an official inspection tag are eligible to play.
- 2.3.3. **Substitution:** Teams may switch which inspected robots are active **between matches**. **Mid-match substitutions** are allowed **only** during an official **Reset**; robots must enter and exit as directed (e.g., via the D-box at restart).
- 2.3.4. **Control & drivers:** Each active robot must have 1 student driver (maximum 2 drivers per team). Control devices must follow wireless/RF rules.
- 2.3.5. **Failure/safety:** If a robot becomes unsafe, the Referee may order its removal; the team may continue with its **remaining active robot(s)**.
- 2.3.6. **No cross-team sharing after inspection:** Robots and major assemblies must **not** be **shared across teams** once inspection is complete.
- 2.3.7. **Parts sharing:**
  - a. **Before inspection:** sharing is allowed.
  - b. **After a team's robot passes inspection: no sharing of major assemblies** (chassis, drive modules, control board, batteries, radios, sensors already mounted).
  - c. **Consumables** (screws, zip-ties, tape, lubricants) may still be shared.
- 2.3.8. **Team Members:** After registration and final confirmation by country partners, no team members can be added or shared across teams.
- 2.3.9. **Driver & device:** Each team designates its **driver(s)** and uses its **own control device** (phone/tablet/laptop) meeting the event's RF/connection policy.

### 3. Team Registration/Documentation & Deadlines

#### 3.1. Registration Link:

To register, participants must visit the Codeavour 7.0 International website and complete the registration form.

<https://codeavour.org/register-now>

3.1.1. **Portal only:** Complete the online process via the **official Codeavour portal** within the notified registration window(s).

3.1.2. **Account & accuracy:** Use a single team account. Ensure **names, age category, school, mentor details, and contact email/phone** are accurate—these will be used for official badges and schedules.

3.1.3. **What you agree to:** By registering you accept the **rulebook**, safety policy, and media/consent terms published on the portal.

3.1.4. **Official communications:** Teams are responsible for reading all **pre-event circulars** (schedule, logistics, safety, arena specs) posted on the **announcement board/channel**.



#### 3.2. Submission Policy:

All details must be submitted via the portal in the specified formats. Missing, late, or incorrect submissions may result in ineligibility or scheduling exclusion.

##### 3.2.1. Team Intro Document (*as per website*)

- Members (age/category), mentor, school, and short team bio.
- Contact details for day-of communications.

##### 3.2.2. Robot Document (*optional, print all your robot data*)

- Robot name(s) and configuration(s); declare up to **3** robots to field.
- Drive system, control method (**PictoBlox/Dabble**), radio/connection details, power/battery type, safety features.
- Dimensions/weight, key components, and any custom parts.
- Compliance checklist signed by mentor.

##### 3.2.3. Design & Control Video (**≤ 3 minutes**):

- Show the robot(s) driving under **manual wireless control** from your device.
- Briefly explain **design rationale**, materials, and control mapping.
- Capture basic motions (start/stop, turn, ball approach). Clear audio/visuals; no heavy edits needed.
- File name for video: **TeamCode\_AgeCategory\_Video**.

**File rules & revisions:** Follow portal limits for format and size). You may resubmit within the window; the **latest timestamp** before the deadline is final.

### 3.3. On site Readiness:

- 3.3.1. **Spares & tools:** Bring essential **spare parts, fasteners, tools, chargers, power strips** (if permitted), and **approved batteries**. Clearly label all items with your **Team Code**.
- 3.3.2. **Devices ready:**
  - a. Install/update **PictoBlox** and any required drivers **before** arrival.
  - b. Prepare your phone/tablet/laptop; **disable auto-updates**, set **Do-Not-Disturb**, prevent **sleep/screen-timeout** during matches.
  - c. Verify your **wireless link** works per **Track 3 guidelines**.
- 3.3.3. **Power & safety:** Use safe chargers; carry batteries safely; follow venue charging rules. The Referee/Inspector may remove unsafe equipment.
- 3.3.4. **Documents at check-in:** Printed **Robot Document, photo IDs**, and any additional forms requested in pre-event circulars.
- 3.3.5. **Participant briefing & inspection:** Attendance is **mandatory**. Only **inspected/tagged** robots may enter the field.

### 3.4. Deadlines & Late Policy:

- 3.4.1. **Hard deadlines:** All registration and submission cut-offs are **hard stops**. The Organizer **may reject** or **waitlist** entries received after capacity/deadline.
- 3.4.2. **Corrections:** Administrative fixes (typos/contact) may be allowed until the **admin cutoff** posted on the portal. Technical content changes after the submission deadline are **not guaranteed** to be accepted.
- 3.4.3. **No-show / withdrawal:** Teams that withdraw or fail to check in on time may forfeit their slot.
- 3.4.4. **Organizer discretion:** Minor extensions or addenda may be issued via official bulletin for fairness/safety; teams must monitor the website.

## 4. Glossary

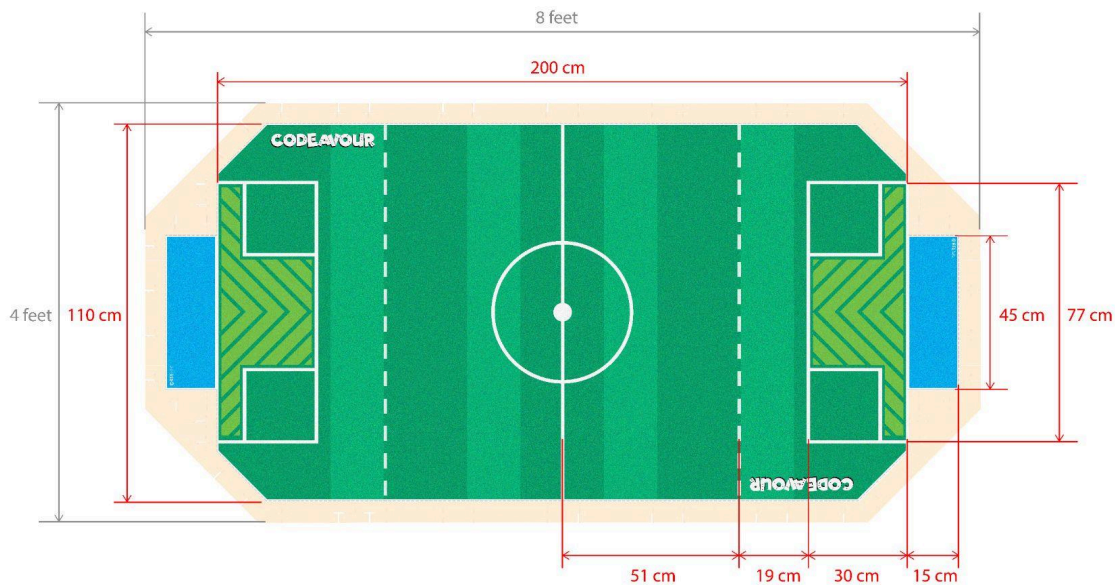
### Know the Lingo

Learn the key terms you need before you play

Term	Meaning
Arena	The marked area where you must play.
Kick-off (KO)	How play starts or restarts after a goal, from the center dot on the Ref's whistle.
Pause	Temporary stop where the ball is placed at the centre, robots stay frozen, and play resumes on the referee's signal.
Reset	A full restart like a kick-off, with the ball at the center and robots re-placed in their D-boxes; also occurs after two consecutive Pauses.
Out of Bounds (OOB)	Ball or robot completely crosses the boundary line. The *Ref restarts play.
D-box	The square in front of each goal used to place robots at kick-offs and full resets.
Foul	A rule break. The Ref gives a penalty.
Red Card	Serious misconduct or too many fouls. Big penalty for the team.
Match Clock	Official timer for the game. Only the Ref can start or stop it.
In-match Score	Your goals minus any foul points for that match.

\*Ref: Referee

## 5. Arena, Ball, and Event Equipment

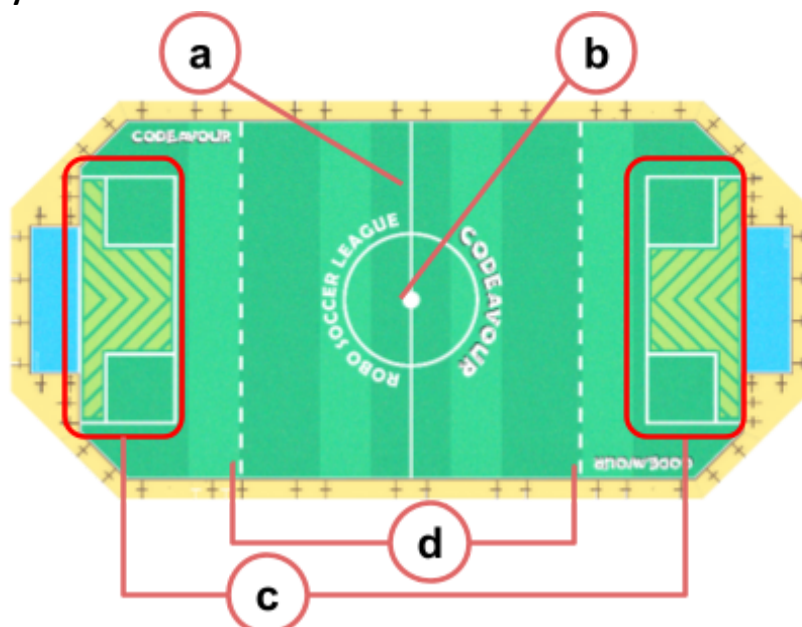


### 5.1. Arena Field Specifications:

- 5.1.1. **Arena Area:** 8 ft × 4 ft
- 5.1.2. **Playing Area:** 6.5 ft × 3.6 ft
- 5.1.3. **Boundary Wall:** 110-15cm high, with slightly filleted corners.
- 5.1.4. **Goal Post:** Width- 40cm, Height-25cm, Depth- 20cm
- 5.1.5. **Surface:** Flat, **matte printed wooden board** with **high-contrast white markings;** low-glare finish to aid vision sensors.

### 5.2. Arena Markings:

- 5.2.1. **a) Centre Line-** White Straight line dividing the Arena for both teams.
- 5.2.2. **b) Centre Dot -** White color Dot at centre- Ball Reset Point
- 5.2.3. **c) D box- (44x15cm)** white color box Line- Start and reset line for Robots.
- 5.2.4. **d) Penalty Point-** White dashed line on Arena.



### 5.3. Marking Notes/Care:

- 5.3.1. No team member enters the field or touches the ball/markers **without Referee permission.**
- 5.3.2. **Arena, ball,** and other official elements may have up to **±2% size difference** or small colour/print variations. **Things provided at the event will be final.**
- 5.3.3. Only **official** field lines/labels are valid. No team can add stickers, tapes, or beacons on the field/walls.
- 5.3.4. Any temporary reference markers (if provided by officials) are **identical** for both sides and removed upon request of the Referee.
- 5.3.5. **Access control:** Only **officials** may place/adjust the **field, ball, or event equipment** during matches.

### 5.4. Ball Specifications:

- 5.4.1. **Type:** Game Ball (Only the official competition-supplied Game Ball will be used in matches.)



- 5.4.2. **Material:** Lightweight, durable, soft-impact foam/rubber design
- 5.4.3. **Size/Mass:** 7 cm ( $\pm 0.5$  cm); 60-80g.
- 5.4.4. **Features:**
  - a. Hollow and light for smooth robot interaction
  - b. High rebound and easy to control on the arena surface
  - c. Safe for indoor play and suitable for younger participants
- 5.4.5. **Materials note:** Balls are **non-magnetic** and not designed for adhesion; designs exploiting anchoring/suction are prohibited (see **Code of Conduct 5.3**).

## 6. Gameplay Rules

The game consists of two teams with their 2 robots playing soccer against each other.

### 6.1. Team and Time:

- 6.1.1. **Active Robots:** Minimum **2 robots per team** allowed on the field under **manual control**.
- 6.1.2. A **third robot** may be held as backup (see substitutions below).
  - a. Backup robots may be swapped **only at a Kick-off/Reset** with Ref approval. The incoming robot must have **passed inspection**.
- 6.1.3. **Match Length: 5 minutes total** → **2 × 2-minute halves** with **1-minute halftime**.

### 6.2. Pre Match Setup and Inspection:

- 6.2.1. **Precheck:** Teams must ensure robots are fully prepared, charged, and in working condition before the match.
  - a. Teams must bring their **printed Robot Document** and be ready to open project files if requested by the Inspector.
- 6.2.2. **Call:** Teams report to the arena **5 minutes** before their match.
- 6.2.3. **Inspection:** Size/mass check, safety check, control demo (PictoBlox/Dabble) will be done.
- 6.2.4. **Briefing:** Referee confirms key rules, addresses questions, assigns sides.
- 6.2.5. **Ready Check:** Controllers connected; robots stationary; hands clear.
- 6.2.6. The team proceed to the main Arena and take their positions. (Refer 6.4)
- 6.2.7. **Coin toss & sides:** Before the match, Referee tosses a coin; first-named team calls. The winner chooses a side to play. Teams switch sides at halftime.

### 6.3. Initial Configuration and Robot Position:

- 6.3.1. Ball will be initially positioned at centre point (refer image A), and both team's, both robot's will be inside marked boxed in their D area side (refer image B).
- 6.3.2. Robots must be placed completely inside the marked area, not on or outside the boundary line. Orientation within the box is allowed.
- 6.3.3. Once placed, you cannot touch and move it again, unless the referee asks you to adjust it.

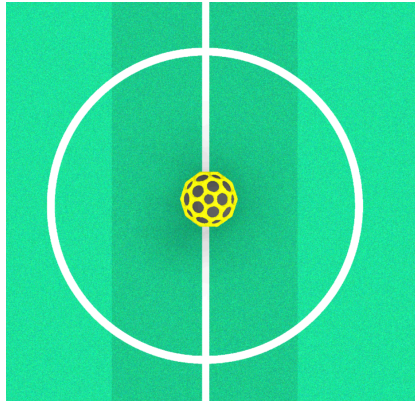


Image A

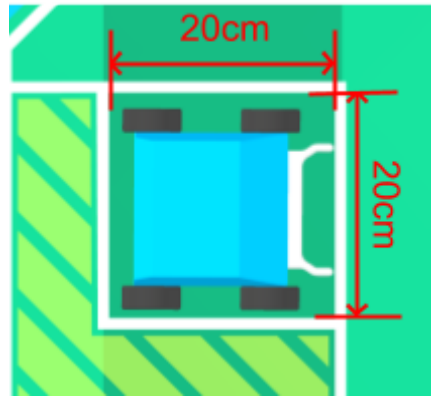
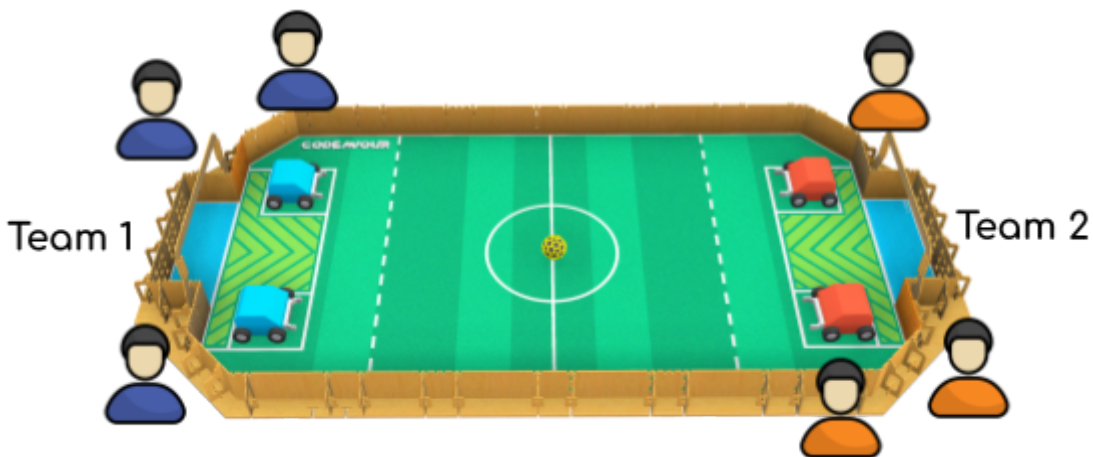


Image B

**6.4. Participant Position:**

- 6.4.1. After sides are decided, each team must stand on **their own side of the arena**.
- 6.4.2. Team members should stand at the **corners of their side**. (refer image below).
- 6.4.3. Once positions are set, **switching places within the team is not allowed**, except **one allowed change during every RESET**.



**6.5. Kick-off:**

A kick-off happens at the start of each half and after every goal. Both teams start together at kickoff to score a goal.

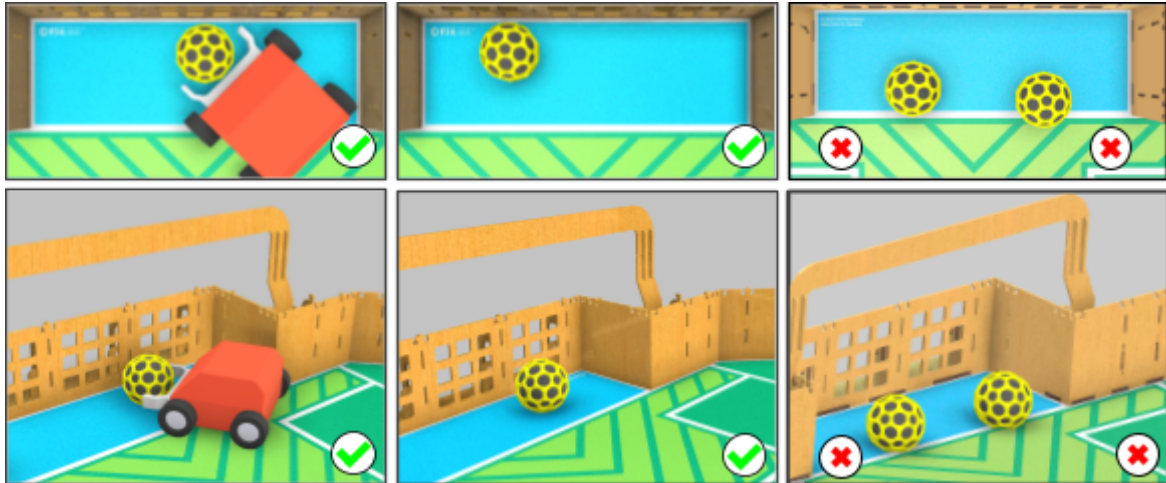
**6.5.1. Kick-off placement:**

- a. Ball on **centre dot**.
- b. All robots are fully **inside their own D-box** and **stationary**.
- c. Match Start **only on the whistle/signal**.

6.5.2. **False Start:** Any robot movement before the whistle = **False Start. (Refer-Clause 8)**; typical remedy: **reset kick-off** and warning/escalation for repetition.

**6.6. Goal/Score:**

A goal is scored when the ball completely crosses the goal line and touches the ground inside the goal or hits the back wall of the goalpost.



6.6.1. For each goal, the **scoring team earns 10 points**.

6.6.2. After a goal:

- a. After a goal, the referee gives a 15–20 seconds window to reset.
- b. The referee will **return the ball to the center** for kick-off.
- c. The referee will give the teams their robot in their half.
- d. Teams will **place robots inside their marked areas** (as per Placing Robots rule).
- e. The game will **resume with a kick-off**.

### 6.7. **Pause vs Reset:**

Essential Match Terms for All Participants and Officials.

6.7.1. **Pause(Temporary stop):**

- a. The ball is placed at the center circle.
- b. **Robots remain** (“frozen”) no one touches them unless the Referee instructs.

6.7.2. **Reset (full restart):** Reset is the same as Kick-off, just

- a. Used after **goals**, or when fairness/safety requires a clean restart.
- b. Ball to **centre**, **both teams re-place robots** inside their **own D-box**.
- c. Two consecutive Pause will also lead to Reset.

### 6.8. **Timeout Rule:**

6.8.1. Each team is allowed **one timeout per match**, with a maximum duration of **1 minute**.

- a. Timeout can be requested **only by the team captain**
- b. Timeout is allowed **only during Kickoff or Reset**
- c. Timeout is **not allowed during live gameplay or Pause**.

6.8.2. During Timeout:

- a. Teams may resolve **connection or minor operational issues only**
- b. **No major hardware changes, redesign, or robot replacement** is allowed.

6.8.3. At the end of 1 Minute, match resume immediately under Kickoff/Reset conditions.

## 6.9. Out of Play and No-Progress:

- 6.9.1. **Ball out of playing area:** If the ball goes outside the arena, the game will be paused and the referee will place the ball back at the center, resume on whistle.
- 6.9.2. **No-Progress (5 s):** If play stalls (e.g., ball wedged against wall/robots, prolonged pushing with **no net movement, simultaneous disconnects**) the Ref counts **5 seconds** and calls **Pause**.

## 6.10. Disabled/Damaged Robots:

- 6.10.1. **During live play:** Overturned, disconnected, or damaged robots **remain in place** until the next **Kick-off/Reset** unless the Ref orders removal for **safety** or **field clearance**.
- 6.10.2. **Exception:** A timeout may be requested as per Clause 6.8 during Kick-off/Reset to resolve technical issues (e.g., disconnections). The timeout is for 1 minute and must not involve major hardware changes.
- 6.10.3. Examples:
  - a. **Turned over by self or opponent:** stays in place; driver may attempt to self-correct using controls.
  - b. **Stuck or disconnected:** remains still until restart.
  - c. **Broken/detached parts**(e.g., wheels, wires, covers): Referee will remove only the loose/damaged part, not the entire robot.
- 6.10.4. **Goal entrapment:** If a robot is overturned or **stuck inside the goal line** and cannot self-recover, it will be removed and returned at the next restart.
- 6.10.5. **Unsafe condition:** The Ref may **remove** any robot presenting a hazard (e.g., exposed battery, smoking motor). The team may continue with its **remaining active robot(s)**.
- 6.10.6. **Backup introduction:** Backup robots may enter **only at Kick-off/Reset**, ensuring no more than two robots per team are on the field at any time.

## 7. Scoring, Standings and Tie-Breakers

### 7.1. In-Match Score:

- 7.1.1. **Goal:** +10pts
- 7.1.2. **Fouls:** Deduct points exactly mentioned in table clause 8.2. Scores can be negative after deductions.
- 7.1.3. **Result:** The highest score in-match wins the match.
- 7.1.4. **Worked Example:**
  - a. Team A: 3 goals (**30 pts**), 3 **False Start (-12)** = **18**
  - b. Team B: 2 goals (**20 pts**), **0 fouls** = **20**
  - c. **Result:** Team B wins **20-18**.

### 7.2. Match Tie:

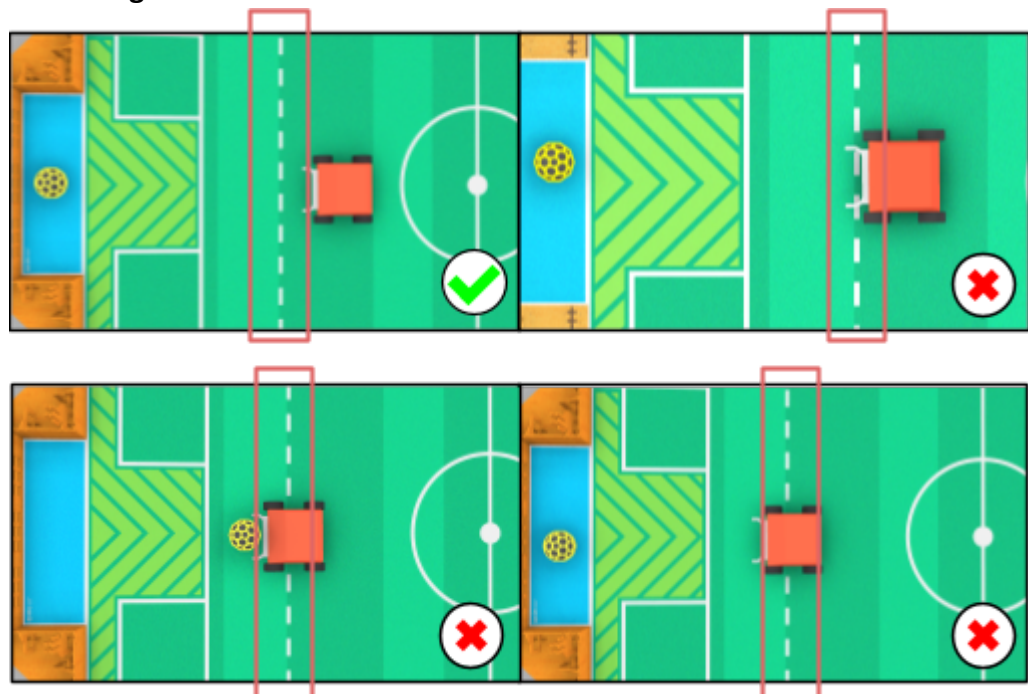
If both teams are tied at the end of a match, a Penalty Shootout will decide the winner.

#### 7.2.1. Penalty Shoot-out:

- a. Each team selects **1 robot** for penalties. Once chosen, it cannot be changed.
- b. Each team gets **3 attempts**. Team members take turns in rotation to control the robot.

#### 7.2.2. How To Penalty :

- a. Chosen Robot will be placed according to the placing robot rule(7.3)
- b. Once time starts, the robot has **15 seconds** to attempt and score.
- c. Invalid Penalty: overstepping the penalty line/mark or failing to shoot in time= **no goal**.



#### 7.2.3. If still tied after penalties:

- a. In **league matches:** Match record as draw, Both teams get **1 point**.
- b. In **knockout matches:** **Golden Goal** (open play; **first to score wins**). The Ref may apply **short restarts** to keep play flowing.

## 8. Fouls, Sanctions & Card System

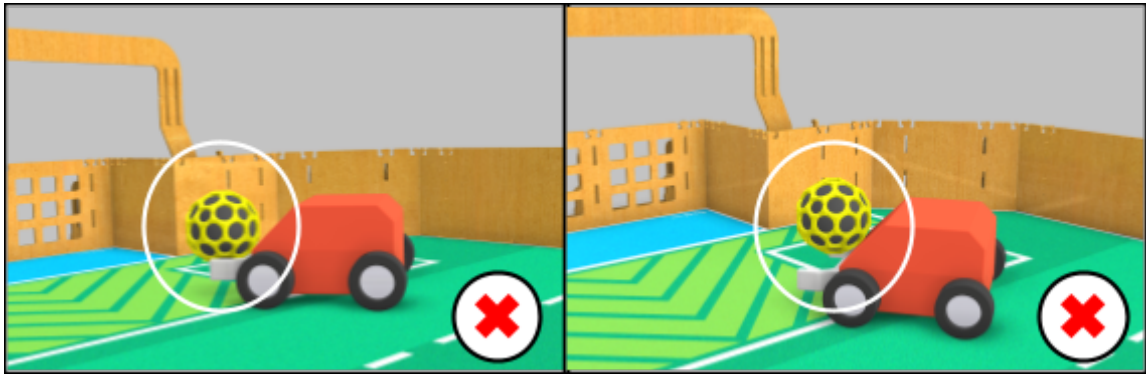
While playing, team players have to adhere to certain rules which can lead to Fouls mentioned below.



### 8.1. Card System: Warnings and Removals

- 8.1.1. **Yellow Card(YC):** For each foul (listed in 8.2) teams get a **Yellow Card**
- 8.1.2. **Red Card(RC):** Accumulation of 4 Yellow Cards result to 1 Red Card
- 8.1.3. **1 Red Card:** Team must **remove one (1) active robot** (team’s choice) for the **remainder of that half**. No replacement may enter during that half.
- 8.1.4. **Scope:** Yellow Cards are tracked across the entire match (both halves). They reset after the match ends and do not carry over to the next match.

### 8.2. Foul Systems and Penalties:

All fouls are assessed by the Referee. Points are deducted immediately from the team’s score, and some fouls also cause a restart.

Foul	Definition	Penalty	Restart
<b>Hand Touch</b>	Any deliberate touch of <b>robots or ball</b> by team members without Ref permission.	<b>-12 pts</b>	<b>Reset</b>
<b>False Start</b>	Robots move <b>before the kick-off whistle/signal</b> .	<b>-4 pts</b>	<b>Reset</b> (re-do kick-off)
<b>Movement During Pause</b>	Any robot <b>moves after “Pause” is called</b> .	<b>-4 pts</b>	<b>Play resumes per Pause</b>
<b>Ball Carry</b>	> <b>3 s</b> intentional <b>carry/enclose</b> that prevents free roll-away (see 10.4).	<b>-4 pts</b>	<b>Pause</b>
			
<i>Exception: Mutual Entanglement</i>	Both robots unintentionally move together with the ball (e.g., entangled bumpers).	<i>No deductions</i>	<b>Pause only</b> (Ref discretion)

			
<p><b>Wrong Connection</b></p>	<p>Attempting to <b>connect/control an opponent's robot</b> or non-assigned device.</p>	<p><b>-4 pts</b></p>	<p><b>As directed</b></p>
<p><b>Goal Camping</b></p>	<p>Robots intentionally remain inside the <b>goal area for more than 5 seconds</b>, without actively engaging in <b>Active Defence or attempting to play</b> (e.g., blocking the goal entrance).</p>	<p><b>-4 pts</b></p>	<p><b>Pause</b></p>
			
<p><b>Crossing Sides</b></p>	<p>Team participants <b>enter the opponent half</b> of the arena/bench area during play.</p>	<p><b>-4 pts</b></p>	<p><b>As directed</b></p>
<p><b>Severe Misconduct</b></p>	<p>Dangerous mechanical action, confirmed <b>RF/IR interference, abusive behaviour</b>, sabotage.</p>	<p><b>Immediate Disqualify</b></p>	<p><b>Match/Event DQ</b> (HR decision)</p>

**Escalation:** Repeated offences (same or varied) may escalate to **YC to RC** at the Ref/Head Ref's discretion, even if point penalties have been applied.

**8.2.1. Timing & Measurement Notes:**

- a. **">3 s" carry** and **">5 s" camping** are judged by the Ref's visible/count timing; partial resets of the count may occur if the robot clearly disengages.
- b. **Intent** matters: incidental brushes or brief contact that do not confer advantage may be **warned** first.

- c. **Team-level responsibility:** Fouls by **any** active robot or team member count **against the team**.
- d. Examples to understand Fouls: (Refer Clause 9)

## 9. Game Play Examples for Clarity of Fouls

- 9.1. **Example A: False Start:** Team A's robot creeps forward **before** the whistle at kick-off → **-4 pts to Team A + Reset** (kick-off re-taken) + YC to the team.
- 9.2. **Example B: Ball Carry:** Team B's front cage pins the ball to the wall and **moves with it for 4 s** → **-4 pts + Pause + YC**. On resume, **ball at centre, robots stay** where they are (unless safety repositioning is ordered).
- 9.3. **Example C: Goal Camping:** TeamA parks a robot **fully inside its own goal mouth for 7s** without engaging the ball → **-4 pts + Pause + YC**. Repeated camping in the match may escalate to **YC**, then **RC** if persistent.
- 9.4. **Example D: Hand Touch:** A driver steadies a tipping robot with a hand during live play → **-12 pts + Reset**. A second incident in the event may draw **YC/RC** depending on circumstances.
- 9.5. **Example E: Movement During Pause:** After a **Pause**, a Team D robot rolls **2–3 cm** forward before the restart signal → **-4 pts**; positions otherwise held. Ref warns for control discipline.
- 9.6. **Example F: Wrong Connection:** Team E attempts to pair with an **opponent's robot** (seen in Bluetooth dialog) → **-4 pts** and warning; a repeated/intentional attempt may be escalated to **DQ** if malicious.
- 9.7. **Example G: Severe Misconduct (Interference):** Head Ref confirms TeamA used a device causing **Bluetooth jamming** near the field → **Immediate DQ** from the **event**.

## 10. Robot Regulations and Specifications

### 10.1. General:

- 10.1.1. Robots must comply with specifications mentioned below at the start **and throughout the match**.
- 10.1.2. Teams are responsible for maintaining connectivity and communication at all times.
- 10.1.3. All required components, tools, and spares must be brought by the team.

### 10.2. Core Requirements:

- 10.2.1. **Programming: PictoBlox only** for all robot logic and driver interface.
- 10.2.2. **Communication:** Manual control via **PictoBlox or Dabble** over **Bluetooth** (BLE or Wi-Fi or Classic per device).
- 10.2.3. **Microcontroller:** Any board **compatible with PictoBlox** (e.g., Quarky, Arduino Uno/Nano/MEGA, micro:bit, ESP32-BLE).
- 10.2.4. **Add on Board:** Can use any, making sure not exceeding the size limit.
- 10.2.5. **Robot Size limit: 20×20×15cm(L×B×H)** at all times—including bumpers, guards, antennas, and any moving parts/mechanism in their **most extended** position.
  - a. Robots must fit fully within the size box during inspection and at any time in play. Mechanisms that intentionally expand or flex beyond the limits are not permitted.
- 10.2.6. **Max weight:** Robots cannot exceed more than **800gram**.  
*NOTE: Removing or swapping any parts in mid/match is not allowed.*
- 10.2.7. **Power:** Battery-powered only. Any battery compliant with standard safety norms with a **maximum rated voltage of  $\leq 9$  volts between any two terminals** on the robot.
  - a. Examples: 1S–2S Li-ion/LiPo (4.2–8.4 V) OK; **3S (12.6 V) NOT allowed**.
  - b. DC-DC converters are permitted **only** if **every output** remains  **$\leq 9.0$  V**. No mains/AC, no tethers.

### 10.3. Allowed/Not Allowed:

The Codeavour team reserves the right to disqualify any robot it deems dangerous at any point in the competition. As follows,

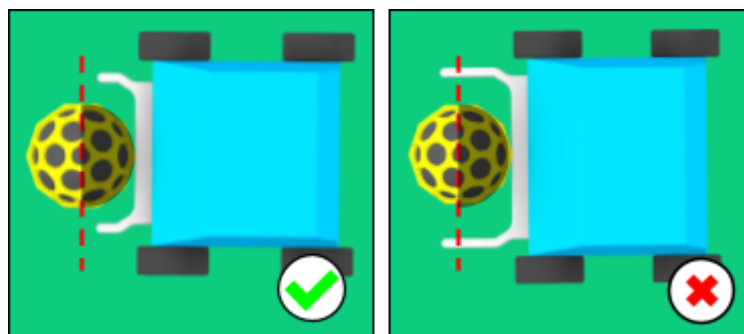
- 10.3.1. **Allowed:** Teams may design and customize their robots, provided they strictly follow all rules and regulations. The following are allowed:
  - a. **Custom frames (wood, plastics, composites, 3D-printed parts).**
  - b. **Standard fasteners (nut,bolt,screws)**
  - c. **Safe adhesives** like thread-lockers or double-sided tape can be used inside the robot (e.g., to secure wires).
  - d. **Identification:** Each team must **leave a 4 × 4 cm space on the top side** of their robot for official labeling during inspection, clearly visible from above.
- 10.3.2. **Not Allowed:** The Codeavour team reserves the right to disqualify any robot it deems dangerous at any point in the competition. As follows,
  - a. **No exposed sharp edges:** The entire design of a robot must not have sharp edges or pointy structure that may harm the Arena/ball/robot around it.
  - b. **No hazardous materials:** No dangerous, flammable, or harmful substances (fluids, powders, aerosols).

- c. **No Anchoring or adhesion:** No tethers, suction cups, sticky coatings, electromagnets, or mechanisms that anchor to the floor/walls/ball..
- d. **No Destructive mechanisms:** Robots must not include any mechanism specifically designed to **damage, disable, or intentionally interfere with the structure or functioning** of another robot or the arena.  
This includes, but is not limited to: **saws, blades, spikes, entangling devices, directed heat, or any mechanism** intended to cause harm or disruption beyond normal gameplay interaction.
- e. **Interference:** No infrared, electromagnetic, RF, or Wi-Fi/Bluetooth jamming; only approved Bluetooth/Wi-Fi control is allowed.
- f. **Unauthorized radios:** No custom transmitters/receivers. Any device intentionally generating **RF/IR interference is not allowed.** (see Code of Conduct & Fair Play).

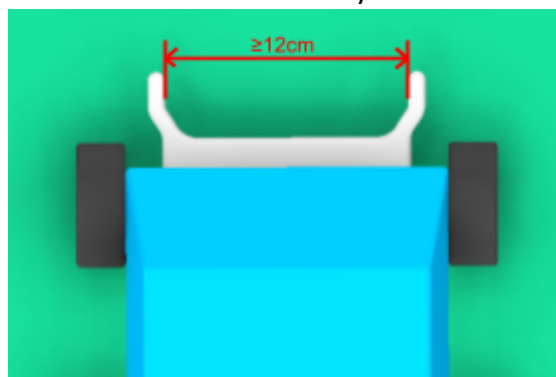
**Inspector’s discretion:** If a design is **unsafe** or **against the spirit** of fair play, it may be required to modify before approval—even if not explicitly listed above.

**10.4. Robot Claw Rules:**

- 10.4.1. **Coverage:** From the top viewpoint, the robot must **not cover > 50%** of the ball’s circumference.(refer image below).



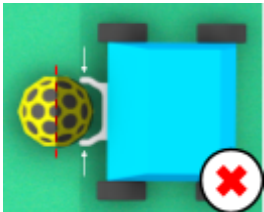
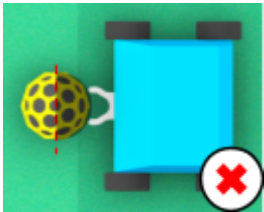
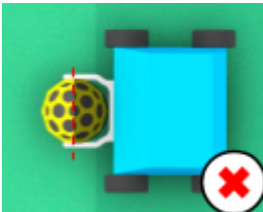
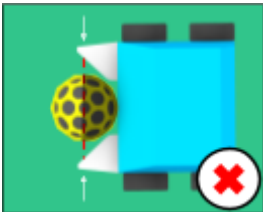
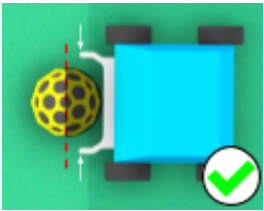
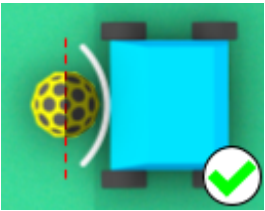
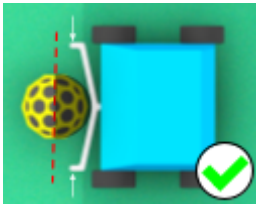
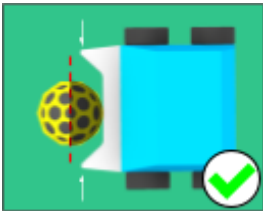
- 10.4.2. **No Grab:** The ball must remain **free to roll away** when lightly pushed by an official—no full cages, pincers, or traps.
- 10.4.3. **Claw Opening:** Your robot must have a minimum  $\geq 12$  cm of open space where the ball sits. This makes sure the ball can always roll out and is not trapped.



**Example:**

- a. **Legal:** Like holding the ball gently in a “U” shape so it can roll away.
- b. **Illegal:** Any design that traps, squeezes, or sticks to the ball so it cannot roll out freely.

**10.4.4. Detailed Examples:**

Status	CLAW-1	CLAW-2	CLAW-3	CLAW-4
<b>Not Allowed</b>				
<b>Reason</b>	Claw Opening < 12 cm	Claw Opening < 12 cm	Claw Opening < 12 cm Ball Coverage > 50%	Claw Opening > 12cm, But Ball Coverage > 50%
<b>Allowed</b>				
<b>Reason</b>	Claw Opening > 12 cm Ball Coverage < 50%	Claw Opening > 12 cm Ball Coverage < 50%	Claw Opening > 12 cm Ball Coverage < 50%	Claw Opening > 12 cm Ball Coverage < 50%

**10.5. Safety Reliability:**

- 10.5.1. **Mechanical:** All screws and parts must be tight. Cover moving parts like belts/gears. Round off sharp edges. Robots should not drop pieces on the field during play.
- 10.5.2. **Electrical:** Cover battery terminals. Keep wires neat and tied. Use strain relief on high-power cables.
- 10.5.3. **Batteries:** Only safe batteries allowed—no swelling, leaking, or damaged packs. Referees can remove unsafe batteries.
- 10.5.4. **Weight and Size:** Robots must always meet size and weight rules, even after paint, tape, or repairs. They can be checked again anytime.

**10.6. Connectivity and Control**

- 10.6.1. Robots must pair and demonstrate basic manual control (forward/turn/stop) using PictoBlox or Dabble at inspection.
- 10.6.2. Use **Airplane Mode + Bluetooth ON** (or Do-Not-Disturb if Airplane Mode unavailable) to avoid call/notification drops.
- 10.6.3. Each robot must use its **own control link**. Non-essential radios must remain OFF near the field.

- 10.6.4. To prevent interference, teams should set a unique device name/channel and follow any RF channel assignment given by officials.
- 10.6.5. USB cables for charging or connectivity can be used only in the **pit area**, not on the match field.

#### 10.7. Inspection Rules:

- 10.7.1. All robots will undergo a **mandatory mechanism compliance check** before the match.
- 10.7.2. Only robots with a **passed inspection tag** can enter the field.
- 10.7.3. Any change to frame, wheels, controller, battery, or ball guide requires **re-inspection**.
- 10.7.4. If a team declares multiple robots, **each one must pass inspection separately**.
- 10.7.5. Referees may **re-check size, weight, and voltage anytime** during matches.
- 10.7.6. The Organizer/Inspector reserves the right to **reject or require modification** of any mechanism that is unsafe or against the spirit of fair play

#### 10.8. Good Practice:

- 10.8.1. Design slightly smaller ( $\leq 19.5$  cm,  $\leq 780$  g) for safety margin.
- 10.8.2. Mark the front of your robot clearly for easier driving.
- 10.8.3. Keep wiring neat and secure.
- 10.8.4. Carry spare batteries or Bluetooth modules.

## 11. Code of Conduct and Fair Play

### 11.1. Principles and Behaviour:

- 11.1.1. Respect, safety, and learning first.
- 11.1.2. Be polite, professional, and disciplined. No taunting, profanity, harassment, threats, or disruptive conduct.
- 11.1.3. **Zero tolerance for discrimination** (race, gender, age, disability, nationality, beliefs).
- 11.1.4. Maintain sportsmanship—no foul play, sledging, or mocking opponents.

### 11.2. Mentor Boundaries and Team Roles:

- 11.2.1. Mentors/Coaches may **advise only off-field or between matches**.
- 11.2.2. No in-match control or covert signaling.
- 11.2.3. Mentors must not touch robots, the field, the ball, or control devices during live play.
- 11.2.4. Only the **team captain** may communicate with the Referee during matches.

### 11.3. Fair and Play Integrity:

Strictly prohibited (examples, not exhaustive):

- 11.3.1. **Anchoring/adhesion:** Hidden magnets, suction, sticky compounds, or mechanisms intended to **anchor** to walls/floor.
- 11.3.2. **Signal interference:** RF/IR/Bluetooth/Wi-Fi jamming, spoofing, or deliberate noise; **covert control** of an opponent's robot or device.
- 11.3.3. **Field manipulation:** Moving/altering goals/lines, obstructing sensors, or intentionally damaging field elements.
- 11.3.4. **Sabotage & tampering:** Interfering with another team's robot, batteries, chargers, code, or tools.
- 11.3.5. **Match fixing/collusion:** Arrangements to alter competitive outcomes (throwing games, coordinated fouling).
- 11.3.6. **Deception:** False IDs, age/category misrepresentation, or falsified documents.

**Penalty: Immediate Disqualification (DQ)** possible for intentional cheating; may escalate to **event expulsion** and result invalidation.

### 11.4. Arena Conduct:

- 11.4.1. **Authorized access only:** Enter the field with Referee permission.
- 11.4.2. **Zones clear:** Keep pits/walkways/charging areas unobstructed.
- 11.4.3. **Noise & decorum:** Reasonable tool use and celebration volume; no horns, sirens, or disruptive lights near active fields.

### 11.5. Safety and Operations:

- 11.5.1. **Power & charging:** Use safe chargers in designated areas; follow Li-ion/LiPo rules; no exposed wiring.
- 11.5.2. **Tools:** No flames/solvents near charging; secure sharp tools.
- 11.5.3. **Batteries & spares:** Transport in protective cases; remove from robots if instructed.
- 11.5.4. **Compliance checks:** Submit to inspections on request; unsafe items may be impounded.

### 11.6. Reporting, Sanctions and Escalations:

- 11.6.1. Report misconduct, safety issues, or suspected interference promptly to the Control Desk/Head Referee.
- 11.6.2. Provide clear facts and supporting logs/photos (video review not guaranteed).
- 11.6.3. Officials may apply one or more of the following, depending on severity and repetition:
  - a. **Non-foul behaviour (e.g., decorum) may receive verbal warnings. Rule infractions listed in always yield a YC.**
  - b. **Red Card (RC)**
  - c. **Match forfeit / Walkover (WO)**
  - d. **Robot removal** (unsafe or non-compliant)
  - e. **Team Disqualification (DQ)** from the event for gross/intentional violations

### 11.7. Media, Privacy & Inclusion:

- 11.7.1. Filming/photography is allowed if it does not obstruct officials, players, or walkways, and does not cause glare or interference.
- 11.7.2. Respect privacy and consent policies, especially for minors.
- 11.7.3. Teams needing accommodations must inform organizers at registration/check-in; approved accommodations will be shared with Referees.

### 11.8. Spirit Clause:

- 11.8.1. If a behaviour is **unsafe, unsporting, or clearly against the intent** of fair competition—even if not explicitly listed—the **Head Referee/Organizer** may act to restore safety and fairness, including modifying procedures or issuing sanctions.

## 12. Authority & Interpretation

These rules apply to **Track 3 of Codeavour 7.0**. By entering, teams agree to follow this rulebook and any official updates/clarifications.

### 12.1. **Who's in charge?**

- 12.1.1. **Organizer:** Sets event rules and final decisions.
- 12.1.2. **Head Referee (HR):** Oversees referees and event-level rulings.
- 12.1.3. **On Site Referee (Ref):** Controls the match and makes on-field decisions.
- 12.1.4. **Volunteers:** Support operations and communicate schedules/announcements.

### 12.2. **Final say:**

- 12.2.1. **During matches:** The **Ref's decisions are final** for that match.
- 12.2.2. **Event level:** HR/Organizer rulings (briefings/bulletins) override printed rules when needed for fairness, safety, or scheduling.
- 12.2.3. **Conflicts:** The **most recent official bulletin/briefing** always prevails over earlier text.

### 12.3. **Clarification:**

- 12.3.1. **Who:** Only the **team captain** may request.
- 12.3.2. **When:** Within **10 minutes of match end** or before the team's next game (whichever comes first).
- 12.3.3. **How:** Submit the form at the Control Desk. Evidence (logs, code snapshots) may be accepted at HR's discretion, but **video review is not guaranteed**.
- 12.3.4. **Outcome:** HR may clarify rules for future matches or uphold the original call.

### 12.4. **Communication During Matches:**

- 12.4.1. Teams must not talk to the Ref unless through the **captain**, and only when acknowledged.
- 12.4.2. **Arguing, delaying, or ignoring instructions** can lead to penalties or disqualification

### 12.5. **Updates:**

- 12.5.1. Organizers may issue updates/changes during the event. Teams must check the announcement board/channel regularly.
- 12.5.2. Safety changes override all rules.

### 12.6. **Safety and Spirit of the Game:**

- 12.6.1. Safety and fairness come first. Referees/organizers may pause, reset, or end a match to protect players, robots, or the arena.

## 13. Safety,Risk and Liability

- 13.1. Teams are fully responsible for safe construction, handling, transport, and charging of their robots.
- 13.2. Use only safe batteries and approved chargers. Do not charge damaged/swollen packs. Charge only in designated areas.
- 13.3. Unsafe robots (e.g., exposed wires, leaking or swollen batteries, sharp edges, smoke) may be stopped and removed until fixed and re-inspected.
- 13.4. Teams must follow all safety instructions from referees and inspectors.both
- 13.5. Organizers are not responsible for loss, theft, or damage to robots, tools, or personal property.

## 14. Annexure

- 14.1. **Organizer (ORG):** Codeavour 7.0 host/authorized staff responsible for event operations, official bulletins, and final interpretations.
- 14.2. **Head Referee (HR):** Senior official overseeing referees and issuing event-level rulings/clarifications.
- 14.3. **Referee (Ref):** Appointed on-field official controlling play, timing, restarts, and sanctions for a match.
- 14.4. **Inspector (INS):** Official verifying robot compliance and safety before approval to compete.
- 14.5. **Arena / Field:** The marked play area used for matches, including touchlines, goal lines, goals, and each team's **D-box**.
- 14.6. **D-box:** The marked square placement zone in front of each goal used at kick-offs and resets for robot placement.
- 14.7. **Device:** The participant's phone/tablet/laptop used to wirelessly control the robot (permitted interfaces only).
- 14.8. **Kick-off (KO):** Start/restart of the robot from the centre dot on the Referee's whistle.
- 14.9. **Pause:** Temporary stoppage; ball is placed on the centre dot; robots remain where they are unless instructed.
- 14.10. **Reset:** Full restart; ball to centre and both teams re-place robots inside their own D-box as directed by the Ref.
- 14.11. **Ball in Play:** From the Ref's whistle/signal to stop; the ball is considered live unless out of bounds or a stoppage is called.
- 14.12. **Dead Ball:** Ball is out of bounds (OOB) or play has been stopped by the Ref.
- 14.13. **Out of Bounds (OOB):** Ball or robot wholly crosses a boundary line or contacts an area outside the field; restart as directed by the Ref.
- 14.14. **Goal:** a goal is considered when the ball completely crosses the goal plane, and the ball either touches the ground inside the goal post or inside the boundary of the goal post.
- 14.15. **Foul:** A rule infraction penalized by the Ref. See **Fouls & Sanctions**.
- 14.16. **Safety Stop:** Immediate halt ordered by the Ref/HR for hazard or field fault; follow the Ref's instructions for Pause or Reset.
- 14.17. **Match Clock:** Official time kept by the Ref; only the Ref can stop/start the clock.
- 14.18. **In-match score:** Goals scored minus foul points in a single match (as defined in **Scoring & Fouls**).
- 14.19. **League points:** Table points for standings—**Win 3 / Draw 1 / Loss 0**.
- 14.20. **Walkover (WO):** A forfeit awarded when a team fails to present a compliant robot/drive team on time as per schedule.
- 14.21. **Drive Team:** Student member(s) designated to operate the robot during the match (driver, spotter, etc.), as permitted by event rules.
- 14.22. **Control Desk (CD):** Operations point for scheduling, forms, and official communications.
- 14.23. **Bulletin / Addendum:** An Organizer / HR update that clarifies or amends rules; latest timestamp/version prevails.
- 14.24. **Active Defence:** refers to any action by the robot to **interact with the ball** or **prevent an opponent from scoring** by actively engaging in gameplay.

## 15. Change Notes

This section outlines the **specific changes, additions, and clarifications** made to the Track 3 Robo Soccer League rulebook for the current season.

### From Version 1 to Version 2

Updates in Codeavour 7.0 Track 3 Rules and Regulation V2.0.0	
<b>New Rule Added:</b>	
1.	6.8 Timeout Rule
2.	10.7 Inspection Rules: 10.7.1 10.7.6
3.	14.24 Active Defence:
<b>Modified Rules:</b>	
1.	6.10 Disabled/Damaged Robots 6.10.2 Exception
2.	8.2 Foul Systems and Penalties (Goal Camping Rule)
3.	10.3.2 Not Allowed d. No Destructive mechanism
4.	10.4 Robot Claw Rules: 10.4.1. Coverage 10.4.3. Claw Opening 10.4.4. Detailed Examples ( Added)

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