

# RoboCup 2017 - Rulebook Changes

**Disclaimer:** This document does not replace the reading of the official rulebook.

## Mandatory Standard Log

After one year of testing, the RefBox worldstate logging is now mandatory for all teams, except younger teams (less than 2 years old). This will enable systematic league benchmarking abilities.

Updates in:     **Normalized data structure**

## Colored Team Markers

With the objective of stimulating team branding and league appeal to the audience, the MSL TC decided to allow colors other than only Cyan and Magenta for the team markers (robot's shirt). Please note that there are restrictions for the chosen colors and the marker itself.

Updates in:     **RC-4.2.4: Robot Markers**  
                  **RC-4.2.4.1: Colour Markers**  
                  **RC-4.2.4.3: Top Markers**  
                  **COMPETITION RULE 4 - Summary of Object Colours**

## Stimulate Passing And Dribbling

The rules for "Valid methods of scoring" was simplified.

In any case, a goal is only valid if the ball has been played by at least two robots (one pass), since the team has gained the ball possession.

A goal is still only valid if the kick is made on the opponent's side. However, it is no longer required to receive the ball on the opponent's side - a pass can be made on own side, then dribble to opponent's side and score.

It is no longer possible to kick directly after regaining the ball possession on the opponent half - a pass is required.

Updates in:     **RC-10.1.1: Valid methods of scoring**

## Double-Yellow Card Penalty

Instead of 120 seconds of run-time, it is now 90 seconds of actual play time (counter stops when game is stopped and during repositionings).

Updates in:     **RC-12.6.1: Temporary Sent-Off**

## Increase In Field Size

Depending on the outcome of a feasibility study by the LOC for RoboCup 2017, a max 25% increase in field length and/or field width can still be announced March 1st 2017 the latest.

Updates in: **RC-1.1: Dimensions**

## Goal Integrity

Robots may not, either intentionally or not, crash against the goals. This also applies to goalkeeper players that recurrently touch and push the goal. A free kick can be awarded against the offending team.

Updates in: **RC-4.1.4: Goals**

## Limited Use of External Boundary Area

Robots are not allowed to gain strategic advantage by positioning themselves inside the external boundary area, otherwise, a freekick foul will be called.

Updates in: **RC-4.1.2: External Boundary Area**

## IEEE 802.11n / 802.11g allowed

WiFi Standards 802.11n and 802.11g are now allowed, as long as they are provided by the Local Organization Access Points.

Updates in: **RC-4.2.5: Communications**

## Technical Verification

For quite a long time, the technical verification has been overlooked. Because this may lead to unfair situations, in 2017 the Technical Committee will thoroughly verify the compliance of all robots with the rules regarding size (RC-4.2.0), weight (RC-4.2.2), ball overlay (RC-12.0.1) and network (RC-4.2.5) limits.

Please note that rule RC-12.0.1 has been rewritten in order to be verifiable.

Updates in: **CR 3.2: Team Registration, Setup, and Technical Inspection**  
**RC-12.0.1: Ball Manipulation**

## **SSID Broadcast OFF**

To avoid having audience devices (smartphones, tablets, etc.) trying to connect with the field AP (and possibly overwhelming it with requests), the SSID broadcast will be turned off.

Updates in: **A 1 Table of Network-Addresses**

## **MAC Addresses**

In order to further improve wireless conditions, the communications will be locked to the MAC addresses provided by the team. Although already present on the rules (RC-4.2.5), the list of qualification materials has been updated as a reminder that teams must provide a list of MAC Addresses, both for robots and development computers.

Updates in: **CR 1.1 Team Qualification for RoboCup-2017**

## **Qualification Materials - Scientific Results**

A factor of 0.5 is applied for publications that are not MSL related.

Updates in: **CR 1.2 Evaluation of the Qualification Material**

## **Technical Challenge**

The aim of this challenge is to encourage teams to improve their ability to:

- Play soccer on a less smooth surface (i.e., artificial grass). We will include the ability to do basic soccer skills but also encourage teams to explore a possible influence on energy battery management.
- Localize and perceive the environment while facing natural light instead of artificial light and while facing obstacles of unknown saturated colors.
- Become less dependent on WiFi to facilitate multi-robot cooperation.

The challenge will be disputed in 4 runs, with gradually increasing complexity and will be played on a MSL field made of artificial grass. Robot will face natural light conditions.

Updates in: **Challenge 1**