

Laws of the SSL-Humanoid 2009

Version 2009.1 (March, 26, 2009)

LAW 1 - The Field of Play
LAW 2 - The Ball
LAW 3 - The Number of Robots
LAW 4 - The Robotic Equipment
LAW 5 - The Referee
LAW 6 - The Assistant Referee
LAW 7 - The Duration of the Match
LAW 8 - The Start and Restart of Play
LAW 9 - The Ball In and Out of Play
LAW 10 - The Method of Scoring
LAW 11 - Offside
LAW 12 - Fouls and Misconduct
LAW 13 - Free Kicks
LAW 14 - The Penalty Kick
LAW 15 - The Throw-In
LAW 16 - The Goal Kick
LAW 17 - The Corner Kick

Notes

Male and Female

References to the male gender in the Laws with respect to referees, assistant referees, team members and officials are for simplification and apply to both males and females.

Notation of Changed Rules

Symbols like [CHANGE], [REMOVE] are added on top of the changed sentence of rule at the last rule change. [CHANGE] represents that the sentence was changed. [REMOVE] represents that the sentence was removed.

LAW 1 - The Field of Play

Dimensions

The field of play must be rectangular. The dimensions include boundary lines.

Length: 4050 mm

Width: 3025 mm

Field Surface

The playing surface is green felt mat or carpet. The floor under the carpet is level, flat and hard. The field surface will continue for 675 mm beyond the boundary lines on all sides.

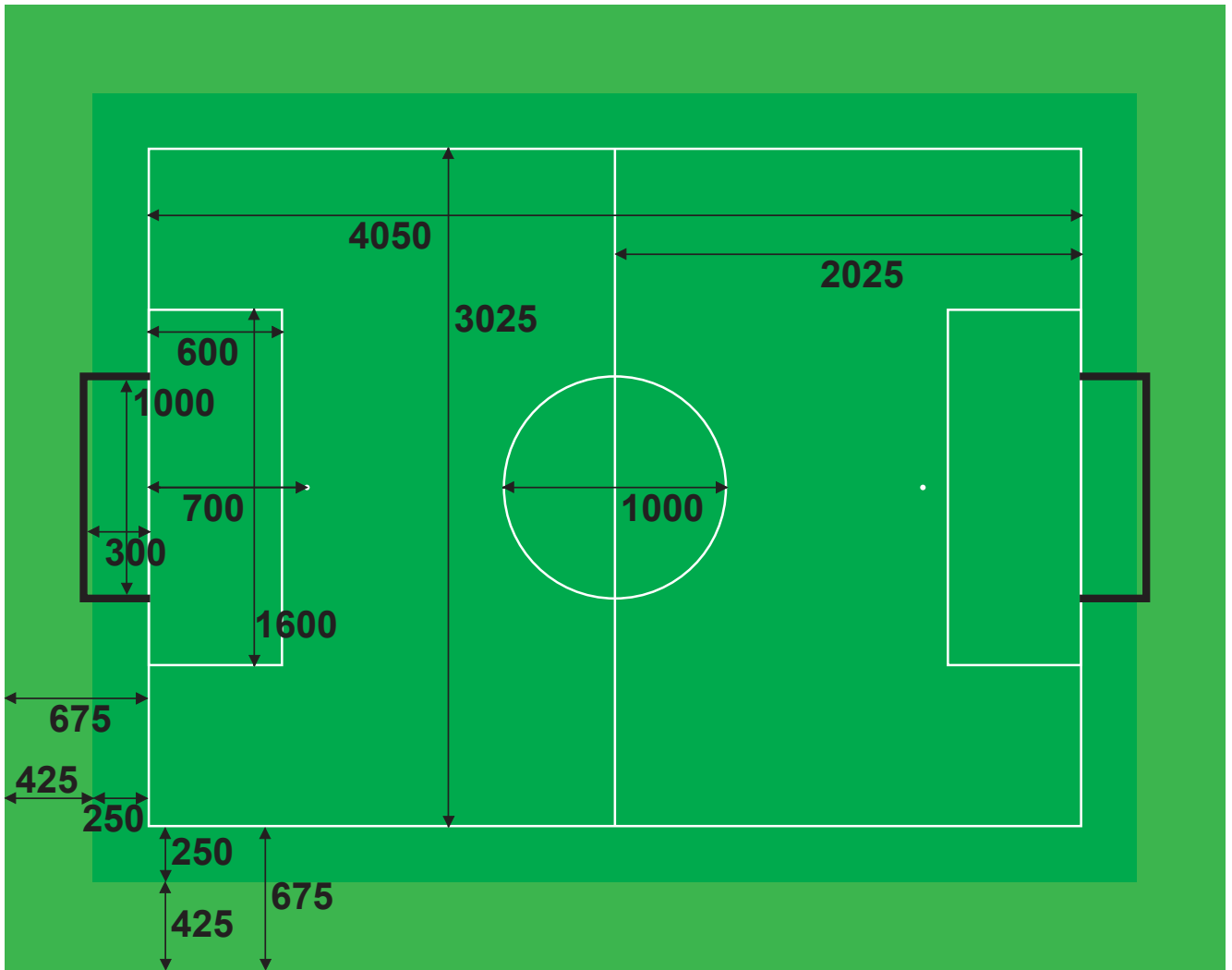


Figure 1: The field dimensions

The outer 425 mm of this runoff area are used as a designated referee walking area (see Law 5).

At the edge of the field surface, a 100 mm tall wall will prevent the ball and robots from running off the edge.

Field Markings

The field of play is marked with lines. Lines belong to the areas of which they are boundaries. The two longer sides are called touch boundaries. The two shorter sides are called goal boundaries.

All lines are 10 mm wide and painted white.

The field of play is divided into two halves by a halfway line.

The centre mark is indicated at the midpoint of the halfway line.

A circle with a diameter of 1000 mm is marked around it.

The Defence Area

A defence area is defined at each end of the field as follows: Two lines are drawn at right angles to the goal line, 300 mm from the inside of each goalpost. These lines extend into the field of play for a distance of 600 mm and are joined by a line drawn parallel with the goal line.

The area bounded by these lines and the goal line is the defence area.

The exact configuration is depicted in Fig. 1.

Penalty Mark

[CHANGE] Within each defence area a penalty mark is made 700 mm from the midpoint between the goalposts and equidistant to them. The mark is a 10 mm diameter circle of white paint.

Goals

Goals must be placed on the centre of each goal boundary.

The distance between the goalposts is 1000 mm. The goal is 300 mm deep.

The distance from the lower edge of the crossbar to the playing surface is 600 mm.

These distances and depth do not include the width of the goalposts and crossbars.

The goalposts and crossbars must be white.

Nets may be attached to the goals and the ground behind the goal.

The nets must be white, gray or black.

The floor inside the goalmouth is the same as the rest of the playing surface.

Goals must be anchored securely to field surface.

Equipment Mounting Bar

A mounting bar will be provided 4000 mm above the field. The bar will run above the midline of the field from goal to goal. The bar should be mounted securely so that it does not swing or sway under a small external force, and it should not bend or twist significantly when the weight of typical video equipment is added.

Decisions of the Technical Committee



Figure 2: The Goal in detail

Decision 1

In case of sharing the fields with SSL (Soccer Small Size Robot League), a half of the SSL field can be used.

And the mounting bar of cameras can also be shared with the one of SSL.

LAW 2 - The Ball

Qualities and Measurements

A standard tennis ball covered by felt

It is:

- spherical
- orange in colour
- 65.41 – 68.58 mm in diameter
- 56.0 – 59.4 g in mass

Replacement of a Defective Ball

If the ball becomes defective during the course of a match:

- the match is stopped
- the match is restarted by placing the replacement ball at the place where the first ball became defective

If the ball becomes defective whilst not in play at a kick-off, goal kick, corner kick, free kick,

penalty kick or throw-in:
- the match is restarted accordingly

The ball may not be changed during the match without the authority of the referee.

LAW 3 - The Number of Robots

Robots

A match is played by two teams, each consisting of not more than three robots, one of which may be the goalkeeper.

Each robot must be clearly numbered so that the referee can identify them during the match. The goalkeeper must be designated before the match starts.

A match may not start unless both teams have at least one robot.

Interchange

Robots may be interchanged. There is no limit on the number of interchanges.

Interchange Procedure

To interchange a robot, the following conditions must be observed:

- interchange can only be made during a stoppage in play,
- the referee is informed before the proposed interchange is made,
- the interchange robot enters the field of play after the robot being replaced has been removed,
- interchange robot enters the field of play at the halfway line.

Changing the Goalkeeper

Any of the other robots may change places with the goalkeeper, provided that:

- the referee is informed before the change is made
- the change is made during a stoppage in the match

Robots Sent Off

A robot that has been sent off may interchange for another robot that leaves the field.

Decisions of the Technical Committee

Decision 1

Each team must have a single designated robot handler to perform interchange and robot placing when required. No other team members can encroach upon the area immediately surrounding the field.

While the ball is out of play, a robot handler is allowed to move his robot(s) to the appropriate position, if the referee permits it for the smooth progress of match.

LAW 4 - The Robotic Equipment

Safety

A robot must not have in its construction anything that is dangerous to itself, another robot or humans.

If the halt signal is sent from the referee box, robots should be able to remove their power.

Shape

- should have two legs and two arms,
- should be the height between 200 mm and 400 mm (fig.3 H), the foot size of less than 130 mm (fig.3 D),
- should be the weight of less than 4 kg,
- should have at least 5 angles for each leg and at least 3 angles for each arm, and should be driven by the drive equipment such as motors,
- should have the head having a height of at least 5 percent of his height (fig.3 C),
- the leg length is defined as a length between the root angle of the thigh and the foot when the leg is straight (fig.3 A),
- should have the arms having a length of less than 120 percent of his leg length, which the arm length is defined as a length between the shoulder angle and the tip of the hand when the arm is straight (fig.3 B),
- the circumscribing polygons of left and right feet should not overlap (fig.3 E).

Colours and Markers

Robots may use black and gray colouring without restriction.

Glorious metal colour should be avoided.

Before a game, each of the two teams has a colour assigned, namely yellow or blue. Each team must be able to use yellow and blue markers.

Circular markers of the assigned colour (team markers) must be mounted on top of the robots. The team markers must have a diameter of 50 mm.

Robots may also use light green, light pink and cyan markers as submarkers.

[CHANGE] A black square plate with 120 mm length must be mounted on the top of the robots. Team marker and submarkers are put on the plate.

Locomotion

[CHANGE] Robots must walk by their two legs. Robots who can not stand up within 10 seconds after falling down, or robots who can not walk must be removed from the field and repaired.

The back of the feet of robot, which is contacted to the field surface, must be made of the materials that does not hurt the field surface.

Wireless Communication

Robots can use wireless communication to computers or networks located off the field.

Global Vision System

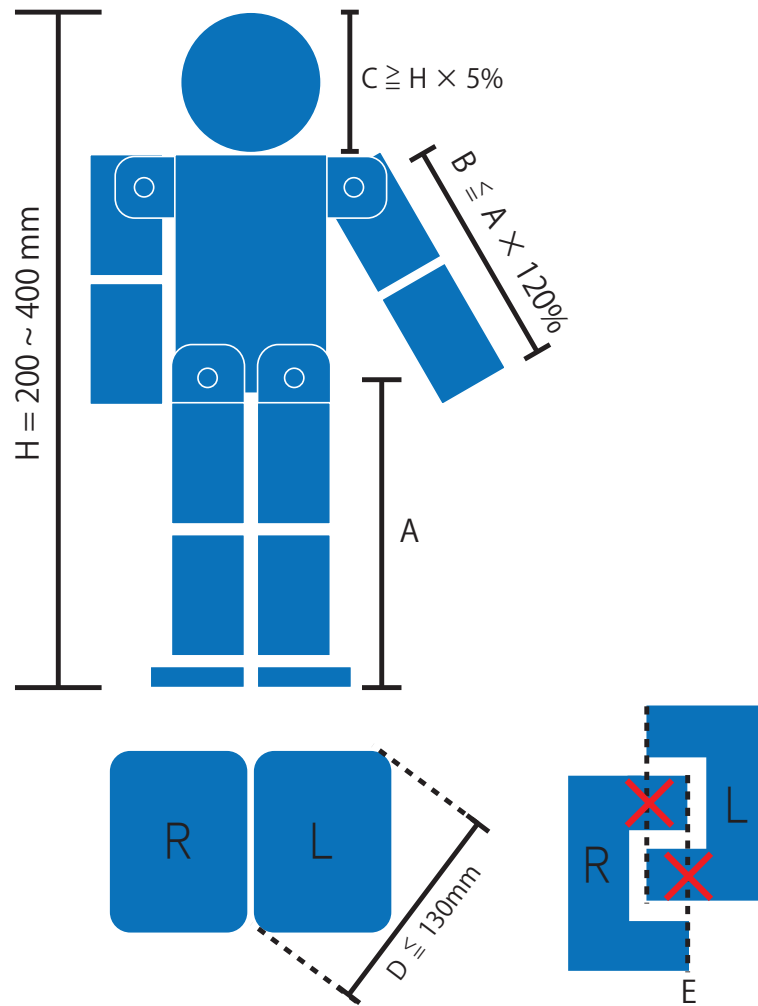


Figure 3: The maximum robot dimensions

The use of a global vision system or external distributed vision systems are permitted, but not required, to identify and track the position of robots and ball.

This is achieved by using one or more cameras.

Cameras may not protrude more than 150 mm below the bottom of the mounting beam provided above the field (Law 1).

Teams must prepare their cameras, PCs and image processing software.

Cameras may attach to the mounting bar as well as the poles around the field. In case of attaching to the poles, the height between 1500 mm and 2000 mm from the field is permitted to attach.

Autonomy

The robotic equipment is to be fully autonomous.

Human operators are not permitted to enter any information into the equipment during a match, except at half time or during a time-out.

Prohibited equipment

- Dribbling devices, kicking devices, wheels and absorbing devices.
- Edge tools, revolving tools, radio devices that emit illegal radio waves, lasers, strobes.
- Devices that spray a liquid, a powder or an air.

Infringements/Sanctions

For any infringement of this Law:

- play need not be stopped
- the robot at fault is instructed by the referee to leave the field of play to correct its equipment
- the robot leaves the field of play when the ball next ceases to be in play
- any robot required to leave the field of play to correct its equipment does not re-enter without the referee's permission
- the referee checks that the robot's equipment is correct before allowing it to re-enter the field of play
- the robot is only allowed to re-enter the field of play when the ball is out of play

A robot that has been required to leave the field of play because of an infringement of this Law and that enters (or re-enters) the field of play without the referee's permission is cautioned and shown the yellow card.

Restart of Play

If play is stopped by the referee to administer a caution:

- the match is restarted by an indirect free kick taken by a robot of the opposing side, from the place where the ball was located when the referee stopped the match

Decisions of the Technical Committee

Decision 1

Official colours will be provided by the organising committee. Teams must use the official colours unless both teams agree not to.

Decision 2

A rules check will be performed on all robots at the competition prior to the first match. Any team's robot which is found to violate a rule must be modified to be compliant before it can participate in matches.

Decision 3

Technical committee will plan to move from the overfield cameras to the street-light style cameras. By the street-light cameras, we mean the cameras looking slantedly downward, which are attached to the pole around the field.

Decision 4

Technical committee is developing a shared vision system and will open it to the public. The arrangement of team marker and submarkers will be standardized for reliable recognition of robots in the shared vision system.

LAW 5 - The Referee

The Authority of the Referee

Each match is controlled by a referee who has full authority to enforce the Laws of the Game in connection with the match to which he has been appointed.

Powers and Duties

The Referee:

- enforces the Laws of the Game
- controls the match in co-operation with the assistant referees
- ensures that any ball used meets the requirements of Law 2
- ensures that the robotic equipment meets the requirements of Law 4
- informs the assistant referees when periods of time lost begin and end in accordance with Law 7
- stops, suspends or terminates the match, at his discretion, for any infringements of the Laws
- stops, suspends or terminates the match because of outside interference of any kind stops the match if, in his opinion, a robot is likely to cause serious harm to humans, other robots or itself and ensures that it is removed from the field of play
- repositions the ball to a neutral position if it becomes stuck during play
- allows play to continue when the team against which an offence has been committed will benefit from such an advantage and penalises the original offence if the anticipated advantage does not ensue at that time
- punishes the more serious offence when a robot commits more than one offence at the same time
- takes disciplinary action against robots guilty of cautionable and sending-off offences. He is not obliged to take this action immediately but must do so when the ball next goes out of play
- takes action against team officials who fail to conduct themselves in a responsible manner and may at his discretion, expel them from the field of play and its immediate surrounds
- acts on the advice of assistant referees regarding incidents which he has not seen

- ensures that no unauthorised persons encroach the field of play
- restarts the match after it has been stopped
- provides the technical committee with a match report which includes information on any disciplinary action taken against team officials and any other incidents which occurred before, during or after the match

Decisions of the Referee

The decisions of the referee regarding facts connected with play are final.

The referee may only change a decision on realising that it is incorrect or, at his discretion, on the advice of an assistant referee, provided that he has not restarted play.

Referee's Signalling Equipment

A device will be supplied to convert the referee's signals into both serial and ethernet communication signals that are transmitted to both teams. The equipment will be operated by the assistant referee. Details of the equipment are to be supplied by the local organising committee before the competition.

Latest referee box of SSL will be used.

Signals from the Referee

During a match the referee will signal the start and stop of play in the usual fashion. The assistant referee will send signals reflecting the referee's call over communication links to each team. No interpretation of the referee's signals by human operators is permitted.

The whistle signal indicates that the referee has stopped play, and that all robots should move 500 mm from the ball to allow the referee to place the ball for a restart. All robots are required to remain 500 mm from the ball as the ball is moved to the restart position.

For a goal (Law 10), or caution or send off (Law 12), an informational signal will be sent to indicate the referee's decision.

The restart signal will indicate the type of restart. Robots should move into legal positions upon receipt of this signal. For restarts other than a kick-off (Law 8) or a penalty kick (Law 14), the kicker may kick the ball when ready without further signals from the referee.

For a kick-off (Law 8) or a penalty kick (Law 14), a start signal will be sent to indicate that the kicker may proceed. This signal will not be sent for other types of restart.

Signals indicating periods of time-out and time lost will also be sent when required.

The referee will be deemed to have given a signal when the assistant referee has relayed that signal over the communications links.

LAW 6 - The Assistant Referee

Duties

The assistant referee is appointed whose duties, subject to the decision of the referee, are to:

- act as timekeeper and keep a record of the match
- to operate the communications equipment to relay the referee's signals over the communications links
- monitor the robot operators for illegal signals being sent to the robots
- indicate when an interchange is requested
- indicate when misconduct or any other incident has occurred out of the view of the referee
- indicate when offences have been committed whenever the assistants are closer to the action than the referee (this includes, in particular circumstances, offences committed in the defence area)
- indicate whether, at penalty kicks, the goalkeeper has moved forward before the ball has been kicked and if the ball has crossed the line

Assistance

The assistant referees also assist the referee to control the match in accordance with the Laws of the Game. In the event of undue interference or improper conduct, the referee will relieve an assistant referee of his duties and make a report to the organising committee.

Decisions of the Technical Committee

Decision 1

A second assistant referee will be used whenever possible. The second assistant referee will help the referee in ball placement on the field, as well as helping monitor compliance with all laws and procedures.

LAW 7 - The Duration of the Match

Periods of Play

The match lasts two equal periods of 5 minutes, unless otherwise mutually agreed between the referee and the two participating teams. Any agreement to alter the periods of play (for example, to reduce each half to 3 minutes because of a limited schedule) must be made before the start of play and must comply with competition rules.

Half-Time Interval

Teams are entitled to an interval at half time. The half-time interval must not exceed 5 minutes. Competition rules must state the duration of the half-time interval.

The duration of the half-time interval may be altered only with the consent of both teams and the referee.

Timeouts

Each team is allocated four timeouts at the beginning of the match. A total of 10 minutes is allowed for all timeouts.

For example, a team may take three timeouts of one-minute duration and thereafter have only one timeout of up to seven minutes duration. Timeouts may only be taken during a game stoppage.

The time is monitored and recorded by the assistant referee.

Allowance for Time Lost

Allowance is made in either period for all time lost through:

- substitution(s)
- assessment of damage to robots
- removal of damaged robots from the field of play for treatment
- wasting time
- any other cause

The allowance for time lost is at the discretion of the referee.

Extra Time

Competition rules may provide for two further equal periods to be played.

The conditions of Law 8 will apply.

Abandoned Match

An abandoned match is replayed unless the competition rules provide otherwise.

LAW 8 - The Start and Restart of Play

Preliminaries

If both teams have a common preferred frequency for wireless communications, the local organising committee will allocate that frequency for the first half of the match. If both teams have a common preferred color, the local organising committee will allocate the color for the first half of the match.

A coin is tossed and the team which wins the toss decides which goal it will attack in the first half of the match.

The other team takes the kick-off to start the match.

The team that wins the toss takes the kick-off to start the second half of the match.

In the second half of the match the teams change ends and attack the opposite goals.

Teams may agree not to change ends and attack the opposite goals with the consent of the referee.

If both teams have a common preferred frequency for wireless communications, the teams should swap the allocation of that frequency for the second half of the match.

Teams may agree not to change the allocation of the preferred frequency with the consent of the referee.

If both teams have a common preferred marker color, the teams should swap marker colors for the second half of the match. Teams may agree not to change the marker colors with the consent of the referee.

Kick-off

A kick-off is a way of starting or restarting play:

- at the start of the match
- after a goal has been scored
- at the start of the second half of the match
- at the start of each period of extra time, where applicable

A goal may be scored directly from the kick-off.

Procedure

- all robots are in their own half of the field
- the opponents of the team taking the kick-off are at least 500 mm from the ball until the ball is in play
- the ball is stationary on the centre mark
- the referee gives a signal
- the ball is in play when it is kicked and moves forward
- the kicker does not touch the ball a second time until it has touched another robot

After a team scores a goal, the kick-off is taken by the other team.

Infringements/Sanctions

Any infringement as listed in Law 9 is handled accordingly

For any other infringement of the kick-off procedure:

- the kick-off is retaken

Placed Ball

A placed ball is a way of restarting the match after a temporary stoppage which becomes necessary, while the ball is in play, for any reason not mentioned elsewhere in the Laws of the Game.

Procedure

The referee places the ball at the place where it was located when play was stopped.

By Law 9, all robots are required to remain 500mm from the ball while the ball is being placed. Play restarts when the referee gives a signal.

Infringements/Sanctions

The ball is placed again:

- if a robot comes within 500 mm of the ball before the referee gives the signal

Special Circumstances

A free kick awarded to the defending team inside its own defence area is taken from a legal free kick position nearest to where the infringement occurred.

A free kick awarded to the attacking team in its opponents' defence area is taken from a legal free kick position mark nearest to where the infringement occurred.

A placed ball to restart the match after play has been temporarily stopped inside the defence area takes place on the a legal free kick position nearest to where the ball was located when play was stopped.

LAW 9 - The Ball In and Out of Play

Ball Out of Play

The ball is out of play when:

- it has wholly crossed the goal boundary or touch boundary whether on the ground or in the air
- play has been stopped by a signal from the referee

When the ball goes out of play, robots should remain 500 mm from the ball as the ball is placed, until the restart signal is given by the referee.

Ball In Play

The ball is in play at all other times.

Infringements/Sanctions

If, at the time the ball enters play, a member of the kicker's team occupies the area closer than 200 mm to the opponent's defence area:

- an indirect free kick is awarded to the opposing team, the kick to be taken from the location of the ball when the infringement occurred * (see Law 13)

If, after the ball enters play, the kicker touches the ball a second time (without holding the ball) before it has touched another robot:

- an indirect free kick is awarded to the opposing team, the kick to be taken from the place where the infringement occurred * (see Law 13)

If, after the ball enters play, the kicker deliberately holds the ball before it has touched another robot:

- a direct free kick is awarded to the opposing team, the kick to be taken from the place where the infringement occurred * (see Law 13)

If, after a signal to restart play is given, the ball does not enter play within 10 seconds, or lack of progress clearly indicates that the ball will not enter play within 10 seconds:

- the play is stopped by a signal from the referee,

- all robots have to move 500 mm from the ball, and
 - a neutral restart is indicated
-

LAW 10 - The Method of Scoring

Goal Scored

A goal is scored when the whole of the ball passes over the goal line, between the goal walls, below the cross bar, provided that no infringement of the Laws of the Game has been committed previously by the team scoring the goal.

Winning Team

The team scoring the greater number of goals during a match is the winner. If both teams score an equal number of goals, or if no goals are scored, the match is drawn.

Competition Rules

For matches ending in a draw, competition rules may state provisions involving extra time, or other procedures approved by the RoboCup Federation to determine the winner of a match.

LAW 11 - Offside

Offside Rule

The offside rule is not adopted.

LAW 12 - Fouls and Misconduct

Fouls and misconduct are penalised as follows:

Direct Free Kick

A direct free kick is awarded to the opposing team if a robot commits any of the following five offences:

- makes substantial contact with an opponent
- holds an opponent
- holds the ball deliberately (except for the goalkeeper within his own defence area)
- is the second attacking robot to simultaneously occupy the opposing team's defence area, or is the second defending robot to simultaneously occupy the team's defence area in such a way to substantially affect game play
- handles the ball deliberately by hand(s) except for goalkeeper
- [REMOVE] - does not stand up within 10 seconds after falling down

A free kick is taken from where the offence occurred.

Penalty Kick

A penalty kick is awarded if any of the above six offences is committed by a robot inside his own defence area, irrespective of the position of the ball, provided it is in play.

Indirect Free Kicks

An indirect free kick is awarded to the opposing team if a goalkeeper, inside his own defence area, commits any of the following offences:

- takes more than fifteen seconds while holding the ball before releasing it from his possession
- holds the ball again after it has been released from his possession and has not touched any other robot

An indirect free kick is also awarded to the opposing team if a robot:

- contacts the goalkeeper where the point of contact is in the defence area
- commits any other offence, not previously mentioned in Law 12, for which play is stopped to caution or dismiss a robot

The free kick is taken from where the offence occurred.

Disciplinary Sanctions

Cautionable Offences

A team is cautioned and shown the yellow card if a robot on that team commits any of the following seven offences:

1. is guilty of unsporting behaviour
2. is guilty of serious and violent contact
3. persistently infringes the Laws of the Game
4. delays the restart of play
5. fails to respect the required distance when play is restarted with a goal kick, corner kick or free kick
6. modifies or damages the field or ball
7. deliberately enters or travels within the referee walking area

[CHANGE] Upon receipt of a yellow card, one robot of the penalised team must immediately move off and be removed from the field. After one minutes of play (as measured by the assistant referee using the official game time) the robot may reenter the field at the next stoppage of play.

Sending-Off Offences

A team is shown a red card if one of the robots or the team is guilty of severe unsporting behaviour.

The number of robots on the team is reduced by one after every red card.

LAW 13 - Free Kicks

Types of Free Kicks

Free kicks are either direct or indirect.

For both direct and indirect free kicks, the ball must be stationary when the kick is taken and the kicker does not touch the ball a second time until it has touched another robot.

The Direct Free Kick

- if a free kick is kicked directly into the opponents' goal, a goal is awarded.
- if a free kick is kicked directly into the team's own goal, a goal is awarded against the team.

The Indirect Free Kick

Ball Enters the Goal :

A goal can be scored only if the ball subsequently touches another robot before it enters the goal.

- if an indirect free kick is kicked directly into the opponents' goal, a goal kick is awarded
- if an indirect free kick is kicked directly into the team's own goal, a corner kick is awarded to the opposing team

Free Kick Procedure

[CHANGE] If the free kick is awarded inside the defence area, the free kick is taken from a point (corner of defence area) 600 mm from the goal line and 712.5 mm from the touch line closest to where the infringement occurred.

If the free kick is awarded to the attacking team within 700 mm of the defence area, the ball is moved to the closest point 700 mm from the defence area.

Otherwise the free kick is taken from the place where the infringement occurred.

All opponent robots are at least 500 mm from the ball.

A robot handler may move the kicking robot to the appropriate position.

The ball is in play when it is kicked or thrown in, and moves.

Infringements/Sanctions

If, when a free kick is taken, an opponent is closer to the ball than the required distance:

- the kick is retaken

Any infringement as listed in Law 9 is handled accordingly

For any other infringement of this Law:

- the kick is retaken

LAW 14 - The Penalty Kick

A penalty kick is awarded against a team which commits one of the five offences for which a direct free kick is awarded, inside its own defence area and while the ball is in play.

A goal may be scored directly from a penalty kick.

Additional time is allowed for a penalty kick to be taken at the end of each half or at the end of periods of extra time.

Position of the Ball and the Robots

The ball:

- is placed on the penalty mark

The robot taking the penalty kick:

- is properly identified

The defending goalkeeper:

- remains between the goalposts, touches its goal line, and faces outward of the goal, until the ball has been kicked. It is allowed to move before the ball has been kicked, as long as its motion does not break any of these constraints.

The robots other than the kicker are located:

- inside the field of play
- behind a line parallel to the goal line and 400 mm behind the penalty mark

The Referee

- does not signal for a penalty kick to be taken until the robots have taken up position in accordance with the Law
- decides when a penalty kick has been completed

Procedure

- the robot taking the penalty kicks the ball forward
- it does not play the ball a second time until it has touched another robot
- the ball is in play when it is kicked and moves forward

When a penalty kick is taken during the normal course of play, or time has been extended at half-time or full time to allow a penalty kick to be taken or retaken, a goal is awarded if, before passing between the goalposts and under the crossbar:

- the ball touches either or both of the goalposts and/or the crossbar, and/or the goalkeeper

Infringements/Sanctions

If the referee gives the signal for a penalty kick to be taken and, before the ball is in play, one of the following situations occurs:

The robot taking the penalty kick infringes the Laws of the Game:

- the referee allows the kick to proceed
- if the ball enters the goal, the kick is retaken
- if the ball does not enter the goal, the kick is not retaken

The goalkeeper infringes the Laws of the Game:

- the referee allows the kick to proceed
- if the ball enters the goal, a goal is awarded
- if the ball does not enter the goal, the kick is retaken

A team-mate of the robot taking the kick enters the area 400 mm behind the penalty mark:

- the referee allows the kick to proceed
- if the ball enters the goal, the kick is retaken
- if the ball does not enter the goal, the kick is not retaken
- if the ball rebounds from the goalkeeper, the crossbar or the goal post and is touched by this robot, the referee stops play and restarts the match with an indirect free kick to the defending team

A team-mate of the goalkeeper enters the area 400mm behind the penalty mark:

- the referee allows the kick to proceed
- if the ball enters the goal, a goal is awarded
- if the ball does not enter the goal, the kick is retaken

A robot of both the defending team and the attacking team infringe the Laws of the Game:

- the kick is retaken

If, after the penalty kick has been taken:

Any infringement as listed in Law 9 is handled accordingly

The ball is touched by an outside agent as it moves forward:

- the kick is retaken

The ball rebounds into the field of play from the goalkeeper, the crossbar or the goalposts, and is then touched by an outside agent:

- the referee stops play
- play is restarted with a dropped ball at the place where it touched the outside agent* (see Law 13)

LAW 15 - The Throw-In

A throw-in is a method of restarting play.

A goal cannot be scored directly from a throw-in.

A throw-in is awarded:

- when the whole of the ball passes over the touch boundary, either on the ground or in the air [CHANGE] - from the point where the ball crossed the touch boundary
- to the opponents of the robot that last touched the ball

Procedure

- The referee places the ball at the designated position.
- All opponent robots are at least 500 mm from the ball.
- The throw-in is performed by holding the ball by hands and throwing it.
- It is possible to do the throw-in by kick of the ball if the team cannot perform the throw-in specified above.
- The ball is in play when it is thrown in or kicked, and moves.

Infringements/Sanctions

If, when a throw-in is taken, an opponent is closer to the ball than the required distance:
- the throw-in is retaken

Any infringement as listed in Law 9 is handled accordingly

For any other infringement:

- the kick is retaken

Decisions of the Technical Committee

Decision 1

Technical committee will have the challenge event for the throw-in to promote the throw-in techniques.

LAW 16 - The Goal Kick

A goal kick is a method of restarting play.

A goal may be scored directly from a goal kick, but only against the opposing team.

A goal kick is awarded when:

- the whole of the ball, having last touched a robot of the attacking team, passes over the goal boundary, either on the ground or in the air, and a goal is not scored in accordance with Law 10.

Procedure

[CHANGE] - the ball is kicked from a point (corner of defence area) 600 mm from the goal line and 712.5 mm from the touch line closest to where the ball passed over the goal boundary

- opponents remain 500 mm from the ball until the ball is in play
- the kicker does not play the ball a second time until it has touched another robot
- the ball is in play when it is kicked and moves

Infringements/Sanctions

Any infringement as listed in Law 9 is handled accordingly

For any other infringement of this Law:

- the kick is retaken

LAW 17 - The Corner Kick

A corner kick is a method of restarting play.

A goal may be scored directly from a corner kick, but only against the opposing team.

A corner kick is awarded when:

- the whole of the ball, having last touched a robot of the defending team, passes over the goal line, either on the ground or in the air, and a goal is not scored in accordance with Law 10

Procedure

[CHANGE] - the ball is kicked from the nearest corner, cross point of both the goal line and the touch line

- opponents remain 500 mm from the ball until the ball is in play
- the kicker does not play the ball a second time until it has touched another robot
- the ball is in play when it is kicked and moves

Infringements/Sanctions

Any infringement as listed in Law 9 is handled accordingly

For any other infringement:

- the kick is retaken