

2004 FIRST Robotics Competition

March 2, 2004

Team Update

14

The new/modified text is bolded and *italicized* and/or ~~lined-out~~.

The Manual

No changes.

Section 1. Introduction

No changes.

Section 2. Communication

No changes.

Section 3. The Arena

Modify 3.2.5 as below. The new/modified text is bolded and italicized and/or ~~lined-out~~.

3.2.5 IR Beacons

Centered on the top of each Tee Frame is a light beacon that continuously emits an infrared signal across the playing field during a match. Each beacon emits at the same IR frequency, but sends pulse trains of different pulse widths. ***The beacon nearest to the red moveable goal will transmit a Type-1 signal, and the one nearest the blue goal will be Type-0.*** These signals are detectable by robot-mounted IR receivers that are tuned to the beacons' frequency. The receivers provide direct input to the robot's control system when they sense an IR signal.

Section 4. The Game

Modify G21 as below. The new/modified text is bolded and italicized and/or ~~lined-out~~.

<G21> ~~While a ROBOT is holding a LARGE Ball, that ball will be considered an extension of the ROBOT.~~ ***In the case of goal tending and assisting, while the ROBOT is manipulating a large ball, it is considered an extension of the ROBOT.***

Modify G24 as below. The new/modified text is bolded and italicized and/or ~~lined-out~~.

<G24> ROBOTS can only grab a Mobile Goal by the top metal edge of the goal platform perimeter. No part of a ROBOT can extend under the base of the Mobile Goals. ROBOTS may never grab or attach to the poles. ***Provided there is no damage to the field, a robot may push against the mobile goal base, the PVC pipes, or the Large Ball to maneuver the Mobile Goal.*** If a ROBOT grabs any other part of the Mobile Goal or extends under the base of the Mobile Goal, the referee will give one warning. If the referee decides that the team is disregarding that warning, the team's ROBOT will be disabled and the team will be disqualified.

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Add new rule G33 as below.

<G33> *A Robot may not impede the opening of the Ball Release door to prevent the release of small balls.*

Section 5. The Robot

Replace R14 as below. The new/modified text is bolded and italicized and/or ~~lined out~~.

<R14> *Electrical tape may only be used as an electrical insulator. Velcro tape or double-sided sticky foam may be used for attaching components to the robot. Adhesive-backed cable mounts may be used. Small amounts of reflective tape may be used for counting wheel revolutions. Adhesive backed labels may be used for labeling purposes. No other adhesive backed tapes are allowed.*

Modify R17 as below. The new/modified text is bolded and italicized and/or ~~lined out~~.

<R17> In order to help reduce the impact forces that the robot will experience during collisions with other robots, teams may add external “bumpers” to the robot. If used, bumpers must satisfy the following constraints:

- Bumpers may extend outside the normal robot starting dimensions (in the horizontal plane) up to 4.” *per side*.
- [rest of bullets unchanged]

Modify the third bullet to R53 as below. The new/modified text is bolded and italicized and/or ~~lined out~~.

- Mounting and connecting pneumatics components using the pre-existing threads, mounting brackets, etc., is not considered a modification of the components. *Removing the pin from the rear of an air cylinder is allowed as long as the cylinder itself is not modified.*

Add the following bullet to R54 as below. The new/modified text is bolded and italicized and/or ~~lined out~~.

- *A device that creates a vacuum is not considered to be a pneumatic device, and is allowed. This includes, but is not limited to, venturi-type vacuum generators and off-the-shelf vacuum devices (as long as they are powered by one of the Kit motors).*

Section 6. The Kit

No changes.

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Section 7. The Tournament

Add the following at the end of 7.1 as below. The new/modified text is **bolded and italicized** and/or ~~lined-out~~.

Robot Starting Positions:

When discussing Robot Starting Position, the white lines will be designated "right" or "left" based on the view of looking at an alliance station from the stationary goal of the same color. As an example, in the top photo in section 4.1, for the Red Alliance this would make the white line at the top of the photo the "left" line and the white line at the bottom of the photo the "right" line.

Qualification Matches:

In Qualifying Matches, each alliance must declare which robot will start on the left or right line as they are checked in to the "on deck" area before their match. Once the alliance has declared left or right, these starting positions may not be changed under any circumstance.

Elimination Matches:

In Elimination Matches a slightly different system will be used. In odd numbered matches (1, 3) the lower ranked alliance (in this example they are the # 8 alliance) must declare first which robot will start on the left and right. This placement can NOT be changed once declared under any circumstance. The higher ranked (in this example they are the # 1 alliance) will get to choose which of their two robots in that match will start on the left or right side AFTER they have seen (or been notified) what starting positions the other alliance has declared. In the even numbered matches (2, and 4 if there is a need for a 4th match) the order is reversed and the higher ranked alliance must declare first while the lower ranked alliance gets to choose their starting positions second.

Add the following new sentence to 7.3.3 as below. The new/modified text is **bolded and italicized** and/or ~~lined-out~~.

A disqualified team will receive zero Qualifying Points and zero Ranking Points. In the very unlikely case that both teams on an Alliance are DQ'd, both teams on the winning Alliance would get their own score as their Ranking Points for that match.

Add the following new sentence to T05 as below. The new/modified text is **bolded and italicized**.

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italicized and/or lined-out.

<T05> Robot Field power will not be re-enabled after a match; however, teams may use the tether feature to make any necessary adjustments to the robot in order to release from each other. For information on using the tether, please refer to the control system documentation from Innovation First. ***Robots MAY NOT interact with the drill-driven mechanism that raises and lowers the bar.***

Section 8. The Awards

No changes.

Section 9. Team Organization

No changes.

Section 10. At the Events

No changes.

Section 11. Robot Transportation

Modify 11.2.5 as below. The new/modified text is bolded and italicized and/or lined-out.

11.2.5 Crate Storage - Pit Stations Are Too Small

Pit space is very limited and the aisles in the Pit must be clear for safety sake as well as robot, spectator, and team movement. ~~**Please do not keep your crate in your pit station because**~~ Your team members, chairs, and equipment must fit within the team's designated space during the competitions. For comfort and convenience sake, FIRST provides free storage for one team crate during each competition