March 08, 2006

TEAM UPDATE #15

GENERAL NOTICES

No changes

Documents and Updates

No changes.

Question & Answer System

No changes.

Section 0 - Introduction

No changes.

Section 1 - Communication

No changes.

Section 2 – Team Organization

No changes.

Section 3 - The Arena

No changes.

Section 4 - The Game

Section 4 – The Game is now revised to Rev E with the following changes:

<G17> ROBOT Orientation - ROBOTs must maintain their vertical orientation with respect to their starting position throughout the match. ROBOTs may not intentionally tip over onto one of their initially vertical sides and operate with this side parallel to the ground. **"Flop-Down" robots will be disqualified.**

<G21> ROBOT Incursion into the Corner Goal – **Robots should not enter the corner goals**. Incidental incursion into the corner goal that occurs as a result of a ROBOT pushing balls into the goal is permitted, not to exceed a distance of approximately 3 inches. **The 3' does not include the deflection of the goal panel or structure.** Intentional incursion, for example to use a ball gathering mechanism to drop off balls inside the goal, or extending a portion of the ROBOT through the goal opening to activate the ball counting system, will result in disqualification of the offending ROBOT**. Any incursion substantially beyond 3 inches, particularly if the robot extends over the lighted scoring system panel, will be considered intentional incursion.**

Commentary to <G21>

If a robot slams into the corner goal with such force that it causes permanent deformation (breaking or permanently bending the clear panel or bending the support structure), it will be considered field damage and will be disabled per <G20>

Once a robot is in place to deposit balls in the corner goal, ramming it from behind generally has no purpose other than to destroy, unnecessarily harass, or force a goal incursion of the scoring robot. Repeatedly ramming a robot that is depositing balls in the corner goal from behind may be called for a <G22> violation and may incur a 5 point penalty or a disqualification.

<**G25**> ROBOT Off Sides - During the SECOND and THIRD PERIODS the ALLIANCE on defense can have at most two (2) operable* ROBOTS on the defensive end of the field (the near end of the field, from the ALLIANCE point of view). If the ALLIANCE has a third operable ROBOT, that ROBOT (the BACKBOT) must be positioned on the end of the field farthest from the ALLIANCE STATION.

If an ALLIANCE is determined to be "Off Sides" they will immediately receive a 5-point penalty. The ALLIANCE will receive an additional 5-point penalty every 5 seconds thereafter, until they have placed a valid BACKBOT in position at the far end of the field. In all situations if a BACKBOT is prevented by an offensive ROBOT from crossing the field centerline, then the ALLIANCE will not be penalized.

The mid-field line is included in both the defensive and offensive half of the field. Multiple ALLIANCE robots are permitted in the far half of the field. ROBOTs of the same ALLIANCE may dynamically change the designation of the BACKBOT during the defensive period as long as there is at least one BACKBOT during the entire period.

<Part A> If an alliance starts a defensive period with more than two operable* ROBOTS on the defensive side of the field, then:

- If none of the ALLIANCE ROBOTS are moving toward the far end of the field at the start of the period, then the ALLIANCE will be considered Off Sides.
- If at least one of their ROBOTS is moving toward the far side of the field, then the ALLIANCE will have a 5 second grace period in which to position a ROBOT beyond the mid-field line and make it their BACKBOT. After the conclusion of the grace period, if the ALLIANCE does not have a valid BACKBOT they will be considered Off Sides.

<Part B> During the defensive period, if an ALLIANCE BACKBOT crosses the centerline to the defensive side of the field before another ALLIANCE ROBOT has taken position as BACKBOT, then the ALLIANCE will be considered Off Sides.

<Part C> During the defensive period, if an alliance BACKBOT is pushed across the center line and into a potential off-sides violation by an opposing ROBOT, the BACKBOT will continue to be considered "On Sides" unless and until it begins to play defensively. If the BACKBOT does not begin defensive play, then it may stay in the position in which it was deposited by the opposing ROBOT, or move back across the centerline at it's own pace. If the BACKBOT does begin to play defensively, then (given that another ALLIANCE ROBOT has not moved to become the new BACKBOT) the ALLIANCE will be considered Off Sides.

* Note: a ROBOT will be considered operable unless the robot has fallen over and cannot be righted, or the ROBOT has been disabled by the field control system, or the team has pushed the "E-Stop" button to disable the ROBOT. Loss of control due to operator error, user software errors, or faulty mechanical systems are not sufficient to cause a ROBOT to be classified as "inoperable."

Section 5. The Robot (includes the Kit of Parts)

Section 5 The Robot is now revised to Rev F.

Rule 14 is modified to recommend that teams install the Color LED prior to the competition s to aid field personnel in assessing a robot's operational status. Installation is not mandatory. When mounted on the robot, teams should follow the general guidelines stated in R14

<R14> Robots **should** use the Alliance Color LED provided in the Kit of Parts to display their alliance color (red or blue). The Color LED will be used by field personnel during the matches for diagnostic purposes. It must be mounted on the robot such that their displayed color is easily visible while standing in front of the robot in its' starting position. Instructions for connecting the Color LEDs are provided in the Innovation First Controller manual. The Robot Controller directly powers and controls the Team Color LEDs. The user has no control over the Team Color LEDs and no programming is required.

Rule 20 (The FIXIT WINDOWS) has been further clarified as follows:

<R20> During the "FIX-IT WINDOW" following each Regional Competition weekend: During this period, all teams (not just those teams attending a Regional Competition) may utilize one or two 5-hour FIX-IT-WINDOWS to manufacture SPARE, REPLACEMENT and UPGRADE PARTS and develop software for their robot at their home facility (not at the competition site). The timing of these "FIX-IT WINDOWS" is at the discretion of the team, but all work must be completed between the **opening** of the Competition (**at 8:30 am on the Thursday of the Competition weekend) and 8:30 am on** the Thursday following the Competition weekend. At the conclusion of a regional competition event, teams may take a limited amount of broken or malfunctioning COMPONENTS or MECHANISMS back to their home facility to make SPARE or REPLACEMENT PARTS. The purpose of this rule is to allow teams to make critical repairs to existing parts to enable them to compete in following events. The intent of this rule is not to have teams take their entire robot back home and make large-scale revisions or upgrades to the robot. Teams may manufacture and/or repair all the parts they want, but the amount of parts they can bring to the competition event is limited (as specified in Rule <R29>).

Change R20 to make the start and end of the Fix-it window to be at 8:30 am local time Thursdays for all teams (competing and non-competing).

Section 6 – Robot Transportation

No changes.

Section 7 – At the Events

No changes

Section 8 – The Tournament

No changes.

Section 9 – The Awards

No changes.

Section 10 – Get Published

No changes.

2006 *FIRST* Guidelines, Tips & Good Practices

No changes

E-Mail Blasts Sent Since Last Update

No changes

Question & Answer Items of Note

No changes