

February 22, 2011

TEAM UPDATE #13

GENERAL NOTICES

Observations from Week 0:

- Rule <R74> is different from previous years. Two solenoids cannot be used to control a single commanded action in a cylinder. For example, one solenoid may not be used to provide pressurized air through one port of a cylinder while a second solenoid is used to close the exhaust port of that cylinder at a certain point in the piston's travel to prevent further movement.
- Remember that all parts of the ROBOT must fit in STARTING CONFIGURATION volume before the start of the MATCH, even if POSSESSING an UBERTUBE.
- In order for the ROBOT to work with the Field Management System, all software must be at the latest revision. Please make sure you update your software before coming to the ARENA.
- Teams must configure their radios once they get to the event and before their ROBOT heads to the ARENA. There will be a kiosk at the event that will configure the radio, but it's important to reset the radio to its factory defaults before running the radio configuration tool. The configuration tool has step-by-step instructions which must be followed for the tool to work effectively.
- Sharp edges on the ROBOTS will not be tolerated, even during Practice Matches. Teams are strongly encouraged to make sure their ROBOT does not pose a puncture hazard to the GAME PIECES.

Section 1 – Introduction & Section 2 – The Arena

No changes

Section 3 – The Game

Section 3 – The Game, Rev L has been updated to include the following edits:

<G20-B> Only MINIBOTS may TRIGGER the TARGET. *Violation: TOWER is disabled.*

<G21> HOSTBOTS may DEPLOY MINIBOTS only onto their ALLIANCE'S TOWERS and entirely below the DEPLOYMENT LINE.

Violation: PENALTY plus RED CARD. TOWER is disabled if MINIBOT is DEPLOYED above the DEPLOYMENT LINE.

<G23> Contact (via ROBOT or GAME PIECE) with the opposing ALLIANCE'S TOWERS is prohibited.

Violation: PENALTY plus RED CARD

<G24> The opposing ALLIANCE may not interfere with the DEPLOYMENT or climbing of a MINIBOT.

Violation: PENALTY plus RED CARD

<G25> During the END GAME, ROBOTS/HOSTBOTS in contact with their ALLIANCE'S TOWER are protected and may not be contacted by an opponent.

Violation: PENALTY for inadvertent contact; PENALTY plus a RED CARD for obviously intentional contact.

<G29> If a ROBOT becomes unsafe (e.g. the ROBOT begins to smoke, the battery falls out, etc.) it may be disabled by pressing the E-Stop button. This will cause the TEAM'S ROBOT to be disabled for the remainder of the MATCH. The E-Stop buttons are intended for remote shut down during a MATCH in the event of safety hazards and will not otherwise affect MATCH score or duration. Any TEAM member may press the E-Stop button.

*Violation: Inappropriate use of the E-Stop button (i.e. not for safety reasons) will result in a **PENALTY plus RED CARD**.*

<G38> ROBOTS and HOSTBOTS may not intentionally deflate GAME PIECES. No violation will be assigned for unintentional deflation.

*Violation: **PENALTY plus RED CARD** for intentional deflation. Repeated unintentional deflation may result in a YELLOW CARD.*

<G39> ROBOTS and FEEDERS may not SCORE on their opponent's PEGS or descore their opponent's GAME PIECES, or interfere with their opponent's TOWERS. *Violation:*

***PENALTY plus RED CARD**.*

<G40> ROBOTS or HOSTBOTS may not exceed PLAYING CONFIGURATION at any time.

*Violation: PENALTY for unintentional, momentary violations. **PENALTY plus RED CARD** for intentional or continuous violations.*

<G46> MINIBOTS may only be used to climb the TOWER.

*Violation: **PENALTY plus YELLOW CARD***

<G47> From the start of the MATCH until it is DEPLOYED, the MINIBOT must remain on the HOSTBOT.

*Violation: **Potential YELLOW CARD**.*

<G48> Strategies aimed at the destruction, attachment, damage, tipping or entanglement of ROBOTS, MINIBOTS, or HOSTBOTS are not in the spirit of the FRC and are not allowed.

*Violation: **PENALTY plus YELLOW CARD***

<G48-C> ALLIANCE ROBOTS may not work together to blockade the FIELD in an attempt to stop the flow of the MATCH. This rule has no effect on individual ROBOT-to-ROBOT defense. *Violation: **PENALTY plus RED CARD***

<G51> Fallen (i.e. tipped over) ROBOTS attempting to right themselves (either by themselves or with assistance from an ALLIANCE partner) have one 10-second grace period per fallen ROBOT in which they may not be contacted by an opposing ROBOT. This protection continues for either 10 seconds or when the protected ROBOTS have completed the righting operation, whichever comes first.

*Violation: PENALTY for inadvertent contact. **PENALTY plus RED CARD** for obviously intentional contact.*

<G52> Intentionally falling down or tipping over to block the field is not allowed.

*Violation: **PENALTY plus YELLOW CARD***

<G54> Each ALLIANCE shall have no more than the four designated members of each of the three participating TEAMS in the ARENA during a MATCH. Any ALLIANCE with additional personnel in the ARENA must have the additional personnel leave the area before the MATCH may proceed.

*Violation: **PENALTY. YELLOW CARD** for repeated offenses.*

Section 4 – The Robot

5V Converter availability:

If your power regulator has failed and you haven't received a new one yet, there are a few options that, while not ideal, will enable teams to continue development. We emphasize that these solutions are not legal on the competition field. Options include:

- 1) Power the radio from the power supply included with it. This would require tethering the robot to an outlet and an extension cord. Teams are encouraged to use diligence and keep safety a priority.
- 2) Tether to the cRIO. Robot performance will be the same wired vs. wireless; however teams will require a long Ethernet cord and must keep safety a priority while tethered.

- 3) Connect the radio to the 5V supply on the PD. While this will work, the 5V supply is not regulated and radio performance will be affected if the battery voltage drops. The result is an unpredictable wireless connection.

At events, the Spare Parts station will include a limited number of converters available for teams to use during the competition, however they must be returned at the conclusion of the event.

Section 5 – The Tournament & The Kit of Parts

Section 5 – The Tournament, Rev C has been updated to include the following edits:

<T25> The only equipment that may be brought on in to the ARENA ALLIANCE STATION is the OPERATOR CONSOLE and non-powered ANALYST-to-FEEDER signaling devices. Reasonable decorative items, and special clothing and/or equipment required due to a disability may be brought into the ALLIANCE or FEEDER STATIONS. Other items, particularly those intended to provide a competitive advantage for the TEAM, are prohibited.

The Kit of Parts

No changes.