

January 28, 2011

TEAM UPDATE #6

GENERAL NOTICES

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No changes.

Section 1 – Introduction

No changes.

Section 2 – The Arena

The dimensions and layout of the vision targets has been posted in the *Vision Target Dimensions* document posted here: www.usfirst.org/frc/competitionmanual under **Section 2 - The Arena**.

Section 3 – The Game

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

- <G05> Alignment devices (templates, tape measures, laser pointers, etc.) that are not part of the ROBOT and fully contained within the volume defined by the **STARTING CONFIGURATION** may not be used to assist with positioning the ROBOT.
Violation: TEAMS that use external alignment devices to position their ROBOT will have their ROBOT arbitrarily repositioned by a referee before the start of the MATCH.
- <G32> Neither ROBOTS, HOSTBOTS, nor MINIBOTS may break the planes of the vertically projected borders of the opponent's ZONES, including a GAME PIECE in their POSSESSION. Momentary incursions by a POSSESSED GAME PIECE will not be penalized if they do not make contact with anything in the ZONE.
Violation: PENALTY. G61 does not apply to this rule, however strategies aimed at taking advantage of this exception will result in a YELLOW CARD. If a ROBOT enters the opponent's ZONE and does not make immediate effort to leave OR if it contacts another ROBOT (or GAME PIECE in its POSSESSION) also in the ZONE, then the intruding TEAM will receive a RED CARD.
- <G33> Neither ROBOTS, HOSTBOTS, nor MINIBOTS may break the planes of the vertically projected borders of the opponent's LANES.
Violation: PENALTY. G61 does not apply to this rule, however strategies aimed at taking advantage of this exception will result in a YELLOW CARD. If a ROBOT enters the opponent's LANE and does not make immediate effort to leave OR if it contacts another ROBOT (or GAME PIECE in its POSSESSION) also in the LANE, then the intruding TEAM will receive a RED CARD.
- <G50> ~~A ROBOT~~ An ALLIANCE may not pin another an opponent ROBOT that is in contact with a field border or TOWER for more than 5 seconds. A ROBOT will be considered

pinned until the ROBOTS have separated by at least 6 feet. The pinning ROBOT(S) must then wait for at least 3 seconds before attempting to pin the same ROBOT again.

Violation: 10 PENALTIES

If the pinned ROBOT chases the pinning ROBOT upon retreat, the pinning ROBOT will not be penalized per Rule <G61>, and the pin will be considered complete.

<G59> TEAMS must retrieve MINIBOTS from the TOWER quickly and safely **without special equipment and while standing on the floor** after each MATCH.

Violation: The FIELD crew will retrieve the MINIBOT if the TEAM does not. A second violation may result in a YELLOW CARD.

Section 4 – The Robot

Section 4 – The Robot, Rev F has been updated to include the following edits:

<R47> Motors and servos used on the ROBOT shall not be modified in any way, except as follows:

- A. The mounting brackets and/or output shaft/interface of the motors may be modified to facilitate the physical connection of the motor to the ROBOT and actuated part.
- B. The electrical input leads on the motors may be trimmed to length as necessary.
- C. The locking pins on the window motors may be removed.
- D. The connector housings on the Window motors (PN 262100-3030 and 262100-3040) may be modified to facilitate lead connections.**

<R48> All electrical loads (motors, actuators, compressors) must be supplied by an approved power regulating device (speed controller, relay module, or Digital Sidecar PWM port) that is controlled by the cRIO-FRC on the ROBOT.

- A. Each CIM motor and Fisher-Price motor must be connected to one and only one approved speed controller. These motors must not be connected to relay modules.
- B. Servos must be directly connected to the PWM ports on the Digital Sidecar. They must not be connected to speed controllers or relay modules.
- C. If used, the compressor must be connected to one and only one approved relay module.
- D. Each other electrical load (motor or actuator) must be supplied by one and only one approved speed controller, or one and only one relay module.

Power regulating devices are “approved” if they are listed in the **2011 Kit of Parts Checklist** or have been approved by *FIRST*. To seek approval for a different device, please contact frcparts@usfirst.org with the component specifications. Any approved devices beyond those on the **2011 Kit of Parts Checklist** will be published at www.usfirst.org/frc/kitofparts.

Section 5 – The Tournament

No change.

The Kit of Parts

The **2011 Kit of Parts Checklist**, Rev C has been updated to correct the nominal voltage for the kit battery.

The **Motor Curves** document posted on the Kit of Parts site (www.usfirst.org/frc/kitofparts) has been updated to reflect the behavior of the M7-RS775-18 when supplied with 12V.