

January 27, 2009

TEAM UPDATE #7

GENERAL NOTICES

General Notes from *FIRST* Headquarters:

The Fifth Gear Simulation Software:

The Fifth Gear software, introduced by *FIRST* President, Paul Gudonis, at Kickoff, is a tool that simulates FRC *Lunacy* and *Overdrive* matches. FRC Volunteers created The 5th Gear, with continuing support from Lockheed Martin; together with *FIRST* and WPI they are offering this year's version to all FRC teams. Exhibitions are planned at several FRC regional competitions, including investigations into how such a simulation may be used most effectively in future FRC seasons.

For more information, please click on the "5th Gear Simulation" link posted under *Section 6 - The Game* at <http://www.usfirst.org/community/frc/content.aspx?id=452>. If you'd like to discuss the simulation or have questions, a discussion forum has been created at forums.usfirst.org, specifically at <http://forums.usfirst.org/forumdisplay.php?f=1091>.

We hope this will be a useful tool for teams and look forward to your feedback on the above forum.

Section 0 - Introduction

No changes.

Section 1 - Communication

No changes.

Section 2 – Team Organization

No changes.

Section 3 – At the Events

Section 3 – At the Events, Rev B, includes the following edits:

3.9 THE PIT

Teams, volunteers, *FIRST* Staff, and guests spend a lot of time in the Pit area. Get to know other teams, help each other when you can, and keep the aisles clear. Time is short, and help is very often right "next door" in the adjacent team pits.

Children under 12 MUST be accompanied in the Pit by an adult at all times!

3.9.1 Be Safe, Be Kind, Be Gracious

- Use common sense regarding safety and courtesy.
- Wear required ANSI-approved safety glasses when in the pit. Wear them on the playing field.
- Choose a student safety captain during the build season to monitor team safety at your work areas and also at the events.
- Respect advice from safety captains and safety advisors.

Section 4 – Robot Transportation

No changes.

Section 5 – The Awards

No changes.

Section 6 – The Arena

No changes.

Section 7 – The Game

No changes.

Section 8 – The Robot

Section 8 – The Robot, Rev F, includes the following edits:

<R18> To attach the TRAILER to the ROBOT, TEAMS must use a Trailer Hitch constructed from materials provided in the 2009 Kit Of Parts. Details on the construction of the Trailer Hitch are provided in Drawing "GE-09040."

- A. The Trailer Hitch is composed of the “Trailer Spacer” (Part 2 in the referenced drawing) and the “Trailer Mount Bar” (Part 3 in the referenced drawing). The Trailer Spacer is a 7-inch length of square steel tubing provided in the Kit Of Parts. The Trailer Mount Bar is a 7-inch length of robot chassis material (C-channel) to be cut from the provided KOP chassis material.
- B. The Trailer Hitch must be rigidly attached to a fixed location on the ROBOT, with the long dimension of the Trailer Hitch horizontal and the opening of the C-channel facing away from the ROBOT. The horizontal center line of the Trailer Hitch must be 2-13/16 inches above the floor, +/- 0.25 inches.
- C. The Trailer Hitch must be positioned so that the TRAILER may be locked in place with a standard 1/4– inch diameter hitch pin (McMaster-Carr part number 98416A009) . During a competition MATCH, this hitch pin will be provided with the TRAILER as part of the ARENA equipment. See Figure 8-5.
- D. The Trailer Hitch must be located on the BUMPER PERIMETER of the ROBOT structure such that it may easily connect with the tongue of the TRAILER (attached to the TRAILER).
- E. The Trailer Hitch must be placed such that, as the TRAILER swings from side to side, the first contact between the TRAILER and ROBOT is BUMPER-to-BUMPER and not TRAILER-tongue-to-BUMPER (to prevent placing excessive stress upon, and possibly damaging, the TRAILER tongue). See Figure 8-6.
- F. The color of the TRAILER (red or blue) will be used to indicate the ALLIANCE of the ROBOT.
- G. The Trailer Hitch must be designed for quick and easy installation and removal, to aid in ROBOT inspection during sizing and weighing checks (as a guideline, the Trailer Hitch should be removable by one person in ten minutes).

<R82> All devices connected to the USB ports of the Driver Station shall be powered solely through the USB port. All devices connected to the analog and digital ports of the Driver Station shall be powered solely through the provided 5Vdc connection pins on the Driver Station. External power sources of any type are not permitted on any equipment connected to these ports.

- Please note that the power available through the USB ports, digital I/O, and analog input pins is limited to 2 amps total. Care must be taken to ensure that any team-provided devices connected to these sources do not over tax the available Driver Station supplied power.

<R82.1>All Driver Stations must have their circuit board grounded to the metal case. The document that describes the process for grounding the Driver Station is posted under *Section 8 - The Robot* of the Competition Manual at <http://www.usfirst.org/community/frc/content.aspx?id=452>.

Section 9 – The Tournament

No changes.

Section 10 – The Kit of Parts

No changes.

Helpful Links: