

January 16, 2009

## TEAM UPDATE #4

### GENERAL NOTICES

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General Notes from *FIRST* Headquarters:

No changes.

#### Section 0 - Introduction

No changes.

#### Section 1 - Communication

No changes.

#### Section 2 – Team Organization

No changes.

#### Section 3 – At the Events

No changes.

#### Section 4 – Robot Transportation

No changes.

#### Section 5 – The Awards

No changes.

#### Section 6 – The Arena

No changes.

#### Section 7 – The Game

Section 7 – The Game, Rev D, includes the following edits:

<G07> Scores are determined based on the state of the GAME PIECES at the end of the MATCH. Scores will be assessed after all objects in motion when the arena timer displays zero seconds come to rest.

- A. The final score of a MATCH is the total of points assigned due to SCORED GAME PIECES, less any assigned PENALTIES.
- B. If a TRAILER tips over, the points SCORED for that TRAILER at the time it was tipped will be preserved for the remainder of the MATCH.

## Section 8 – The Robot

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

<R66> Inputs to custom circuits can be connected only to the following sources:

- A. Power Distribution Board protected 12Vdc outputs
- B. Speed controller outputs,
- C. Relay module outputs,
- D. Analog Breakout outputs,
- E. Digital Sidecar PWM **Out**, **I2C**, Relay or Digital **I/O** ports,
- F. Other custom circuits, or
- G. Switches, potentiometers, accelerometers, sensors, and other additional permitted electronics.

<R67> All outputs from sensors, custom circuits and additional electronics shall connect to only the following:

- A. Other custom circuits, or
- B. PWM **Out**, **I2C**, Relay or Digital **I/O** ports on the Digital Sidecar, or
- C. **ANALOG IN** ports on the Analog Breakout.
- D. Ethernet Port 2 on the cRIO Mobile Device Controller (to which the Kit Of Parts-provided camera, and only that camera, may be connected).

## Section 9 – The Tournament

No changes.

## Section 10 – The Kit of Parts

A number of teams have reported faulty 5V indicator LEDs on their Power Distribution (PD) Board. After assessment of the situation, we are certain that all of these failures are due to case interference with the resistor that limits the current in the 5V LED.

There is no harm in using the PD Board without this resistor, and *FIRST* will not be replace PD Boards because of this issue. The conformal coating provides convenient protection from any loose component.

While we're certainly disappointed that the 5V LED may not be functional for all teams, we appreciate your understanding as we work through and with any blemishes of a very new, very exciting control system. Thank you.