# 2005 FIRST Robotics Competition

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## → Special Notices ←

**There are no -> Special Notices <- for this update.**

## → General Notices ←

### Documents and Updates

FIRST will provide important information to teams via the FIRST web site at:

http://www.usfirst.org/robotics/doc_updt.htm

Please check the team updates portion of the web site on a regular basis to insure that your team does not miss critical information about the 2005 FIRST Robotics Competition.

Our schedule to publish Team Updates is:
- Tuesday by 5PM and Friday by 10AM. We work hard to meet these commitments. Unexpected circumstances may, on occasions, delay their publication.
- Additional updates may be released if required.

### Question & Answer System

**Please review answers to questions in the Question & Answer System daily before submitting a new question (see instructions below).**

The Question & Answer System can be found at: http://www.usfirst.org/robotics/2005/qa.htm

1. Please ask one question at a time.
2. Questions are limited to 240 characters.

| Find Q&A Answered After a Certain Date | Find an Individual Q&A ID |
|---|---|
| Leave **Section** set to **All** | Enter question ID # in the **ID** field |
| Set **Date** to **After** | Press *Update Filter* |
| Enter the appropriate date in the next field | |
| Leave **Search** blank | |
| Set **Status** to **Answered** | |
| Press *Update Filter* | |

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## 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

➤ **ADD EXAMPLES to: Rule G15 (G15 is reproduced here to assist you while reading the examples)**

<G15> A ROBOT may not interfere with an opposing ROBOT while any part of the opposing ROBOT is touching its LOADING ZONE and the ROBOT is in the process of retrieving/receiving a TETRA. It is intended that TETRAS be introduced into play as rapidly as the alliance ROBOTS are able to retrieve and utilize them. Violations will result in a 30-point penalty (i.e. three 10-point penalty flags will be thrown) to the offending alliance.

**The intent of Rule G15 is to allow teams uninhibited access to their loading zones to retrieve tetras and to protect a human player who is in the process of handing a tetra to its robot that is in a manual loading station. It is not to provide a means to gain an advantage by penalizing your opponent.**

**Example 1**

Robot "BLUE01" is in the red alliance loading zone, blocking access to the zone. Robot "RED01" approaches the loading zone to retrieve a tetra. BLUE01 stays in the way. RED01 enters the loading zone and runs into BLUE01, and is not able to retrieve the tetra. The blue alliance would receive a 30-point penalty under <G15>, as they interfered with RED01's attempt to retrieve a tetra while RED01 was in the loading zone. The red alliance does not receive a penalty for the robot-

to-robot contact, as BLUE01 was not in contact with its own loading zone, and BLUE was not in the process of retrieving a tetra.

### Example 2

Robot "BLUE01" is next to the red alliance loading zone, but not in the zone. Robot "RED01" approaches the loading zone to retrieve a tetra. BLUE01 stays in the way. RED01 runs into BLUE01, and is not able to enter the loading zone or retrieve a tetra. No penalty is assessed to either alliance, because RED01 never entered the loading zone.

### Example 3

Robot "BLUE01" is in the red alliance loading zone, blocking access to the zone. Robot "RED01" approaches the loading zone to retrieve a tetra. BLUE01 decides to move out of the way. As RED01 enters the loading zone, BLUE01 is leaving the zone, and they lightly contact each other. RED01 then retrieves the tetra. No penalty is assessed to either alliance, because only incidental contact occurred, and BLUE01 did not interfere with the RED01 efforts to retrieve the tetra.

### Example 4

Robot "RED01" is in the red alliance loading zone, preparing to retrieve a tetra. Robot "RED02" is next to the same loading zone, waiting for RED01 to finish and get out of the way. Robot "BLUE01" approaches the loading zone and pushes RED02 into RED01, and RED01 is not able to retrieve the tetra. The blue alliance would receive a 30-point penalty under <G15>, as they interfered with a robot in a loading zone (RED01) that was retrieving a tetra. The fact that they used an intermediate device (RED02) to affect the interference is immaterial; the blue robot was still the source of the interference. The red alliance does not receive a penalty, as RED02 is on the same alliance as the affected robot (RED01), and under <G15> they would be penalized only if they were on opposing alliances.

### Example 5

Robot "RED01" is in the red alliance loading zone, preparing to retrieve a tetra. Another tetra is on the ground next to the loading zone. Robot "BLUE01" approaches the loading zone and pushes the tetra on the ground into RED01, which is dislodged from its position. RED01 has to reset its position, and after this delay, retrieves their tetra. The blue alliance would receive a 30-point penalty under <G15>, as they interfered with a robot in a loading zone (RED01) that was retrieving a tetra. Even though RED01 was eventually able to retrieve the tetra, the retrieval was delayed and made more difficult, which constitutes interference. The fact that BLUE02 used an intermediate device (the tetra on the ground) to

affect the interference is immaterial, the blue robot was still the source of the interference.

## Example 6

Robot "RED01" is in the red alliance loading zone, is already loaded with a tetra, and is waiting for a path to clear to the center goal before moving in to the rest of the field. Robot "BLUE01" approaches the loading zone, and blocks RED01's attempts to leave the loading zone and score on the center goal. The robots come into contact several times while BLUE01 blocks RED01. No penalty is assessed to either alliance, provided BLUE01 acts within the limitations of <G21> that prohibit pinning for more than 10 seconds. RED01 is not retrieving a tetra, so no violation of <G15> has occurred.

## Example 7

Robot "BLUE01" pushes robot "RED01" into the blue loading zone. "BLUE01" continues such that it is in the blue loading zone while it is still in contact with "RED01". No penalty is assessed against "RED01" since "BLUE01" was not in the process of retrieving/receiving a tetra while it was pushing "RED01".

## Example 8

Robot "RED01" is in the red alliance loading zone, retrieving a tetra. Robot "BLUE01" is next to the loading zone, but clearly not touching the loading zone or RED01. Robot "RED02" approaches BLUE01, and pushes BLUE01 into the loading zone, where it contacts RED01 and prevents it from completing the tetra retrieval. No penalty is assessed against either alliance. RED02 was the source of the interference. Because BLUE01 was merely the object used by RED02 to interfere, and not the source of the interference, it did not violate <G15>. The red alliance is not given a penalty, because interference with their own alliance partners is permitted (although not very wise).

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## Section 5 - The Robot (includes the Kit of Parts)

**ROBOT**

➢ **"C" PROGRAMMING NOTICE: Master Code Update Required**

You must download new Master Code before you compete in a FIRST Robotics Competition.  New Master Code version 10 is available now on the web: http://www.ifirobotics.com/rc.shtml#Programming.  The Master Code download process erases the User / Default code.  So after downloading the new Master Code you must re-download your User or Default code from the web.   After this process is completed (downloading Master and User or Default Code), the auto-load feature is disabled and can no longer be enabled.  With this feature being disabled, in order to re-download User or Default Code, you must hold the programming button down on the RC unit until the Program State LED turns solid yellow.  Instructions for downloading Master Code are included in the 2005 Master Code version 10 zip file.

**KIT**

➢ **CORRECTION to: Nut in the Wheel Assembly Instructions**

Page 4 of the wheel assembly instructions on the Innovation First website lists the following:

Recommended hardware can be found at www.mcmaster.com
Screw Part Number: **91255A276**
Nut Part Number: **90760A411**

The nut part number is INCORRECT.  It should be:

**90480A195**

It was correct on the Advanced Material List.

➢ **CAUTION ADVISED: Transmission Noise**
When assembling the transmissions, please reference the Assembly Tips on page 2-5 of the Transmission Manual. Most importantly, ensure that all setscrews are secured with Loctite threadlocker and that the internal gears are lubricated with a lithium-based grease.

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- **INNOVATION FIRST PURCHASES: Buying with a Purchase Order**
  You can buy from Innovation First with a Purchase Order if the amount is $500 or greater. There are no exceptions. You can also purchase with a credit card (preferred), COD or mail in a check with your order.

- **PURCHASING the: CMU Camera 2**
  You can purchase a camera module from Innovation First but not online. The module consists of the camera, a motherboard that mates with the camera, and a RS-232 Converted board. You must be a FIRST team and call Innovation First to purchase this item, 903-453-0800.

## 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 - Scholarships

No changes.

## FIRST Guidelines, Tips & Good Practices

No changes.

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## E-Mail Blasts Sent Since Last Update

### 1/19/2005

**Championship Hotel Reservations**
Championship hotels are now available on-line. If you are attending the Championship, please go to http://www.ths-frc.com/ to make your reservations.

**Sprocket Kit for 2005 FRC**
Due to the high demand, Innovation First is now offering the Large 28-tooth sprocket (ROBOT-SPROCKET-2005-LG) and the Small 21-tooth sprocket (ROBOT-SPROCKET-2005-SM) as individual items. These sprockets were previously sold only as a kit of 2 sprockets each (ROBOT-SPROCKET-2005). The price for each sprocket is $19.99.

To place your order, email Innovation First at info@innovationfirst.com or call them at 903-453-0800.

## Question & Answer Items of Note

None.