

January 27, 2006

TEAM UPDATE #4

GENERAL NOTICES

Innovation First has just released an updated version of the IFI Loader specifically designed to accommodate very large hex files. The new IFI Loader file is “IFI_Loader v1.1.0” and can be found on the RC web page by clicking on the URL shown below:

<http://www.ifirobotics.com/rc.shtml#Programming>

The new IFI Loader is:
IFI_Loader v1.1.0

Documents and Updates

Section 5 contains a clarification and revision to Rules concerning the legal Exide Battery types permitted. The EX18-12 and the ES18-12 batteries are identical and may be used. Teams wanting to order spare batteries (Exide ES18-12) can find the 2006 Battery Order Form on the *FIRST* web site at

http://www.usfirst.org/robotics/2006/frcdocs.htm#Section5/Parts_Order_Forms/

Question & Answer System

The Q & A System has been quite active and generally is up-to-date. Teams are advised to actively monitor and to use the “search” function in particular for the latest discussions on the Rules, bumpers, motors, balls, etc.

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

No changes.

Section 5. The Robot (includes the Kit of Parts)

The following changes have been made to The Robot Section 5, now at Rev D:

<R43> **Additional Parts:**

Change the reference to servo type (in Bullet 1) from HS-322S to HS-322HD. The only Hitec HS-322 servo model currently available in stores is the HS-322HD (same item as supplied in the Kit of Parts).

<R43> Specific items allowed include:

- Additional HITEC HS-322HD Servos.

Exide Battery Types

Exide Battery type EX18-12 is a manufacturers part supplied to *FIRST* for the Kit of Parts. The identical battery, commercially available, is the Exide ES18-12. Revisions to Rules R51 and R52 defines these Exide Battery types are permitted legal sources:

<R51> The only legal main source of electrical energy on the robot is the 12VDC non-spillable lead acid battery provided in the Kit of Parts. That 12V battery is the Exide type EX18-12. The Exide ES18-12 battery, purchased through your local Exide supplier as a spare, is identical and may also be used. You may use other equivalent type 12V batteries, but only during the Thursday practice rounds.

The 7.2v “backup” battery is considered an integral part of the Robot Controller, and may not be used for any other purpose.

<R52> The EX18-12 or ES18-12 Battery may only be charged by an Automatic Battery Charger rated at a maximum of 6 Amperes between matches. When recharging the Kit batteries, you may use the charger provided by *FIRST* or an automatic charger with an equivalent charging current rating.

Deleted the battery type number from the description as unnecessary.

<R09> ..., *the Exide 12VDC battery* and its associated half of the Anderson connection pair (including no more than 12 inches of cable per leg, the associated cable lugs, connecting bolts, and insulating electrical tape)

Section 6 – Robot Transportation

Instructions have been clarified in 6.7.1 The FEDEX Freight System regarding the new Passkey process in following sections:

6.7.1.1 NEW: PassKey Process - Teams in the 48 Contiguous U.S. States

As a part of the Kit of Parts, teams will receive instructions for printing on-line airbills. You will find the directions in a large FedEx envelope. If you are registered for the Championship, your *return* airbill will be in the registration envelope at the event.

6.7.1.2 Process - Teams in HI, AK, PR

FIRST will send a FedEx envelope with two (2) pre-printed airbills to your team's Shipping Contact. This will most likely occur in early February.

If you are registered for the Championship, your *return* airbill will be in the registration envelope at the event

6.7.1.3 Process – International Teams Competing in the U.S.

FIRST will send a FedEx envelope with two (2) pre-printed airbills to your team's Shipping Contact. This will most likely be in early February. Make sure you have all Customs papers in order for the shipment to and from the U.S.

If you are registered for the Championship, your *return* airbill will be in the registration envelope at the event.

Section 7 – At the Events

No changes.

Section 8 – The Tournament

No changes.

Section 9 – The Awards

The **Hall of Fame Awards** section has been revised to set a new deadline date for candidates to submit a DVD together with their Chairman's Award submission. The changes, highlighted in italics are as follows:

6.7.1 Hall of Fame Award

FIRST Robotics created The Hall of Fame to recognize the teams that have had the most impact on *FIRST* growth. A team earns permanent Hall of Fame status by winning the Championship Chairman's Award, *the* most prestigious *FIRST* award. Unlike other Halls of Fame, the model teams in the *FIRST* Hall of Fame are not retired, but begin a new phase of participation, requiring additional activities to achieve Hall of Fame Star Status. To achieve Hall of Fame Star Status, a team must submit a Chairman's Award entry, using the same criteria as all other Chairman's Award applicants as described above in "Submission Process." Hall of Fame Chairman's Award submissions will not be included in the Regional Chairman's Award judging process.

6.7.1.4 NEW: DVD Submission

FIRST encourages teams to enhance each submission by creating a DVD, which *should be* mailed to *FIRST* headquarters, attention Sue Robinson, postmarked *no later than April 19, 2006*. Teams are *encouraged to* bring a copy of the DVD and have equipment to show it in their booths at The Championship.

Congratulations to all the previous Chairman's Award winners! This year's thirty-three (33) Regional Chairman's Award winners will vie for the one spot reserved for the 2006 winner.

6.7.1.5 Display Specifications

These stellar teams should also create a display booth that meets the standards associated with the Chairman's Award. It should showcase the teams' achievements and support for *FIRST* and highlight how the team continues to promote *FIRST*, while showing what it means to be a Chairman's Award recipient.

Each team will have a ten-foot space (10), which includes a skyline wall and display drum on which teams can display graphic panels and awards. *These walls are made of fabric and only Velcro can be attached to them. We ask teams not to assemble* any large structure over forty-eight inches (48) tall or one that extends out from the skyline panel and impedes persons from viewing all of the Hall of Fame teams at one time.

Section 10 – Get Published

No changes.

2006 *FIRST* Guidelines, Tips & Good Practices

The 2006 *FIRST* Guidelines, Tips, and Good Practices document has been upgraded to Rev C with changes as highlighted below:

- ✓ **Update G4.2** 12VDC Power distribution system to show the suggested power distribution system drawings permitted featuring use of the IFI CB/Distribution PCB supplied in 2005. Teams should refer to the 2005 Power Distribution diagram for guidance in wiring for this configuration.
- ✓ **Update section G4.4.1** with a modified CMU Cam2 simple diagram showing the recommended Pan/Tilt control cable connections from the RC unit.

A game plan with good and simple advice, not added to the Guidelines book, is presented here regarding the assembly and checkout of the Vision System sensor for your robot: Sometimes, ... doing less is more...

- 1) Build camera per instructions and attach to RC per instructions,
- 2) Build green light per instructions,
- 3) Point camera toward green light
- 4) Load "camera.hex" to RC unit processor
- 5) Use the "default" calibration parameters (no, you don't need to calibrate first)
- 6) You're done! Camera should be tracking.

E-Mail Blasts Sent Since Last Update

No changes.

Question & Answer Items of Note