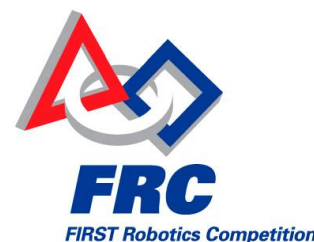


**Section**  
**3**

# AT THE EVENTS



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## 3 AT THE EVENTS

### 3.1 OVERVIEW

This section provides a general summary regarding safety, mascots/uniforms, recommended items and equipment for teams to bring, Pit rules, generic event schedules, robot inspections, replacement parts, and competition manners. The following section provides a "feel" for competition schedules, registration procedures, practice times, and matches. Please familiarize your team with this overview so all team members know what to expect and will understand the routine and the rules.

### 3.2 FIRST SPECIFIC EVENT INFORMATION

To ensure that your team has the proper information for the competitions it will attend, review the information presented at [www.usfirst.org/frc\\_regional\\_events](http://www.usfirst.org/frc_regional_events). This information is only available on the *FIRST* web site and contains critical event-specific information regarding pre-order lunches, agendas, event addresses/directions, drayage locations, team socials, and more.

### 3.3 FIRST SAFETY

Participants and team mentors should review the *FIRST* safety policies and the *FIRST* Safety Manual located at [www.usfirst.org/community/frc/content.aspx?id=470](http://www.usfirst.org/community/frc/content.aspx?id=470). It provides sound safety practices for your workplace and *FIRST* events. Additional specific site restrictions can be found within the information referenced in Section 3.2. Every team should know, understand, and follow the safety rules.

- Do not run in the venue.
- Wear proper closed-toed shoes to protect feet and toes.
- Charge batteries in an open, well-ventilated area. Do not charge near an open flame or near equipment that may produce sparks. Do not use smoking materials in the battery charging area. Charge in an upright position. It is not safe to charge the SLA battery in an inverted position. Should your battery leak, ask the Pit Administration Supervisor for baking soda to absorb the acid.
- Open flames are not allowed in any of the buildings
- Only the drayage company may handle loading robots in and out.
- Only operate tethered robots in the Pit area.
- Two-way radios are not allowed in the pit or near the playing field as they may interfere

#### 3.3.1 Safe Travel

Travel in pairs or larger groups at all times going to, coming from, and during each event. Be sure to include enough informed chaperones, specified meeting places in case someone gets separated from the group, contact information for those traveling, and a room list for hotel stays. Be sure to specify a meeting place for your group in case of fire or evacuation at the hotel or at an event. Keep an accurate team count and have your team use the buddy system.

#### 3.3.2 Safety Captain Badges

Each team should appoint a safety captain, adult or student, who will observe and make suggestions for a safe workplace and work methods prior to and during the competition events. He or she will receive a badge at the team's initial competition event and should continue to maintain a safe environment, especially the team's pit station, at each competition event.

#### 3.3.3 Mandatory Safety Glasses

For each competition, *FIRST* requires all teams to bring and supply ANSI-approved safety glasses for its team members, mentors, and guests. All individuals must wear them in the team Pit stations, the general Pit area, and the competition field. Safety glasses must be non-shaded, except for rose, blue, and amber tints. Additionally, individuals must wear safety glasses while:

- Crating and uncrating the robot
- Working on the robot
- Observing any robot building/repair work

Regular glasses do not qualify as safety glasses, and *you must use approved safety goggles over them*. Goggles are not required over glasses **only if** the glasses are ANSI-approved with side shields.

### 3.3.4 Safety Manual

The “*FIRST* Robotics Competition Team Safety Manual,” found online at [www.usfirst.org/community/frc/content.aspx?id=470](http://www.usfirst.org/community/frc/content.aspx?id=470), is a must read for safety captains, mentors, and students. It contains helpful suggestions and a checklist. The whole team should be familiar with its contents.

### 3.3.5 Other Safety Recommendations

At events, the pure anticipation and excitement of being there sometimes overshadows common sense and safety fundamentals. One safety area that teams sometimes overlook is the particular need to wear appropriate and proper clothing when working or just hanging around the robots. In addition to the ANSI-approved safety glasses required for eye protection, *FIRST* also highly recommends that team members and mentors:

- Refrain from wearing dangling jewelry or loose, baggy clothing near the robots
- Tie back long hair so that it will not get caught in the robot or other machinery
- Wear gloves to protect hands and fingers when handling the robot or the robot crate.
- Remember that Fire Extinguishers are available at the Pit Administration Station and near the Playing Field
- Please stay within your Pit Station or move to the competition viewing area. If the pit area becomes too crowded for teams and their machines to move back and forth to the field safely and quickly, *FIRST* will request that some team members leave the area.
- Each team appoints a Safety Captain who will help maintain event safety, especially in the Pit. He/she should monitor your team’s general safety practices and Pit and Pit Station safety.

### 3.3.6 Robot Carts

To protect team members from muscle strains and other injuries as they transport the robot between the Pits and the competition area, we strongly recommend that team members use a cart, but please keep the following in mind:

- Carts must remain in the team pit area when not in use for robot transportation;
- All carts should fit through a standard 30-inch door;
- Wheels on the cart must not damage site flooring;
- Do not add music to the cart.

Refer to the “*FIRST* Safety Manual” for robot lifting techniques. By practicing these safe techniques, your team members will also develop a quick, fluid routine.

### 3.3.7 Safety Recognition Program

Throughout the competition, the easily recognizable, green-shirted Safety Advisors will continuously tour in pairs to observe activities in the Pit, practice field, queue line, and playing fields to critique the safety habits of the teams. This includes observing the uncrating of robots and transporting them between the Pit and playing fields. The Safety Advisors will rate safe performance in three key areas:

- 1.) Safe Behaviors
- 2.) Physical Conditions

### 3.) Safety Glasses as well as other Personal Protective Equipment (PPE) as appropriate

Safety Advisors will use plastic safety tokens, or credits, to recognize and encourage safe behaviors at the competition. Teams will earn tokens for positive safety habits in the above areas.

Teams will receive ten (10) safety tokens in the registration packet and should keep 5 of them. They should distribute the other five (5), in whatever denomination they wish, to teams worthy of best safety practices. Teams will return the tokens to the Administration Station for a final count on the last competition day. The three teams accruing the most safety tokens will be announced during the Awards Ceremony. They should collect their “safety” pins at the Pit Administration Station after the ceremony.

## 3.4 COURTESIES AND RULES

The behind-the-scenes action is in the Pit. This is where you can get to know other team members and perhaps pick a few brains and learn a few things. The *FIRST* Staff and volunteers want you to enjoy the competition and ask that everyone follow courtesy rules while in the Pit, on the playing field, and in the audience.

We are trying to encourage support from our audience at the Regional events and the Championship because we need continued and growing support from outside sources. Please help to make guests feel comfortable and welcome. Provide your team with the site restrictions and rules so everyone can work and compete in a safe, sportsmanlike, friendly, and orderly environment.

## 3.5 STAFF/VOLUNTEER BADGES

At events, staff and volunteers will wear distinguishing badges. Should your team members or mentors have questions or a problem, most staff and volunteers will help you find the answer, especially the pit administration staff.

## 3.6 COMPETITION OVERVIEW

This section provides general competition information and necessary details regarding scheduling, robot inspection, practice times, safety, rules, regulations, and suggestions for teams.

### 3.6.1 Practice Matches

Your registration envelope will contain a list of practice times for the first day. Practice matches take place on the competition field. The list will indicate on which competition field you will practice and with what teams. Teams may not switch practice times.

#### 3.6.1.1 Time Slots

All teams will receive a comprehensive list of practice times. Your team must be ready to practice at the designated times and on the specified fields. If your team/robot cannot be ready for your practice time slot, you team may still send your human player to practice alone. Your team members may want to scout other teams and their strategies during practice and the actual competition matches.

#### 3.6.1.2 The Filler Line

Although teams may not switch practice times, there will be a designated Filler Line at each Regional Competition. Teams whose robots are ready for practice may join the filler line. Teams from the Filler Line will be used on a first come, first serve basis to fill empty spots in practice matches left by other teams that do not show up for their own practice match. Filler Lines will be limited to at most, six robots, but is dependent upon space at venues. Criteria for joining the filler line are as follows:

- Teams must join the Filler Line with their robot
- Teams may not work on their robot while in the Filler Line
- Teams may not occupy more than one spot in the Filler Line
- If a team is queued up for their practice match, they may not join the Filler Line
- Robots in the Filler Line, after the lunch break, must have passed full inspection.

### 3.6.1.3 Courtesy

In order to make the most of practice time, there will be specified teams on a field during an assigned practice slot. Each team must be respectful of the other teams sharing the field. Friendly interaction between machines is acceptable if all teams are willing. Un-sportsman-like conduct on the part of a team during practice could result in loss of practice time.

## 3.6.2 Competition Matches

Once your team robot passes inspection and receives its official sticker, it is eligible to compete.

### 3.6.2.1 Match Lists:

Match lists for the second and third day of competition will be available on the afternoon of practice day. The FTA will determine what time these lists will be generated and distributed. The Pit Administration Supervisor will manage the distribution process. This list includes both days of matches and provides information as to when teams will participate, with whom, and against whom. The list is final and the schedule will not be altered.

### 3.6.2.2 Scouting:

Teams often use the match list to scout other teams to watch their strategies and robot capabilities. This is especially helpful when choosing alliances, should your team advance to the final matches.

### 3.6.2.3 Early Matches:

Make sure your team is on time and in place if you have an early match on competition days. ***If your team is scheduled for any of the first four matches on those days, you must queue up before the Opening Ceremony.*** Matches begin immediately after its conclusion.

### 3.6.2.4 The Schedule at Events

You will need to know when you will compete. The Pit Announcer and Queue Team will work together throughout the days to line up teams for competition matches and maintain the schedule. Pay attention to the practice and match schedules and listen for announcements throughout the day, especially about any changes to the number of the ending match before lunch or which match designates the end of the competition day. Please note that there will not be audible queuing at the Championship; teams must queue a half hour prior to each designated match.

## 3.6.3 Sample Competition Agendas

Print the event-specific agenda from the web site for each event you will attend. This information can be found at [www.usfirst.org/frc\\_regional\\_events](http://www.usfirst.org/frc_regional_events). Bring it with you so your team will have the schedule.

The following agendas are approximations.

### 3.6.3.1 Regional Competitions

**First Day**     Robot uncrating and battery charging

3 persons per team admitted (*one person must be post high school*) prior to pit opening, typically 7:45 a.m. Each must have safety glasses. **This early opening time is not for team station setup, work on the robot, or registration.**

Team arrival. Pit typically opens at 8:30 a.m.  
Registration - Release form collection, before noon  
Practice matches  
Official weigh-in and inspection  
Pit closes not later than 8 p.m.

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**Second Day** Pit opens, typically at 8 a.m.  
Team lineup typically begins at 8:30 a.m.  
Opening ceremony, typically 9 a.m.  
Qualification matches  
Awards ceremony  
Pit closes not later than 6 p.m.  
Team Social, if applicable

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**Final Day** Pit opens, typically 8 a.m.  
Opening ceremony, typically at 9 a.m.  
Continued Qualification matches  
Elimination matches, typically at 1 p.m.  
Awards ceremony  
Bronze medallion pickup at the Pit Administration station  
Chairman's Award submissions returned  
Pit closes not later than 5 p.m. - Robots crated for shipping

### 3.6.3.2 Championship Agenda

**Wednesday Evening** Robot uncrating, battery charging, and registration - typically from 6 to 9 p.m.

3 persons per team admitted (*one person must be post high school*) prior to pit opening. Each must have safety glasses. **This time is not for team station setup or work on the robot.**

---

**Thursday** Team arrival. Pit typically opens at 7:30 or 8:00 a.m.  
Registration upon arrival and before noon  
Practice matches  
Official weigh-in and inspection  
Pit closes not later than 8 p.m.

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**Friday** Pit opens; typically at 7:30 or 8 a.m.  
Team lineup begins at 8:30.  
Opening ceremony about 9 a.m.  
Seeding (qualifying) matches  
Pit closes not later than 6 p.m.

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**Saturday** Pit opens, typically at 7:30 or 8 a.m.  
Opening ceremony  
Continued seeding (qualifying) matches  
Elimination matches, typically 1 p.m.  
Awards ceremony  
Teams receive returned Chairman's Award submissions before Pit closes  
Pit closes not later than 5 p.m.- Robots packed for shipping, pit stations clean  
*FIRST* Finale typically from 6:30 to 9:30 p.m.

### 3.7 EARLY UNCRATING PROCEDURE AT EVENTS

For teams' convenience and to help ensure safety in the Pit, three (3) persons from each team will be allowed to uncrate early. **At least one of the three must be an adult of post high school status.** If any of the three-team members leave the Pit area during that time, he/she will not be re-admitted until general Pit opening. **Teams cannot work on the robot or set up the team's station during that time.**

**Regional Competitions:** Refer to your event agenda for possible early opening time, for uncrating only, on Thursday morning.

**The Championship:** Uncrating will be allowed on Wednesday evening from 6 p.m. to 9 p.m. The adult team member can also use this time to register at the Championship early to avoid the rush on Thursday morning. **There is to be no pit station setup at this time. If your crate becomes your pit setup, please remember you may *only* uncrate your robot.**

The Shepard Service Desk personnel will be on hand to help during this limited opening.

- If your crate has incurred damage, do not open it until you notify the Shepard Service Desk personnel right away about the problem.
- Look for any label on your crate having to do with weight or crate damage questions regarding your shipment. Contact the Shepard Service Desk *before opening the crate. Once the team opens a crate, it cannot protest a weight issue.*
- **SES - Resolution time for weight overage / damage problems:**  
Notify the Shepard Service Desk personnel *immediately.*
- When you have uncrated, notify the Shepard Service Desk personnel so haulers can remove the empty crate(s) and keep aisles clear and safe.

### 3.8 TEAM REGISTRATION

Registration takes place at the Pit at the Administration Station the first morning of the event at the Regional Competitions and Wednesday evening and Thursday morning for the Championship. At each event, *an adult member* of each team should register *by noon on the first day of the event.*

Prior to attending your event(s), please download the Essential Information Sheet and the Agenda. You can find agendas on the 2008 *FIRST* Robotics Competition Regional Events page.

Please read the following information carefully.

#### 3.8.1 Consent / Release and Team Roster Forms

You can find the forms here:

[www.usfirst.org/community/frc/content.aspx?id=8128](http://www.usfirst.org/community/frc/content.aspx?id=8128)

*Teams cannot register without a completed Consent/Release form for each team member and mentor attending the event(s) and a completed Team Roster.* This includes adults traveling with the team. The forms for persons under 18 years of age must also have a parent or legal guardian's name and signature.

##### 3.8.1.1 Prepare and Collect the Consent / Release Forms

Assign someone to take care of this project in advance. *Do not leave it for the last minute!* If a person does not attend the first event and did not turn in a form, he/she must complete one and turn it in at the event he/she attends. This includes the Championship.

***We do not want, and will not accept school permission forms in lieu of our official form.***

##### 3.8.1.2 Bring Required Consent Forms and Team Roster to Registration

By choosing to attend or participate in the 2008 *FIRST* Robotics Competition events, each person grants *FIRST* permission to use all photographs and/or video footage, releases *FIRST* from liability, and provides the opportunity to gather alumni information. Each must use our official consent forms for this purpose. Read below for instructions/requirements:



Team's <u>INITIAL</u> 2008 Regional Event		Subsequent Regional Competitions & Championship
1.	Download the 2007-08 revised <i>FIRST</i> Consent/ Release and Team Roster forms from: <a href="http://www.usfirst.org/community/frc/content.aspx?id=8128">www.usfirst.org/community/frc/content.aspx?id=8128</a>	Supply a completed <i>original</i> Consent form only for anyone who has not provided a form at an FRC Regional competition event during this season.
2.	To make it easy for yourself, fill in your team number on the designated line on the Consent form <b>BEFORE</b> you make copies.	
3.	Make enough copies of the Consent form for all team members, mentors, and accompanying adults.	
4.	Have each person fill one out and sign it.	
5.	Team members under 18 must have a parent or legal guardian sign theirs.	
6.	Collect the <i>original</i> Consent forms with the Team Roster on top, clip them together, and bring them to the event.	
7.	Give all forms to the registration staff at the Pit Administration Station at your initial Regional competition of the season.	

### 3.8.2 Registration Envelope

Upon receipt of the team's consent/release forms, each team will receive an event-specific registration envelope containing:

**Pit Map:** Pit layout. It shows team location, parts replacement, inspection/ weigh/size areas, the traffic flow, and Pit Administration area.

**Practice Match List:** Schedule designating practice times/alliance partners for all teams on the first day of the event.

**Safety Captain Badge:** This safety badge is in the team's initial event registration envelope *only*. Bring it to subsequent Regional events.

**10 Safety Tokens:** These tokens are part of our safety recognition program.

**Team List:** List of competing teams by number, official team name, and state.

**Operator Badges:** These are for participants as defined in Sections 7, The Game.

## 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 Pit stations.

### 3.9.1 Be Safe, Be Kind, Be Gracious

- Use common sense regarding safety and courtesy.

- Wear required ANSI-approved safety glasses when working on or watching work done on a robot. Wear them on the playing field.
- Choose a student or adult 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.
- While your robot is in your team's pit space any hybrid receiver must be disconnected from your robot.
- Teams will not be allowed to activate their shooting mechanisms within the team's pit space. If possible, we will try to provide a designated space within the venue for testing purposes.
- Trackballs must be stored within the confines of the team's pit space.

### 3.9.2 Administration Station

The Pit Administration Station is centrally located in the Pit area. *FIRST* staff members and/or volunteers run this area to register teams and help teams and visitors. Come to the Pit Administration station to:

- Turn in your team's Consent/Release Forms.
- Register and receive your registration envelope, safety tokens, and badges. Check your event agenda for the Pit opening/closing time for each event.
- Notify a staff member that your team is ready for its initial robot inspection.
- Pick up participation medallions at your initial event of the season.
- Look at an FRC Competition Manual.
- Turn in safety tokens for the award count.
- Get answers to most questions, including machine shop access.
- Ask about lost and found articles.
- Report an illness or injury.

### 3.9.3 Pit Map

You will receive a Pit map when you register. It shows team locations, robot traffic flow, First Aid/EMT Station, Replacement Parts Area, Drayage Service Desk, Inspection Area, and the Pit Administration Station.

### 3.9.4 Team Stations

These are the areas where teams work on their robots. These numbered spaces help organize team placement and help team members, judges, and visitors find teams easily. These areas are set up to be as equal as possible. Each team's pit station will have a table and power outlet.

#### 3.9.4.1 Rules

For safety and because of insurance regulations:

- Teams cannot build any structure that supports people, or items for storage, above the work area in their team pit station.
- No Team Station structures, signs, flags, or displays can be higher than 10 feet above the floor.
- Team Station signs, flags, and displays must be securely mounted to the structure.
- *FIRST* personnel, event management, and/or local committee members will require teams to remove any pit structure that is deemed unsafe or outside specifications.

### 3.9.4.2 Station Numbering

At every event, each team station will have a pole-mounted team number sign. They are aligned for easy team identification.

### 3.9.4.3 Space Regulations

Each team is allotted approximately the same amount of workspace at an event, usually about 10' by 10' by 10'; however, the size will vary from event to event, and in many cases the space is smaller. Be sure your equipment will fit in a space smaller than those dimensions. In all cases, the height cannot exceed 10'. This includes the height of signs, flags, banners, etc.

It is not gracious to expand your area. Keep your equipment and team members within your assigned area and do not "grow" into the aisle or undesignated space. If your team is too large to fit into the allotted space, encourage your team to leave the area to scout other teams and/or to watch the matches.

***Don't add to your space by setting up in another area or by adding illegal height.***

### 3.9.5 Replacement Parts Station

Spare parts will be available at the events; however, the available parts at the events will not be published until after Kickoff. Watch for a Team Update with this information. *FIRST* asks that teams bring any unused parts from their kits to events to assist and support each other. This kindness can expand your *FIRST* network of friends as you exchange parts.

***Batteries & chargers will NOT be available at any event unless you have made prior arrangements with FIRST (email [FRCParts@usfirst.org](mailto:FRCParts@usfirst.org) for more information).***

Teams are responsible for all Innovation First, Inc. products required at events. If a team has a problem with its controller, LOANERS will be available under the following restrictions:

- Teams must get approval from the on-site Innovation First, Inc. staff member.
- An adult member of the team must provide a Credit Card number to ensure proper return of the items after the completion of the event.
- **If the part is not returned at the end of the event, or the part is damaged when returned, FIRST will bill the credit card for the replacement cost of the borrowed item or the repair charge.**
- All "loaner" items are available on a first-come, first-served basis. (\*) Requires approval from Innovation First, Inc. before a team can borrow equipment.
  - Operator Interface (\*)
  - Robot Controller (\*)
  - Radio Modems (\*)
  - AC Adapter for Operator Interface
  - Speed Controllers (Victor 884)
  - Relay Modules (Spike)

### 3.9.6 Inspection

To ensure all robots are safely constructed and fall within the *FIRST* parameters, there is an official robot inspection at each event. *FIRST* staff and volunteers will be on site all day on the first day of the event, until Pit closing time, to inspect machines. Inspectors can sometimes help find problems and/or provide suggestions during an early inspection. Go to the Inspection Station, shown on the Pit map. Read below for criteria and caveats:

1. To ensure safety and readiness, pre-inspect your robot before you ship it. This will make your official inspection go more smoothly and quickly.

2. Inspectors will use an Official Inspection sheet for checking robots; a draft copy of the inspection checklist will be available to teams during the build season. Inspectors check off items on an Inspection Sheet as the team passes those portions of the process.
3. Don't wait until the last moment to begin the process. Bring your robot to the Inspection Station early. Partial inspections, such as for height and weight compliance, help prevent an inspection clog at the end of the day.
4. Student team members must accompany the robot and be prepared to answer Inspectors' questions.
5. Correct items and return for inspection until your robot passes.
6. Teams may practice on the first day of the event without completing the inspection process; however, if field personnel deem a robot unsafe, it will not be allowed to practice until the unsafe condition is fixed.
7. Robots must pass inspection before actually competing in qualification matches.
8. Each time you modify your robot, you must request and pass a robot re-inspection.
9. Inspectors may re-inspect randomly before or after matches to ensure continued safety and compliance.
10. Remember: Each team is only allowed to have one robot at an event.

### **3.9.7 Practice Field**

Many events will have practice fields on which teams can share practice time. Adhere to the system in place, work with the schedule, and make every effort to keep the area safe, both in and around the perimeter.

### **3.9.8 Drayage Service Desk**

Shepard Exposition Services will have a representative at its service desk to help you with shipping questions or problems. Refer to the Pit Map for its location.

### **3.9.9 Machine Shop**

Each event has a machine shop to help teams with repair and fabrication. While the machine shops vary from event to event, *FIRST* strives to have welding and a variety of high-powered tools available at the shop.

The staff and volunteers in the Pit Administration Station will be able to tell you how to make use of the machine shop. Sometimes the machine shop is on site and readily accessible to all teams, but when it is off site, we require teams to use the mandatory transportation provided at the venue. *Teams cannot travel to the machine shop "on their own."*

**Pit/Machine Shop Hours:** Specific hours are necessary to provide teams with equal work time. Please be aware of the opening and closing hours of the Pit and Machine Shop posted on the agenda posted on the web.

### **3.9.10 First Aid Station**

There will be an EMT or Nurse in the Pit to assist with injury and illness. Mentors and the Safety Captain should refer to the Pit Map for the location and alert team members. *Notify the Pit Administration Supervisor of any injuries or illness.* Bring a box of bandages for minor injuries.

### **3.9.11 Traffic Flow**

At each event, there is a pre-determined traffic flow pattern to maximize efficiency of the team/robot ingress and egress and maintain safety to the competition area. Refer to the Pit Map for the flow. The queuing team maintains this pattern at each event. Please obey the traffic rules to ensure an efficient lineup for practice and competition.

It is extremely important to keep aisles clear for safety, judging accessibility, robot mobility, courtesy, and maintaining competition schedules. Keep chairs and equipment out of the aisles.

Please sit in the audience, not on the floor or in the aisles. Judges/Safety Advisors notice noncompliance.

### 3.9.12 Suggested Equipment

We suggest you bring the following:

- Extension cord, heavy duty and at least 25 feet long.
- Power strip to make best use of your power drop.
- Other items as suggested on the *Team Checklist* in this section of this Manual.
- A relatively small cart to transport your heavy robot from the Pit to the playing field. Do not add music to your cart.

### 3.9.13 Machine Tools at Events

When using tools in the Pit, be sure to use them properly, in a safe and controlled manner. Unsafe operation, especially those that endanger those around you and your team, will be subject to scrutiny by the event staff and safety reviewers. Their findings may result in team caution or event expulsion.

Please adhere to the following safety rules regarding Pit safety and tool use:

- **Tools that throw sparks are prohibited.**  
Examples: Electric welders, bench grinders, and angle grinders.
- **Tools that produce open flames are prohibited.**  
Examples: Gas welders and propane/MAPP gas torches.
- **Floor-standing power tools are prohibited.**  
Examples: Full-size drill presses, full-size band saws, and full-size table saws.
- **Grinding or painting in the Pit is prohibited.** Designated grinding and painting areas are available to teams.
- **Brazing/welding is prohibited at the pit stations.** Use the machine shop.
- Soldering is permitted **using electric iron/gun only.**
- **Small, bench-top machinery, with appropriate guards, is permitted in team Pit stations.**  
Examples: Band saws, drill presses, and sanders.
- **Small, desktop machining centers are permitted as long as they are reasonably sized and easily lifted by one person.** They must be appropriately covered to prevent throwing of chips during operation.  
Example: Desktop CNC mill.

### 3.9.14 Team-Provided Mobile Machine Shops

*FIRST* welcomes team-provided mobile machine shop facilities/trailers at events, but the proposed facility has to comply with *FIRST* and venue requirements. The mobile machine shop/trailer sponsor must adhere to the following two sections.

#### 3.9.14.1 Approval and Liability and Security Coverage

- Have *FIRST* approval and clearance prior to each event. E-mail [frcteams@usfirst.org](mailto:frcteams@usfirst.org) to request approval by Kickoff.
- Provide liability coverage. Note that liability coverage at event venues vary, and specific venue policies may further restrict the use of these team-provided mobile machine shops. Without the proper additional insurance certificate, the mobile machine shop cannot be used at the event. The requirements are:
  - a) Name *FIRST* as an additional insured.

- b) Fax the certificate to 603 666 3907, Attention Team Support.
- c) Present a copy of the certificate to the Event Manager on site prior to setting up the machine shop.
- Include an appropriate team-provided staff to perform the requested work. Each must be covered under the provided liability coverage.
- Provide for any security requirements. Neither *FIRST* nor the venue will provide these services.

### **3.9.14.2 Local Restrictions**

Although *FIRST* may approve a local machine shop use at any Regional, there are local restrictions such as fire codes, and venue approval that you must consider as part of the process. *FIRST* will do its best to convey any relevant needs, and work on your behalf to gain venue approval through a professional and legal process.

### **3.9.14.3 Other Requirements**

In addition to the above, the sponsoring team(s) must:

- a) Include an electrical source for the mobile machine shop facility.
- b) Ensure that all teams have the ability to use tools/machines and its use. Access cannot be restricted to certain teams.
- c) Handle job requests through the same counter/process as the *FIRST*-provided shop services. This includes the sponsoring team's requests.
- d) Operate ONLY during event hours when the Pit is open.

### **3.9.15 Announcements**

We make every effort to keep noise down and announce only important items and scheduling, so do not ask the pit announcer to make frivolous announcements.

### **3.9.16 Queuing Your Team**

The Pit announcer and queue volunteers must maintain the practice and match schedules. Your team should designate team members to be your queue captains and carefully watch the schedule and alert the team when its turn is near. The queue captain should:

- Look at the Pit Map to find the pre-set traffic pattern for each event.
- Highlight team practice times on the Practice Schedule on the first day of the event and your competition match times on your Match List for the second and third days.
- Listen carefully for the queuing announcements at Regional events and line up your four (4) competing team members/mentor and robot when your team number is announced.
- Queue your team a half hour prior to your matches at the Championship since there are no match announcements. Ensure that you monitor play within your respective division and adjust your queuing time accordingly. Please check with the Lead Field Queuing personnel on your field if you have questions.

**NOTE:** *Check the second and third day schedule. If your team is in the first 4 matches of either day, the competition team must queue up prior to the Opening Ceremony, on or near the field.*

### **3.9.17 Property Security**

There have been occasions when items such as cameras and laptops have "disappeared" from the Pit or competition area. Use common sense and do not leave valuable items unattended. Neither the site nor *FIRST* is responsible for any theft. Take valuable items with you, or designate a team representative to remain with them in the Pit Station or competition areas.

### **3.9.18 Lost and Found**

If you find an article or lose one, come to the Pit Administration Table to fill out a "Lost Item Report," or to turn in an article you find. We try hard to return articles to owners.

### 3.10 CEREMONIES

There are both Opening and Awards Ceremonies on the second and third day at Regional events. These ceremonies allow everyone to show honor and respect for our country, sponsors, teams, mentors, volunteers, and award winners and to provide everyone with the opportunity to applaud the successes of team members and mentors. They also give teams a chance to "meet" the judges, referees, MCs and other important persons and sponsors involved with the event.

At the Awards Ceremony, **FIRST** presents trophies and medallions to outstanding teams.

#### 3.10.1 All Teams Should Attend

We encourage all team members to attend the ceremonies, on time, to show appreciation for the event and those people involved who are volunteering their time and efforts.

#### 3.10.2 Pit Manners/Rules During the Ceremonies

- 1.) Team members will *not* be allowed to use power tools, hammers, or other noisy tools during the ceremonies.
- 2.) All persons in the Pit should observe the code of behavior for the presentation of the *Star Spangled Banner* and any and all other national anthems:
  - Maintain a respectful silence.
  - Stand, facing the flag. If there is no flag, look toward the video screen showing a flag.
  - Hats off, please.

### 3.11 PIT CLOSING ETIQUETTE

**On Time:** For many reasons, it is necessary that teams adhere to the Pit closing time each day. Many people working in the Pit are volunteers and deserve to have a set closing time met. Assign team members and mentors to the clean up/organization of your pit station.

**Robot Shipment:** The mentor in charge of your robot shipment must take care of the shipping process early with a plan in place to have everything packed and out the door by closing time. This means having a crew ready to get your robot crated and labeled for shipment on the last day. When your play in the competition ends, pack your crate; notify the shipping/drayage company that it is available for removal and clean up your area. To avoid congestion and long lines, please do not wait until the end of the competition to prepare your robot for shipment.

Advance preparation is especially important because any team may end up participating in elimination matches and will have even less time to prepare their robots for shipping.

### 3.12 TEAM SOCIALS

Many events host team socials, which is a great part of the competition celebration. Refer to [www.usfirst.org/frc\\_regional\\_events](http://www.usfirst.org/frc_regional_events) prior to your event to learn event specifics. Team socials are usually after the Awards Ceremony on the evening of the second day, and usually include food, fun, and an opportunity to unwind and get to know each other in an informal, relaxed, and entertaining setting.

In order to help ensure that your team social will be organized and fun, each attending team must have 1 adult chaperone for each 10 students. There usually is no charge, and "come as you are from the competition" is the dress code. Remember that your behavior reflects the ethics of your team and sets the tone for the activities.

### 3.13 CHAMPIONSHIP *FIRST* FINALE

This event takes place after the Awards Ceremony on Saturday evening. Please refer to the *Championship* event Information.

### 3.14 PARTICIPATION MEDALLIONS

*FIRST* provides ONE box of twenty-five (25) bronze medallions to each team that has *not* won the following medal(s):

- A Regional Chairman's Award winner

- An Engineering Inspiration Award winner
- A 2008 Regional Champion or Regional Finalist

### 3.14.1 Pick up at Your Initial Event

A box of 25 medallions is given out at the Pit Admin Station at each team's initial event only. Pick up/sign for them on the last day of the event, once it's clear that you won't receive any of the awards listed above. If your team has been to another event, you will not receive medallions at a subsequent event. See below.

### 3.14.2 If You Forget to Pick Up Your Medallions

- Teams have to request shipment.
- Teams will pay for the shipment cost via their shipping account number in the TIMS.
- The medallions will not ship until after our trucks return from the Championship and materials are unloaded and categorized. Estimated ship time would be mid/end May.
- We will accept check, credit card, or money order. We will not accept purchase orders, and there will be a request deadline.

## 3.15 TEAM SPIRIT AND TEAM “LOOK”

When deciding on a team name or acronym, consider how you can work a theme around it to make your team more fun and recognizable. Part of the pleasure of being a team member or mentor is the way the team stylizes itself. Team numbers provide unique identification for FRC teams. We strongly recommend that you include the team number on all team T-shirts, trading buttons, hats, cheers, and costumes.

### 3.15.1 Team Giveaways

Often teams bring items to give away to others at the event. This is completely optional, but a great way to promote your team identity. The most popular item to give away is a button with your team logo and number.

### 3.15.2 Mascots and Team Costumes

Keep safety in mind. Awards acceptance often means descending and ascending bleachers. Please make sure that mascot and team costumes are safe for the wearer as to vision and movement and that they are comfortable and cool enough to prevent fainting and dehydration.

### 3.15.3 Competition Spirit

We ask that you choose to bring attention to your team in ways that are in good taste and in the spirit of the competition. Please refrain from the following:

- Using obnoxious noisemakers.
- Using objects that can damage bleachers or floors.
- Wearing inappropriate clothing.
- Taping or affixing items or papers to walls, bleachers, floors, or other site areas.

Please make sure your Pit Station and surrounding area is clean when you leave the site.

### 3.15.4 Banners and Flags

Sponsors provide *FIRST* with banners so we can display them in specified areas as a way of thanking them for their generosity. We encourage teams to bring team flags and/or sponsor banners, but we ask that you adhere to the following:

- Do *not* hang them in the competition area, since this area is designated for official *FIRST* sponsors' banners.
- You may bring banners to the competition area while your team competes, but do not leave them or use them to section off seating. *Saving group seats is not permitted.*
- Hang banners *in your Pit station only*, not on the Pit walls.



### 3.16 BLEACHER RULES

Sitting together in a group during competition matches makes the game more exciting and fun. It's where you can show support for your team. Since very often there is not enough seating to accommodate everyone, there has to be a policy regarding seating. Teams are not allowed to save seating space.

With this in mind, it is not permitted to hang banners or ribbons to designate such an area. *We will remove and discard banners or roping, etc.* Please take turns sitting in the bleachers. Share the fun. When you see there is a crowding problem, leave after your team's match and return later for another few matches.

### 3.17 SITE RESTRICTIONS

Please read the following common site restrictions and adhere to them in order to promote an orderly, safe, pleasant, and exciting competition. Please refer to Section 3.2 for additional site restrictions at your event.

- **Do not take robots from any Regional or the Championship.** You must go through the drayage company and ship your robot, even if it's your last competition.
- **Do not bring food** on the site. If you bring food, do not bring it onto the property.
- **Do not use noisy devices**, such as floor stompers, whistles, or air horns.
- **Do not deliver or ship robots directly to the competition site.** All shipments go through the drayage company.
- **Do not arrange for Internet access or phone lines** on the site or attempt to connect to the Internet.
- **Do not sell any products.** This includes food, hats, shirts, or any promotional products.
- **Do not give out any free food products**, such as candy, water, soft drinks, or fruit. You may trade team pins, however.
- **Do not sell raffle tickets.**
- **Do not bring bottled gas tanks (e.g. helium).** This is a safety concern.
- **Do not use walkie-talkies.** They can interfere with the robots.
- **Do not invite or bring live bands** to play in the audience. This dilutes the presentation on the playing field and is too loud and confusing for the audience.
- **Do not play loud music in the Pit** because it interferes with important announcements. If a team receives more than a warning or two, the power to the team's Pit Station will be shut off and/or the music confiscated.
- **Do not form "tunnels"** during the Awards Ceremony. This can cause discomfort to those traveling through them and creates safety issues.

### 3.18 CONSIDERATIONS

You will often hear the expression *Gracious Professionalism* throughout your involvement in *FIRST*. You can read Woodie Flowers' definition in Section 0 of the Manual. One of our main goals is to encourage all team members and mentors to conduct themselves with kindness, sharing, and consideration..

We hear heartwarming stories of teams sharing parts, helping to build and/or repair competing robots, and helping rookie teams avoid preventable pitfalls. These are examples of some side benefits of being involved with this organization. Please read the following sections to help further the success of *FIRST* and its teams.

### 3.19 LOCAL STORES – WEB SITES

Use these URLs to locate stores in the vicinity of your hotel and/or competition site. Before you travel, print out directions from both the competition site and your hotel. Competition site addresses for each event are on our web site in the Events Sections, “Site Info.”

**Note for Canada:** Please note that the web site addresses for stores in Canada end in “.ca”. If the address is for a home page, click on the “find a store,” “store locator,” or “location.”

## HARDWARE STORES

Ace Hardware	<a href="http://www.acehardware.com/">www.acehardware.com/</a>
Lowe's	<a href="http://www.lowes.com/">www.lowes.com/</a>
Menard's	<a href="http://www.menards.com/nindex.jsp">www.menards.com/nindex.jsp</a>
The Home Depot	<a href="http://www.homedepot.com">www.homedepot.com</a>
The Home Depot - Canada	<a href="http://www.homedepot.ca">www.homedepot.ca</a>
True Value Hardware	<a href="http://www.truevalue.com/">www.truevalue.com/</a>

## OFFICE SUPPLIES

Kinko's	<a href="http://www.kinkos.com">www.kinkos.com</a>
Office Depot	<a href="http://www.officedepot.com/">www.officedepot.com/</a>
Office Max	<a href="http://www.officemax.com/">www.officemax.com/</a>
Staples	<a href="http://www.staples.com">www.staples.com</a>
Staples Business Depot	<a href="http://www.staples.ca">www.staples.ca</a>

## VARIETY STORES

Kmart	<a href="http://www.kmart.com/shc/s/StoreLocatorView?storeId=10151&amp;catalogId=10104&amp;langId=-1&amp;adCell=A2">www.kmart.com/shc/s/StoreLocatorView?storeId=10151&amp;catalogId=10104&amp;langId=-1&amp;adCell=A2</a>
Target	<a href="http://sites.target.com/site/en/spot/page.jsp?title=stores_services_main">http://sites.target.com/site/en/spot/page.jsp?title=stores_services_main</a>
Wal*Mart	<a href="http://www.walmart.com/cservice/ca_storefinder.gsp?NavMode=7">www.walmart.com/cservice/ca_storefinder.gsp?NavMode=7</a>

## ELECTRONICS

Best Buy:	<a href="http://www.bestbuy.com/">www.bestbuy.com/</a>
Circuit City:	<a href="http://www.circuitcity.com/">www.circuitcity.com/</a>
Future Shop	<a href="http://www.futureshop.ca">www.futureshop.ca</a>
Radio Shack®:	<a href="http://www.radioshack.com/">www.radioshack.com/</a>

## DRUG STORES

CVS Pharmacy	<a href="http://www.cvs.com/CVSApp/cvs/gateway/cvsmain">www.cvs.com/CVSApp/cvs/gateway/cvsmain</a>
Eckerd, Rite Aid, Brooks	<a href="http://www.riteaid.com/brooks_eckerd/locator/">www.riteaid.com/brooks_eckerd/locator/</a>
Sav-On, Osco	<a href="http://www.savon.com/default2.asp">www.savon.com/default2.asp</a>
Shoppers Drug Mart	<a href="http://www.shoppersdrugmart.ca">www.shoppersdrugmart.ca</a>
Walgreens	<a href="http://www.walgreens.com/">www.walgreens.com/</a>

### 3.20 TEAM CHECKLIST

This list provides suggested items your team may want to / must bring. Replenish between events.

<b><u>SAFETY GLASSES are REQUIRED!</u></b> Bring enough for your team and visitors.	Bring required completed <b>CONSENT/ RELEASE FORMS</b> for all team members and mentors!
<p style="text-align: center;"><b>TOOL BOX ITEMS</b></p> <ul style="list-style-type: none"> <li>-- Ball driver set / nut driver set</li> <li>-- Batteries and Charger</li> <li>-- Box cutter</li> <li>-- Broom (small, for pit station cleanup)</li> <li>-- C-Clamp, large, medium, small</li> <li>-- Cutters</li> <li>-- De-burring tool</li> <li>-- Dremel tool/accessories</li> <li>-- Drill - cordless w/charger, Drill bit set</li> <li>-- Flashlight</li> <li>-- Glue, super, glue stick, Loctite</li> <li>-- Hacksaw and blades</li> <li>-- Hammer (ball peen &amp; brass)</li> <li>-- Heat gun</li> <li>-- "Leatherman" tool</li> <li>-- Level, small</li> <li>-- Lithium grease, spray can</li> <li>-- Magnet on a stick</li> <li>-- Paint brush</li> <li>-- Pliers - large, small, needle nose assort.</li> <li>-- Power outlet strip / extension cord (2)</li> <li>-- Power screwdriver</li> <li>-- Saber saw/wood &amp; metal blades</li> <li>-- Sandpaper - various grits</li> <li>-- Screws - nuts - washers</li> <li>-- Screw driver assortment, flat and Phillips</li> <li>-- Shrink tubing</li> <li>-- Socket set – 1/4", 3/8" drive</li> <li>-- Soldering iron (electric), solder, wick, flux</li> <li>-- Spare parts</li> <li>-- Square - small, medium</li> <li>-- Tap &amp; die set/assorted taps</li> <li>-- Tape: clear/electrical/masking</li> <li>-- Tape measure / ruler</li> <li>-- Tie wraps / connectors / rubber bands</li> <li>-- Tin snips</li> <li>-- Tweezers / scissors</li> <li>-- Vice grip - large, small</li> <li>-- Volt meter</li> <li>-- WD-40 / lithium grease, spray can</li> <li>-- Wire terminal crimpers / Wire strippers</li> <li>-- Work gloves- several pairs</li> <li>-- Wrenches, Allen, crescent, open and box</li> <li>-- X-Acto knife and blades</li> </ul>	<p style="text-align: center;"><b>ADDITIONAL ITEMS</b></p> <ul style="list-style-type: none"> <li>-- Banners - Corporate signs &amp; flags for pit station</li> <li>-- Camera and film, disposable</li> <li>-- Cart for moving robot</li> <li>-- Drop light</li> <li>-- Epoxy</li> <li>-- File folder box for paperwork</li> <li>-- Hand truck</li> <li>-- Laptop / software / cables / discs</li> <li>-- Manual and Updates</li> <li>-- Medical Release Forms</li> <li>-- Message board - dry erase marker set</li> <li>-- Notepads / spiral notebook / clipboard</li> <li>-- Paper / Post It Notes</li> <li>-- Paper towels and paper cups</li> <li>-- Pens / pencils / sharpies / markers</li> <li>-- Portable printer</li> <li>-- Release form for each person, completed</li> <li>-- Seat(s) for pit station (small, foldable)</li> <li>-- Schedule to set up and break down pit station</li> <li>-- Spray cleaner</li> <li>-- Stapler / staples</li> <li>-- Storage box / bins- trinkets &amp; trash (buttons)</li> <li>-- Team roster and contact information</li> <li>-- Trash can (small) / trash bags</li> <li>-- Ziploc bags</li> </ul> <p style="text-align: center;"><b>PERSONAL ITEMS</b></p> <ul style="list-style-type: none"> <li>-- 1<sup>st</sup> Aid Kit - Band-Aids / blister kit / ice bag</li> <li>-- Advil / Aspirin / Tylenol</li> <li>-- Alcohol prep pads / 3M First Aid tape</li> <li>-- Cough drops / sore throat medicine</li> <li>-- Eye wash and drops</li> <li>-- Hand sanitizer / Liquid Soap</li> <li>-- Feminine products</li> <li>-- Insect sting medicine / OFF spray</li> <li>-- Kleenex / Cotton Balls / Wet ones / Q-Tips</li> <li>-- Neosporin</li> <li>-- Pepto-Bismol / Imodium AD</li> <li>-- Safety glasses</li> <li>-- Sewing kit (small)</li> <li>-- Sunscreen / sunburn Spray / aloe vera</li> </ul>