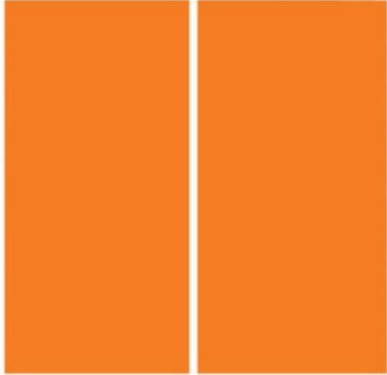




Training and Support



# 2017-2018 FIRST® Tech Challenge Scorekeeper Manual Part I



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## Volunteer Thank You

Thank you for taking the time to volunteer for a *FIRST*® Tech Challenge event. *FIRST*® and *FIRST*® Tech Challenge rely heavily on volunteers to ensure events run smoothly and are a fun experience for teams and their families, which could not happen without people like you. With over 4,600 teams competing yearly, your dedication and commitment are essential to the success of each event and the *FIRST* Tech Challenge program. Thank you for your time and effort in supporting the mission of *FIRST*!



Revision History		
Revision	Date	Description
1	10/3/2017	Initial Release
1.1	10/25/2017	<ul style="list-style-type: none"> <li>Updated Tournament Org Chart</li> <li>Added Key Volunteer Role Minimum Age Requirement section</li> </ul>
1.2	01/09/2018	<ul style="list-style-type: none"> <li>Updated cover image</li> <li>Updated sponsor thank you image</li> </ul>

## Contents

Introduction.....	5
What is <i>FIRST</i> ® Tech Challenge? .....	5
<i>FIRST</i> Tech Challenge Core Values .....	5
<i>Gracious Professionalism</i> ® .....	5
<i>Gracious Professionalism</i> for Volunteers.....	6
Youth Protection Program .....	6
Youth Protection Expectations and Guidelines.....	6
NOTICE OF NON-DISCRIMINATION .....	6
<i>FIRST</i> Volunteer Rights and Responsibilities .....	6
Volunteer Code of Conduct .....	7
Tournament Organization Structure.....	8
Job Description.....	9
Volunteer Training and Certification .....	9
<i>Gracious Professionalism</i> ® - "Doing your best work while treating others with respect and kindness - It's what makes <i>FIRST</i> , first."	

Volunteer Minimum Age Requirement..... 9

Key Volunteer Role Minimum Age Requirement ..... 9

Bring a Friend! ..... 9

Overview of Responsibilities ..... 10

Pre-Event Day Responsibilities..... 10

Event Day Responsibilities ..... 11

    Scoring System Setup..... 11

    Pre-Match Responsibilities..... 11

    Game Play ..... 11

    Generate Alliances..... 11

    Awards..... 11

Post-Event Responsibilities ..... 11

Appendix A – Resources ..... 12

    Game Forum Q&A ..... 12

    FIRST Tech Challenge Game Manuals..... 12

    FIRST Headquarters Pre-Event Support..... 12

    FIRST Tech Challenge Event On-Call Support ..... 12

    FIRST Websites..... 12

    FIRST Tech Challenge Social Media ..... 12

    Feedback..... 13

Appendix B: Event Checklist..... 13

## Introduction

### What is FIRST® Tech Challenge?

FIRST Tech Challenge is a student-centered program that focuses on giving students a unique and stimulating experience. Each year, teams engage in a new Game where they design, build, test, and program autonomous and driver operated robots that must perform a series of tasks.

They also cultivate life skills such as:

- Planning, brainstorming, and creative problem-solving.
- Research and technical skills.
- Collaboration and teamwork.
- Appreciating differences and respecting the ideas and contributions of others.

To learn more about FIRST Tech Challenge and other FIRST® Programs, visit [www.firstinspires.org](http://www.firstinspires.org).

### FIRST Tech Challenge Core Values

FIRST asks everyone who takes part in FIRST Tech Challenge to uphold the following values:

- We display *Gracious Professionalism*® with everyone we engage with and in everything we do.
- We act with integrity.
- We have fun.
- We are a welcoming community of students, mentors, and volunteers.
- What we learn is more important than what we win.
- We respect each other and celebrate our diversity.
- Students and adults work together to find solutions to challenges.
- We honor the spirit of friendly competition.
- We behave with courtesy and compassion for others always.
- We act as ambassadors for FIRST and FIRST Tech Challenge.
- We inspire others to adopt these values.

**An example of *Gracious Professionalism* is patiently listening to a team's question and providing support despite having several pressing things to do on the day of the event.**

## Gracious Professionalism®

FIRST uses this term to describe our programs' intent and is shared with all young people engaging in FIRST programs. At FIRST, team members help other team members, but they also help other teams.

*Gracious Professionalism*® is not clearly defined for a reason. It has different meanings to everyone.

Some possible meanings of *Gracious Professionalism* include:

- Gracious attitudes and behaviors are win-win.
- Gracious folks respect others and let that respect show in their actions.
- Gracious Professionals make valued contributions in a way that is pleasing to others and to themselves.

In FIRST, *Gracious Professionalism* teaches teams and student participants:

**FIRST Tech Challenge is MORE THAN ROBOTS<sup>SM</sup>! While competing, students develop personal and professional skills they will be able to rely on throughout their life.**

- Learn to be strong competitors, but also treat one another with respect and kindness in the process.
- Avoid leaving anyone feeling as if they are excluded or unappreciated.
- Knowledge, pride and empathy should be comfortably and genuinely blended.

In the end, *Gracious Professionalism*® is part of everyday life. When professionals use their knowledge in a graciously and individuals act with integrity and sensitivity, everyone wins, and society benefits.

Watch Dr. Woodie Flowers explain *Gracious Professionalism* in this [short video](#).

### ***Gracious Professionalism for Volunteers***

It is a good idea to spend time going over this concept with volunteers. Provide volunteers with real-life examples of *Gracious Professionalism* in practice before, during, and after the event and recognize great *Gracious Professionalism* when you see it in action!

## **Youth Protection Program**

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The *FIRST* YPP sets minimum standards recommended for all *FIRST* activities. Adults working in *FIRST* programs must be knowledgeable of the standards set by the *FIRST* YPP, as well as those set by the school or organization hosting their team.

### ***Youth Protection Expectations and Guidelines***

Coaches and mentors should read and follow the [FIRST Youth Protection Program guide](#). Anything labeled as required is mandatory in the United States and Canada, and cannot be waived without approval from the *FIRST* Youth Protection Department. *FIRST* recommends that the standards set forth in the *FIRST* Youth Protection Program guide be applied outside of the United States and Canada to the extent possible. At a minimum, local regulations regarding youth protection must be complied with.

Most up to date forms are available here: <http://firstinspires.org/resource-library/youth-protection-policy>

The US Screening process, the Canadian Screen process, Frequently Asked Questions (FAQ), and additional information are on the *FIRST* Youth Protection Program Website: <http://firstinspires.org/resource-library/youth-protection-policy>

### ***NOTICE OF NON-DISCRIMINATION***

For Inspiration and Recognition of Science and Technology (*FIRST*®) does not discriminate based on race, color, national origin, sex, disability, age, status as a veteran who served in the military, religion, gender, gender identity, or gender expression in its programs and activities.

Keep updated at: <http://www.firstinspires.org/about/legal-notices>

## ***FIRST* Volunteer Rights and Responsibilities**

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Volunteers are the most valuable asset to *FIRST*®. Your selfless contribution of time and resources are instrumental in accomplishing our mission of inspiring the next generation of science, technology, engineering, and mathematics leaders and innovators. The foundation of the relationship between *FIRST* and our volunteers is respect.

**It is your right to:**

- Be treated with *Gracious Professionalism*®. *Gracious Professionalism* is a way of doing things that encourages high-quality work, emphasizes the value of others, and respects individuals and the community.
- Feel valued. *FIRST* recognizes the significant efforts that volunteers contribute. The time that you donate not only helps *FIRST* succeed but also builds the *FIRST* community.
- Understand your role. *FIRST* will inform you about what's expected of you, your schedule, any meals you will be provided, any changes to program or policy, and who to contact should you need assistance.
- Expect a safe environment. *FIRST* strives to create and maintain a safe environment for all volunteers and participants and will always factor safety into program planning.
- Receive fair treatment and inclusion. All volunteers will be treated with respect and dignity in inclusive environments. *FIRST* does not discriminate on the basis of race, color, national origin, sex, disability, age, status as a veteran who served in the military, religion, sexuality, gender, gender identity, or gender expression in its programs and activities.
- Reevaluate your time commitment. *FIRST* appreciates all of our volunteers and understands that volunteers experience life situations that may affect their commitment.
- Communicate with your Volunteer Coordinator or your local *FIRST* leadership about:
  - Concerns or limitations that are affecting your volunteer role.
  - Any mistreatment towards you or others. You may be required to fill out a [non-medical incident form](#).
  - Contact *FIRST* Headquarters directly if you feel that you are being treated improperly and attempts to resolve issues and conflicts at the local level are not successful. Volunteers can call (800) 871-8326 or email [volunteer@firstinspires.org](mailto:volunteer@firstinspires.org).

#### It is your responsibility to:

- Treat others with *Gracious Professionalism*®.
- Follow the schedule and the role description provided for your position. Contact your local *FIRST* leadership if there are any issues.
- Respect others, treat them fairly and kindly. Be inclusive and follow the non-discrimination policy of *FIRST*.
- Follow safety rules and ensure safety of others. Adhere to all [FIRST Youth Protection Program \(YPP\) policies](#). Report any injuries or safety concerns within 48 hours.
- Adhere to the [FIRST Code of Conduct](#).
- Have FUN!

## Volunteer Code of Conduct

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The mission of *FIRST* is to inspire a generation of science and technology leaders who are both gracious and professional. This *FIRST* Code of Conduct lists some of the basic behaviors mentors, coaches, volunteers, team members, Affiliate Partners, contractors, staff, and other participants should adhere to while participating in *FIRST* activities.

- Exhibit [Gracious Professionalism](#)® always. *Gracious Professionalism* is a way of doing things that encourages high-quality work, emphasizes the value of others, and respects individuals and the community. With *Gracious Professionalism*, fierce competition and mutual gain are not separate notions.

- Ensure the safety of all participants in *FIRST* activities.
- Not engage in any form of bullying, harassment, use of profane or insulting language, or any actual or threatened violence.
- Adhere to all *FIRST* Youth Protection Program (YPP) policies.
- Report any unsafe behavior to event or local *FIRST* leadership.

Should a volunteer not comply with the Code of Conduct, they may be barred from participating in future *FIRST* activities.

## Tournament Organization Structure

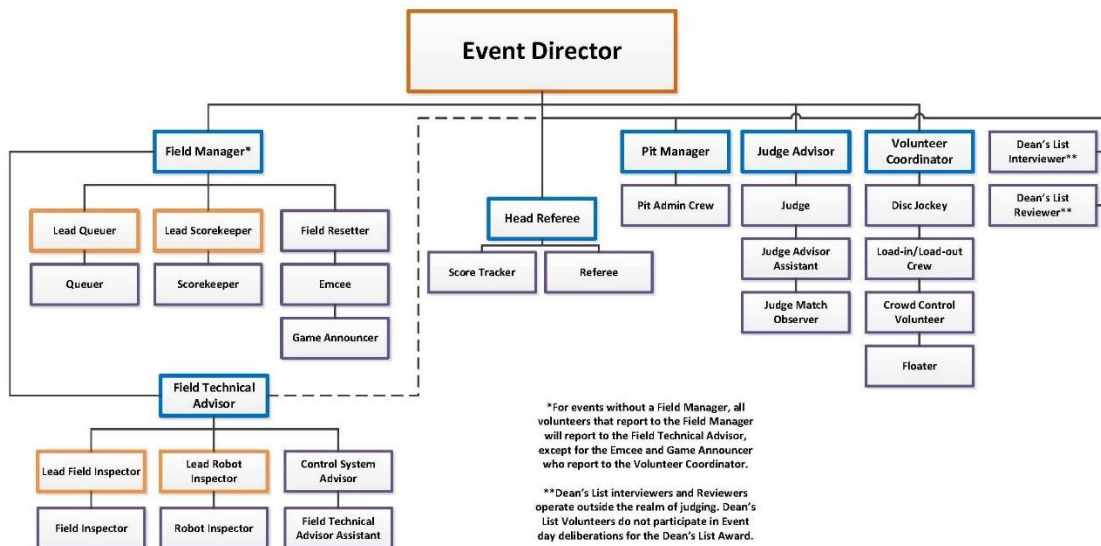


Figure 1 - League Championship, Qualifying Tournament, Championship Tournament Organization

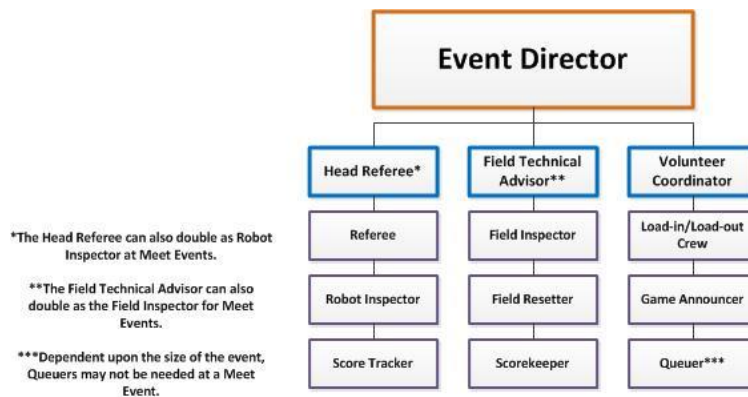


Figure 2 - League Meet Organization

Learn more about the roles of volunteers on our [Volunteer Resources page](#), "Volunteer Role Description".



## Job Description

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- **Physical/Technical Requirements:**
  - Technical – High
  - Physical – Low
  - Administrative – High
  - Communication – High
- **Time commitment:**
  - The Scorekeeper should expect to arrive early at the Event to help set up the Scoring System and displays.
  - The Scorekeeper should expect to be at the Event for the entire duration of the Event, approximately 8 hours for a full-day Event. League Meet Events may run shorter.
- **Proper Dress:**
  - The Scorekeeper generally sits at the Scoring System. Comfortable shoes and attire are encouraged.
  - ANSI Z87.1 certified safety glasses are required in the Competition Area.

### **Volunteer Training and Certification**

Volunteers must apply to their role using the [Volunteer Registration System](#). After the volunteer has applied to their role, FIRST Tech Challenge will send an email to the volunteer with access instructions to training and certifications (if applicable). Emails with access to the training and certifications will be sent within one business day from applying to the role. If you have applied for a role but have not received access to the training, please email [FTCTrainingSupport@firstinspires.org](mailto:FTCTrainingSupport@firstinspires.org).

The Scorekeeper should read this manual before the Event. In addition, the Scorekeeper should read the Scoring System Guide for instructions on how to use the system. Scoring System use varies slightly based on the type of the event. If the Event is a League/Meet or League Tournament, be sure to read the Scoring System Guide specific to League Meet Events.

The Scorekeeper should watch the Scorekeeper video that will walk through the system. The Scorekeeper is required to pass the certification test prior to volunteering.

The Scorekeeper should speak to the Event Director or Affiliate Partner to check for additional requirements, such as expectations on what shall be displayed on various screens and when.

### **Volunteer Minimum Age Requirement**

FIRST requires that FIRST Event volunteers be at least 13 years old for most roles. There are exceptions listed below. The Regional Planning Committee can increase the age requirement as needed. Adult volunteers cannot have children with them while volunteering nor be responsible for supervising children at the event. Children under the minimum age are welcome at FIRST Competitions with suitable supervision by someone other than a volunteer.

### **Key Volunteer Role Minimum Age Requirement**

Volunteers MUST be at least 21 years old before they can serve in a Key Volunteer Role for the FIRST Tech Challenge. Key Volunteer positions include: Volunteer Coordinator, Head Referee, Judge Advisor, Field Manager, Field Technical Advisor, Lead Robot Inspector, Lead Field Inspector, and Lead Scorekeeper. Local Affiliate Partners can make case by case exceptions to these guidelines by contacting FIRST for approval.

### **Bring a Friend!**

Volunteers are a huge part of the FIRST Tech Challenge Program and continuing to inspire students to seek out careers in science, technology, engineering, and math (STEM). FIRST Tech Challenge needs your help in

recruiting new volunteers to keep our programs thriving for future generations! If you have a friend or co-worker you think would be interested in volunteering at an event, there are just a few easy steps to help get them involved!

1. Check out our full list of [volunteer opportunities](#) online!
2. Have them apply for the Event in the [Volunteer Registration System](#). Volunteers must be screened before volunteering.
3. Have them contact [FTCTeams@firstinspires.org](mailto:FTCTeams@firstinspires.org) with any questions they may have.

If they are concerned about jumping in head first, no worries! Job shadowing at a *FIRST* Tech Challenge Event is a great way to get a taste of what a full day's worth of competition looks like. New volunteers can discover ways they can fit their personal skills into a volunteer position!

## Overview of Responsibilities

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The *FIRST* Tech Challenge Lead Scorekeeper (referred to in this manual as “the Scorekeeper”) is the person responsible for making sure that the Scoring System is handled correctly and that Match Scores are entered accurately. The Scorekeeper helps the flow of the Event and provides information to the Teams and to the audience. Being prepared before and diligent during the Event will help to provide a positive experience for all participants. The responsibilities of a Scorekeeper include:

- Participation in training prior to the Event.
- Accurately entering Match Scores into the Scoring System.
- Entering Team and Sponsor Information into the Scoring System.
- Generating Matches for the Event.
- Setting up displays for audience to view Scores.
- Communicating Match schedules to Key Volunteers such as Referees, Judges, Event Directors, etc.

Make sure to speak with the Affiliate Partner or Event Director prior to the Event to determine if there are additional responsibilities and time commitments to set up the Scoring computers and displays. At some Events, the Scorekeeper may be responsible for setting up the computers, displays, etc. There are many components that are required to be set up to run the Scoring System and displays correctly.

A Scorekeeper must be confident and comfortable with the System to be able to reliably record results during the hectic pace of an *FIRST* Tech Challenge Event. Learning ahead of time will go a long way towards keeping the Event running smoothly and on time.

## Pre-Event Day Responsibilities

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Outlined below are responsibilities Scorekeepers have before Event day. Make sure to check with the Event Director to see if they need help setting up before the Event.

- Review the Scorekeeper Manual and Scoring System Guide.
- Watch the pre-recorded Scorekeeper training video. This will help familiarize with the system and how it operates.
- Pass the Scorekeeper certification test
- (Optional) Attend a Monthly Key Role Discussion Q&A call. This will provide the opportunity to ask questions, or provide feedback to other Scorekeepers.

Many Events set up the fields and A/V equipment the night before, which may also include loading the Scoring System onto the scoring computer and setup of the display screen. Be sure to check with the Event Director or Affiliate Partner to understand what is being prepared ahead of time, and what needs to be done on the morning of the Event.

## Event Day Responsibilities

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### Scoring System Setup

Setup of the Scoring System is oftentimes completed the day before the Event. The Affiliate Partner or Event Director will be able to guide you on what has been completed the day before. On the morning of the Event, you will need to turn on the scoring computer and displays, and start the Scoring System.

### Pre-Match Responsibilities

- Work with Affiliate Partners or Event Director to establish when teams are declared “no show”
- Work with Affiliate Partners or Event Director to determine logistics of the event, such as number of matches to be played, or the time schedule for the matches.
- Ensure that all team and sponsor information has been entered correctly.
- When all teams have checked in, update team information as necessary and generate matches.
- Communicate match schedules to Key Volunteers
- Generate the Inspection Schedule.
- Generate the Judging Schedule.

**Important** – generate Matches only **AFTER** all Teams have checked in, and have been certified to play. **DO NOT EVER** generate and distribute the Match list prior these steps, as substitutions cannot be made for absent Teams.

See Appendix B for the Event Checklist.

### Game Play

The Scorekeeper and the Emcee/Game Announcer should agree on a “ready” signal to start the match timer clock prior to the start of the Matches. The match timer clock shall begin after the Emcee/Game Announcer has verified that both Alliances and the Scorekeeper are ready, and a 3-2-1 countdown.

### Generate Alliances

After all Qualification Matches have been played, the Scorekeeper will enter the formed Alliances and generate matches for the Elimination Matches.

### Awards

The Scorekeeper may be asked to enter the Awards into the Scoring System and print the Awards Ceremony Script for the Emcee/Game Announcer.

Other Event Day duties may be assigned as needed.

## Post-Event Responsibilities

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**For League Meet Events** - the Scorekeeper must save and provide the results to the Event Director or Affiliate Partner. These results contain important Team information that needs to be loaded into the Scoring System at the next League Meet or League Tournament.

**Qualifying Tournaments, League Tournament, State/Region Championship, Super-Regional Championships** – After all Matches have been played and all scores have been recorded, the Event score results must be submitted to *FIRST*. Instructions can be found in the Scoring System guide or the Scorekeeper course in Schoology.

## Appendix A – Resources

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### Game Forum Q&A

<http://ftcforum.usfirst.org/forum.php>

Anyone may view questions and answers within the *FIRST*® Tech Challenge Game Q&A forum without a password. To submit a new question, you must have a unique Q&A System User Name and Password for your team.

Volunteers that apply for a specific volunteer role will receive an email from [FTCTrainingSupport@firstinspires.org](mailto:FTCTrainingSupport@firstinspires.org) with their username and password to the forum. You will receive access to the forum thread specific to your role.

### FIRST Tech Challenge Game Manuals

Part 1 and 2 - <http://www.firstinspires.org/node/4271>

### FIRST Headquarters Pre-Event Support

Phone: 603-666-3906

Mon – Fri

8:30am – 5:00pm

Email: [FTCTeams@firstinspires.org](mailto:FTCTeams@firstinspires.org)

### FIRST Tech Challenge Event On-Call Support

*These numbers are available for event personnel only. Please **do not** call these numbers if you are a team looking for a ruling, a decision, or assistance. We trust that you will not misuse this resource.*

Day of Event Robot Control System Support: 603-206-2450

All other Day of Event support: 603-206-2412

### FIRST Websites

*FIRST* homepage – [www.firstinspires.org](http://www.firstinspires.org)

[FIRST Tech Challenge Page](#) – For everything *FIRST* Tech Challenge.

[FIRST Tech Challenge Volunteer Resources](#) – To access public Volunteer Manuals.

[FIRST Tech Challenge Event Schedule](#) – Find *FIRST* Tech Challenge events in your area.

### FIRST Tech Challenge Social Media

[FIRST Tech Challenge Twitter Feed](#) - If you are on Twitter, follow the *FIRST* Tech Challenge Twitter feed for news updates.

[FIRST Tech Challenge Facebook page](#) - If you are on Facebook, follow the *FIRST* Tech Challenge page for news updates.

[FIRST Tech Challenge YouTube Channel](#) – Contains training videos, Game animations, news clips, and more.

[FIRST Tech Challenge Blog](#) – Weekly articles for the *FIRST* Tech Challenge community, including Outstanding Volunteer Recognition!

[FIRST Tech Challenge Team Email Blasts](#) – contain the most recent *FIRST* Tech Challenge news for Teams.

[FIRST Tech Challenge Google+](#) community - If you are on Google+, follow the *FIRST* Tech Challenge community for news updates.

### **Feedback**

We strive to create support materials that are the best they can be. If you have feedback about this manual, please email [ftteams@firstinspires.org](mailto:ftteams@firstinspires.org). Thank you!

## **Appendix B: Event Checklist**

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### ***Before the Event***

Attend Scorekeeper Training.....

### ***Night before the Event\*\****

Install the Scoring System and display application on the correct computers .....

Turn on and test the Scoring System .....

Enter Team and sponsor information .....

Test all displays .....

Print referee score sheet.....

***\*\*Check with your FTA, Event Technical Director or Affiliate Partner to determine step has already been completed.***

### ***Morning of the Event***

#### ***Before Teams arrive at the Event***

Turn on and set up all scoring electronics:

- Computers .....
- Projectors .....
- Displays .....
- Routers .....
- Printers .....

#### ***Start up the Scoring System***

Ensure that all Team/sponsor information is entered correctly.....

Start Display Applications .....

Enable Sponsor Display.....

Work with Affiliate Partners to establish a time when Teams are declared “no show” .....

Work with Affiliate Partners to determine

- Number of Matches to be played in the Tournament.....
- Time schedule for the Matches .....

#### ***After All Teams Have Checked In:***

Update Team Information as necessary.....

Add or delete Teams as necessary .....

Generate Matches .....

- **Important** – generate Matches only **AFTER** all Teams have checked in, and have been certified to play. **DO NOT EVER** generate and distribute the Match list prior these steps, as substitutions cannot be made for absent Teams.

Print Match lists:

- 1 copy for the scoring table .....
- 1 copy for each Field Control Volunteer .....
- 1 copy for each Queuer.....
- 1 copy for each Team (without times) .....
- 1 copy for the Affiliate Partner/Event Director.....
- 1 copy for each Judge/Judge pair .....
- 1 copy for the Judge Advisor.....
- 1 copy for each Judge Assistant .....
- 10-15 extras.....

Print Team Lists:

- 1 copy for each Queuer.....
- 1 copy for each Game Announcer/Emcee.....
- 1 copy for each Judge.....
- 1 copy for the Judge Advisor.....
- 1 copy for each Judge Assistant .....

Announcer Sheet

- 1 for each Game Announcer/Emcee .....

Print Web Page Instructions

Copies for each Team and additional as requested