



Training and
Support

2018-2019 *FIRST*[®] Tech Challenge Queuer Manual

ROVER RUCKUS



Presented By **Qualcomm**

www.firstinspires.org

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FOR INSPIRATION & RECOGNITION OF SCIENCE & TECHNOLOGY

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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 5,500 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	7/11/2018	Initial Release
1.1	11/12/2018	<ul style="list-style-type: none"> Updated Tournament Org Charts Appendix A – Update to on call event support line to include scoring system support.

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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. To learn more about FIRST® Tech Challenge and other FIRST® Programs, visit www.firstinspires.org.

FIRST Core Values

We express the FIRST® philosophies of *Gracious Professionalism®* and *Coopertition®* through our Core Values:

- **Discovery:** *We explore new skills and ideas.*
- **Innovation:** *We use creativity and persistence to solve problems.*
- **Impact:** *We apply what we learn to improve our world.*
- **Inclusion:** *We respect each other and embrace our differences.*
- **Teamwork:** *We are stronger when we work together.*
- **Fun:** *We enjoy and celebrate what we do!*

Gracious Professionalism®

FIRST® uses this term to describe our programs' intent and *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 the end, *Gracious Professionalism®* is part of everyday life. When professionals use their knowledge 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!

FIRST Volunteer Rights and Responsibilities

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>

Volunteer Rights and Responsibilities

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.

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!

Tournament Organization Structure

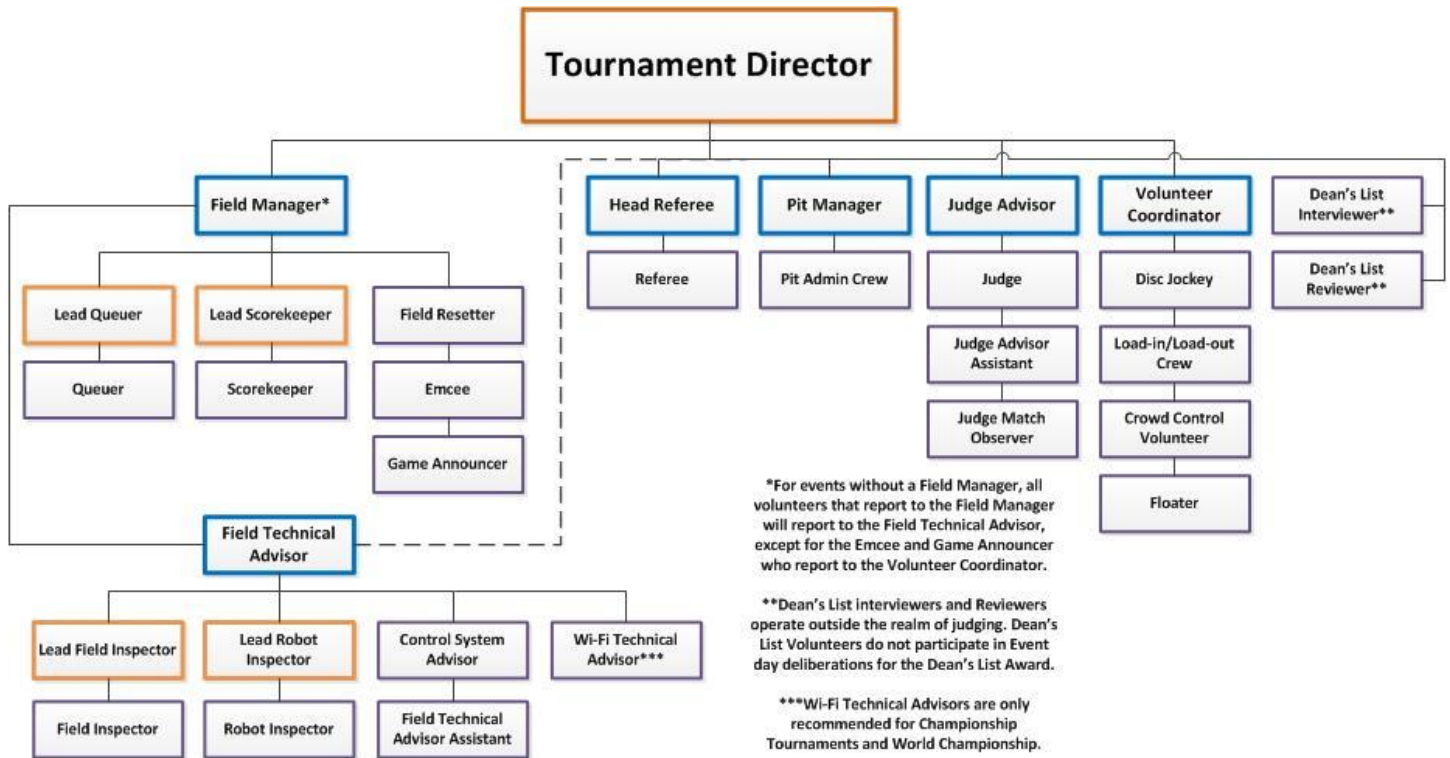


Figure 1 - League Championship, Qualifying Tournament, Championship Tournament Organization

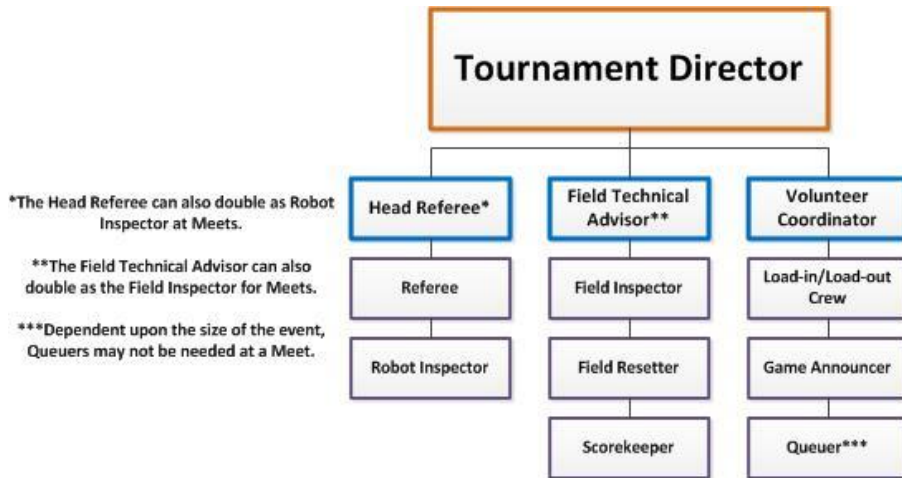


Figure 2 - League Meet Organization

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

Job Description

Queuer's main responsibility at events is to help teams get from the pit area to the competition fields on time so that the event can run smoothly and on schedule.

Introduction

- **Physical/Technical Requirements:**
 - Technical – Low
 - Physical – High
 - Administrative – Medium
 - Communication – High
- **Time commitment:** Queuers should expect to spend 6-8 hours at a full day event and 3-4 hours at a league meet.
- **Proper Attire:**
 - Wear comfortable shoes, most of the day will be spent standing/walking between the pit area and the competition fields.
 - 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.

Queuers should read this manual prior to the event. She/he should also speak to the Tournament Director or Affiliate Partner to determine if there are any additional requirements, such as meetings prior to the event or run-throughs of the queuing path before the event. The approximate training time is one hour.

Volunteer Minimum Age Requirement

FIRST requires that *FIRST* event volunteers be at least 13 years old, however, 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.

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 Firsttechchallenge@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

Lead Queuer

Lead Queuers manage the flow of teams to and from the competition area. Queuers will work with the Tournament Director and the Field Technical Advisor to create unrestricted paths to and from the pit area to the competition area. Creating and managing a safe, orderly flow of robots/teams to and from the competition will assist on keeping all the matches running on time. Lead Queuers will also properly stage alliances in holding areas, while ensuring that the proper numbers of teams are in the queue. The Lead Queuer is an important part of the event management team, working directly with the Tournament Director, Field Tech Advisor, and the Queuing Staff.

Prerequisite for Lead Queuer Role

To serve as a Lead Queuer, previous experience as a Queuer is required.

Queuers

Responsible for managing team traffic to and from the playing field. Stage and position teams in preparation for the start of matches. Play a critical role in ensuring smooth flow of match play and maintaining the pace of the event.

- Escorts teams from the pit to the queuing area.
- Stage and position teams for matches.
- Restrict access to field for unauthorized individuals.
- Maintain an uninterrupted flow of teams to the playing field.
- Direct teams to fields and facilitate team departure from field.

The Lead Queuer may also opt to assign some of the Queuers as runners. Runners are there to locate teams to queue up for the next match. Although teams are expected to report to the Queuers prior to their match, it is often necessary to locate a team that has not reported for their upcoming match.

Pre-Event Day Responsibilities

Outlined below are some responsibilities a Queuer may have prior to event day. Make sure to check with the Tournament Director to determine if they need assistance setting up prior to the event.

- Work with the Field Technical Advisor or Field Manager to set up the queuing areas around the field.
- Tape off queuing areas.
- Inspect the robot traffic path.

Event Day Responsibilities

Queuers should arrive early on event day to review the flow of the robot traffic paths. It is very important for a Queuer to know the traffic flow, and to ensure all teams are on the field when they need to be. This is a key success factor to making sure the matches run on time and stay on schedule.

Match Lists

It is important to check in with the Tournament Director or Field Technical Advisor to obtain match lists. The match list will be generated only after all teams have checked in for the day and have robots that have successfully completed robot inspection. This is the most vital tool a Queuer needs to be successful, as this shows which team is competing in which matches. Below is a sample of what the match list will look like:

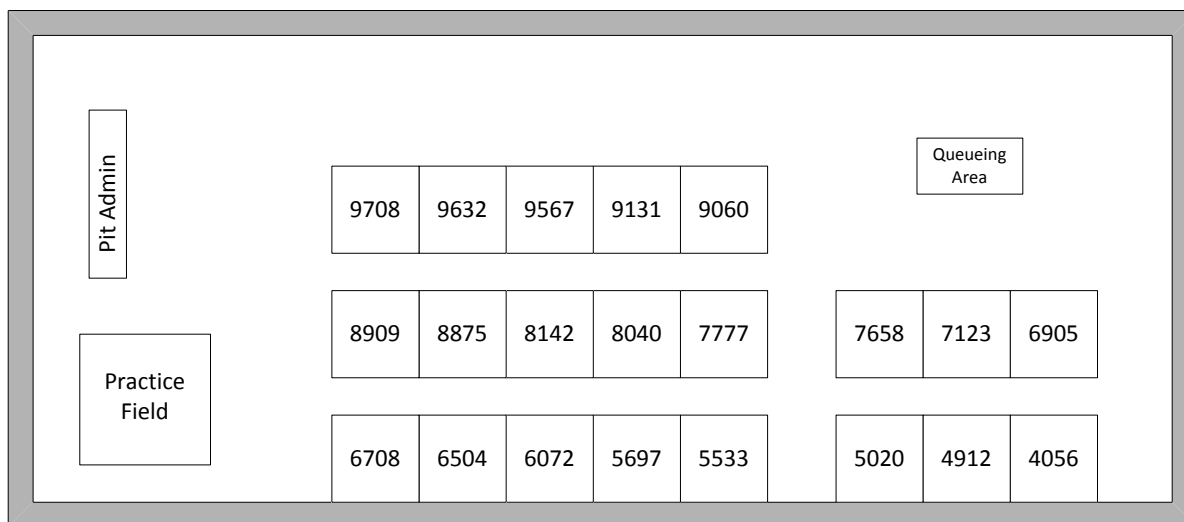
State Championship Match List					
Qualification Matches					
Number	Red 1	Red 2	Blue 1	Blue 2	
1	9004	9002	9007	9003	
2	9009	9001	9008	9010	
3	9006	9008	9000	9005	
4	9007	9006	9001	9016	
5	9009	9003	9004	9000	
6	9005	9004	9002	9001	
7	9008*	9002	9006	9009	
8	9003	9000	9005	9007	
9	9010	9000	9002	9005	
10	9007	9001	9008	9009	
11	9010	9006	9003	9004	
12	9009	9007	9005	9006	
13	9000	9008	9004	9010	
14	9003	9002	9001	9008	

Note: * Indicates a surrogate match. Those matches do NOT count in the rankings

The match list also shows which color alliance the team will be for each match, which is needed to properly set the teams up on the competition field, and to provide alliance flags to each team.

Pit Map

Obtain a pit map from either the Tournament Director or from Pit Admin. Having a map of where each team is in the pit is key, as Queuers may need to potentially locate teams that have upcoming matches but have not already reported to the Pit Queuers. Below is a sample pit map:



Team Software Changes

The field Inspection checklist from the [Game Manual Part 1](#) specifically states that teams must **not** make software changes while in queue for the next match. This could hinder a team’s performance on the field. Make

sure to remind them of this rule. Teams are, however, allowed to continue making minor mechanical fixes to their robot.

Qualification Matches

- During qualification rounds, set up a routine with the teams:
 - Teams check in with the Lead Queuer to be sent to the competition field.
 - Queuers provide appropriate alliance flags (red or blue).
 - Queuers make sure each team is in the correct position on the field.
 - Teams enter one side and exit the opposite side of the field.
- Monitor match times and adjust for behind or ahead of schedule situations.
 - Communicate with the Lead Queuer, Field Technical Advisor or Field Manager about schedule.
 - Pit Queuers should announce which matches are not on schedule.
 - Use a whiteboard in the pit area to provide information about how far ahead or behind the match schedule is.
 - Use runners to locate teams if matches are running behind or ahead.
 - Teams who don't show up for their match forfeit the match. If for some reason a team chooses to skip a match, they should send a driver to their match, so it is not a forfeit.

Alliance Selections

- Prepare for alliance pairings.
 - One member from each team reports to a designated area for alliance selections.
 - One representative from each of the four top seeded teams represent the alliance captains.

Semi-Finals and Finals

- Stage robots for first matches before opening ceremonies.
- Eliminated alliances must leave the competition area.
- Robots must remain in the competition area during the final rounds until eliminated.

Appendix A – Resources

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 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 - <https://www.firstinspires.org/resource-library/ftc/game-and-season-info>

FIRST Headquarters Pre-Event Support

Phone: 603-666-3906

Mon – Fri

8:30am – 5:00pm EDT

Email: firsttechchallenge@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 and Scoring System Support: 603-206-2450

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

FIRST Websites

FIRST homepage – 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.

Feedback

We strive to create support materials that are the best they can be. If you have feedback about this manual, please email firsttechchallenge@firstinspires.org. Thank you!