CENTERSTAGE℠

Volunteer Role Quick Guides

Job Description: The Control System Advisor (CSA) is a volunteer who helps teams with robot control system related issues. The CSA works in collaboration with the Field Technical Advisor (FTA), Robot Inspectors, and Field Inspectors who may direct teams experiencing issues on the field or in the pits to the CSA for help. This position requires a high level of technical knowledge and interpersonal skills, and is a major contributor towards assuring that all teams have a successful event. <u>The minimum age allowed for a Control System Advisor (CSA) and a Wi-Fi Technical Advisor (WTA)</u> **is 18, and they can be affiliated with a team.**

Time commitment:
- Training – About four to six hours
- Event Day – About eight hours

Proper Safety Attire:
- Wear comfortable, closed-toe and closed-back shoes, most of the day will be spent standing and walking between the pit area and the competition fields.
- ANSI Z87.1 certified safety glasses are required in the competition and team pit areas.

Event Day for the CSA:
- Arrive early; the CSA should be one of the FIRST volunteers to arrive on event day. • If the event does not have a WTA, the CSA or FTA should verify the reserved wireless channels for the competition are clear and that low ping times are observed for a test robot controller-driver station (RCDS) pair running on these channels.
- Help with field inspection when not helping a team.
- The rest of the day will be spent helping teams that are in the queue preparing for their match, or those who have technical issues that cannot be resolved by an FTA.
- Note: Even though the CSA's role is to provide more in-depth technical support to teams and mentors, the CSA's should still prioritize support issues to make sure they are addressing the most critical issues in a timely manner to help as many teams, as possible.
- CSA's in the on-deck queue for a playing field perform the following activities to help teams prepare for a match: **1)** Verify that the Driver Station (DS) and Robot Controller (RC) Android devices are communicating wirelessly, the gamepads are communicating with the DS, DS USB cables are untangled, and an op mode is selectable on the DS. **2)** Provide assistance, as needed. **3)** Confirm that the robot main power is turned off during transport to the playing field. 4) If robots are assigned to specific Wi-Fi channels, verify that the DS and RC are using the correct Wi-Fi channel.

CSA Robot Triage:
If there is a robot issue on the field the FTA cannot resolve in a timely manner, the team who is experiencing the issue will be directed to the CSA for support. The CSA should work with the team away from the competition area to help diagnose and resolve the technical issues. When problems arise, the CSA should troubleshoot with the following guidelines:
- Ask the team to describe their robot's unexpected behavior.

• Check the status of the robot by visual inspection of the robot, the robot controller, and the driver station.

• Check the status of the robot by viewing the log file on the robot controller and possibly on the driver station. Note that this might require (with the team's permission) the CSA connect the Android devices to a laptop.

• Check the voltage level of the robot controller, driver station, and main robot battery. • Check the wiring of the electronic modules.

• If necessary, look at the source code of the team's op modes.

• Recommend corrective action to the team. Consult the CSA Troubleshooting Guide for details on the available tools that can be used to troubleshoot a problematic robot. The CSA may spend extended time helping a team, but if there are multiple teams who need in-depth assistance, the CSA should rank the issues and try to provide support to as many teams as possible. While the CSA is working with the team, they should suggest the other members of the team watch the match schedule while they are troubleshooting the problems with the robot. Even if the robot cannot function, it is important that at least one team member be in the competition playing field alliance station for each match. If not, they will not be credited with the results of the match. In some cases, just having the robot on the field can score points even if it does not function.

Common questions asked by teams and suggested responses are shown below:

Q1: Why aren't you going to replay that match? **A1:** There are only certain situations that warrant replaying a match. Unless we can prove that it was a field fault or Wi-Fi interference, we cannot replay a match.

Q2: Why did you replay a match for someone else, but not us? **A2:** Explain the team's situation versus the other situation. How were they different? If the team still has questions, suggest that they talk with the head referee in the competition area Question Box.

Q3: Why won't you fix that score? We have video (or photographs) to prove the score is wrong! (This is not a question for the CSA to answer, but one for the referee to answer officially. Scoring questions should always be deferred to the Head Referee). **A3:** Direct the team to the question box so they can discuss this issue with the head referee. Note that referees cannot accept video replay as per Section 4.3, Rule , a - The referees will not review any recorded match replays or photographs.

Q4: Why don't you fix/cleanup the wireless environment? It's obvious the wireless environment is disruptive and causing disconnects. **A4:** We have been overseeing the field's wireless channel throughout the day and then state the relevant facts about the wireless environment for the tournament.

Q5: The scoring referees scored our match wrong or they put the wrong score into the computer. (This is not a question for the CSA to answer, but one for the referee to answer officially. Scoring questions should always be deferred to the head referee). **A5:** Teams may formally protest a match for a period of time not to exceed three matches following the match in question. If a team wants to dispute a score, one student representative should wait patiently in the designated Question Box area for the head referee (do not interrupt matches for this conversation). If the referees agree that they made a mistake, they can correct it. If the referees are confident in their score, the team should accept that decision.

Award Overview: In an effort to recognize the leadership and dedication of the most outstanding secondary school students from FIRST® , the Kamen family sponsors awards for selected 10th or 11th grade* students known as the FIRST® Robotics Competition and the FIRST® Tech Challenge FIRST Dean's List Award. **Minimum Age: 18 and can be affiliated with a team**

Similar to the very prestigious National Merit Scholarship Award, there are three (3) levels of FIRST Dean's List Award students. FIRST® Tech Challenge Dean's List Interviewer Manual | 7 Gracious Professionalism® - "Doing your best work while treating others with respect and kindness - It's what makes FIRST, first."
1. FIRST Dean's List Semi-finalists – comprised of the two (2) students in their 10th or 11th school year* nominated by each team.
2. FIRST Dean's List Finalists - The students selected for each Regional Championship.
3. FIRST Dean's List Winners - comprised of the ten (10) FIRST Robotics Competition and ten

Criteria for selection of the FIRST Dean's List shall include, but not be limited to a student's:
   • Demonstrated leadership and commitment to FIRST Core Values
   • Effectiveness at increasing awareness of FIRST in their school and community
   • Interest in and passion for a long-term commitment to FIRST
   • Overall individual contribution to their team
   • Technical expertise and passion
   • Entrepreneurship and creativity
   • Ability to motivate and lead fellow team members

Role Overview: The Dean's List interviewers' responsibilities include:
   • Access and review nominations prior to the event - Every nomination is different and reading the nomination ahead of time helps prepare appropriate questions for each semi-finalist.
   • Interview the semi-finalist during the event- Interviews are only 6-10 minutes and being prepared will help an interviewer ask specific questions to better understand the individual contributions of that student.
   • Write a narrative about the interview after the event - Once interviews have concluded, the Dean's List interviewer is responsible for writing a summary outlining what they have learned about the student. The notes from the interviewer are a vital piece of information when students are reviewed to potentially move to the next level.

Conflicts of Interest:
   ● A coach/mentor is volunteering as an interviewer;
   ● A parent/relative of a team member is volunteering as an interviewer;
   ● An alumni (student or adult) of a team is volunteering as an interviewer;
   ● A sponsor of a team is volunteering as an interviewer;

Link to Dean's List Award System: https://my.firstinspires.org/Judging/

Overview of Responsibilities: The event administrator is a key role that acts as a substitute for the PDP level of access to the FTC Scoring system. **Minimum age: 18 and can be affiliated with a team**

As a substitute for the partner, this role may also include:

● Inviting event management staff, coaches, and volunteers to create accounts and certify.
● Assigning volunteers to designated roles in Volunteer Management System (VMS).
● Managing event schedule, including opening/closing ceremonies and assigning teams, judges and the judge advisor.
● Add and distribute links for virtual judging sessions.

Event Management Workflow Chart

List of Actions	FTC Scoring System	FTC Live	Spreadsheet and email	Video Conferencing	VMS
Event Request Creation	x				
Access Volunteers CSV					x
Assign Volunteer Roles					x
Event Configuration	x				
a. Define submission window	x				
b. Add/Edit Teams	x				
c. Add/Edit Sponsors	x				
Add Teams	x				
League Creation	x				
League Add/Edit Teams	x				
Remote Scorekeeping	x				
Traditional (in-person) Scorekeeping		x			
Traditional Judge Assignment					x
Remote Judge Assignment	x				x
Remote Judge Panel Assignment for Teams	x		x		
Remote Judge Interviews	x			x	
Remote Judged Awards	x				
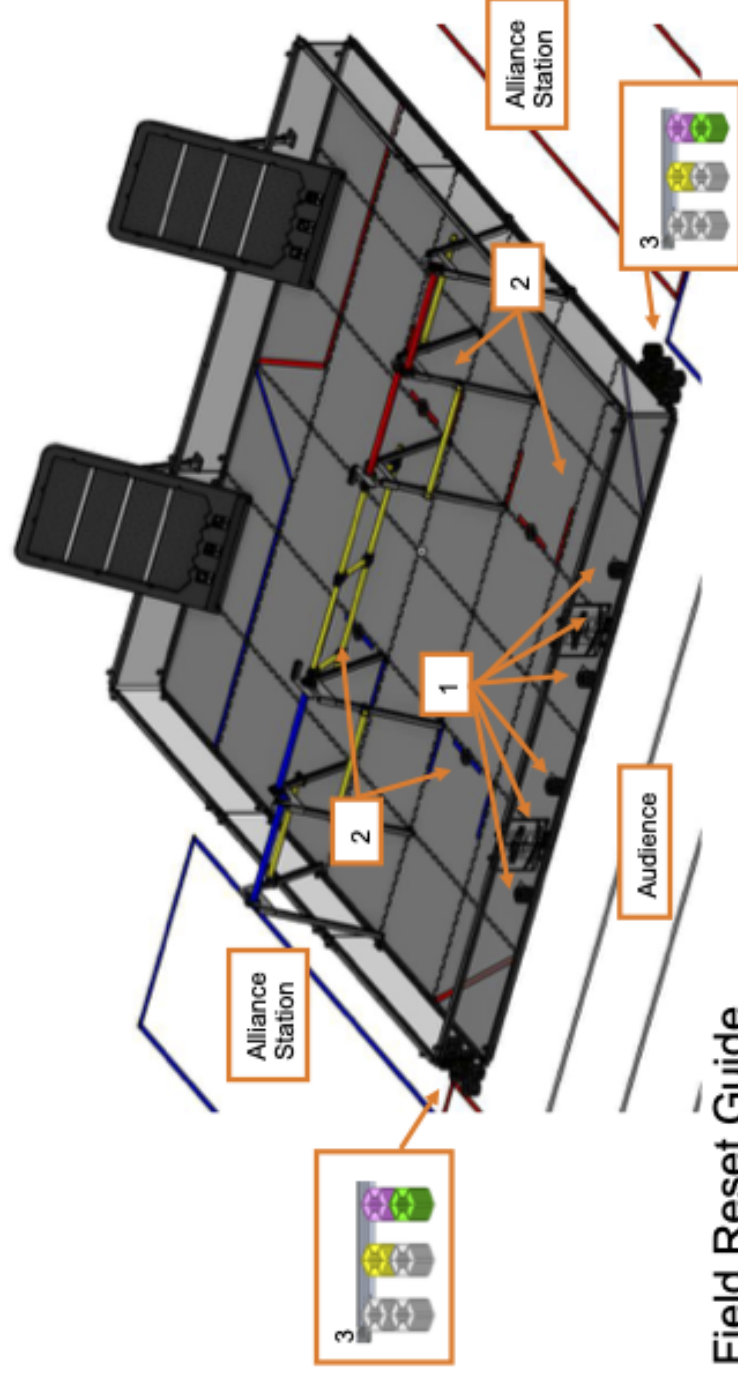
Field Reset Guide

Field reset is an important part of any competition. The field reset volunteer is responsible for quickly and correctly restoring the playing field back to the original pre-match setup so that the new match can begin. The diagram in this document provides a visual of what the pre-game setup looks like so that you can successfully reset the field for the next match. There are 94 Pixels; 64 white, 10 green, 10 purple, and 10 yellow. The field reset volunteer should scan the Playing Field and Landing Zone for abandoned Robot parts and Team supplied game elements (Drones and Props). Upon completion of field reset, return the lost items to teams or place them in the competition area lost and found.

1. **Playing Field Pixel Stacks (x6):** There are a total of 30 white Pixels that are stacked <u>inside of the field</u> in sets of 5. Each stack of 5 Pixels is centered from side to side on each of the white tape lines on the audience side of the field. The Pixels should be touching the field perimeter wall.
2. **Spike Mark Pixels (x4):** One white Pixel is placed centered on each of the 4 center Spike Marks.
3. **Pixel Storage (x2):** There are a total of 30 Pixels placed in the Pixel storage. There are 3 stacks of 5 white pixels, one stack of 5 green Pixels, one stack of 5 purple Pixels, and one stack of 5 yellow Pixels.

Field Reset volunteers should report any missing Pixels to the Head Referee or FTA at the conclusion of field reset.

Important Safety Note: Field reset volunteers should never step over the Trusses or Stage Door as these pose a tripping hazard.

Prerequisite for the Field Supervisor Role To serve as a field supervisor, previous experience as a field technical advisor and/or referee is required.

Job Description: The field supervisor and field technical advisor work together to keep the areas in and around the robot playing fields running smoothly. The field technical advisor concentrates on the technical issues (robots, field control system, scoring software, etc.) and the field supervisor is responsible for operational activities (team queuing, playing field reset, etc.). **Minimum age: 21 and can be affiliated with a team**

The field supervisor is responsible for all activities in and around the robot playing fields, including:

• Competition playing field set-up and tear down.
• Keeping the robot matches on schedule.
• Ensuring the playing field is set up for each match.
• Repairing playing field game elements.
• Managing a safe environment, including:
      o Everyone is wearing safety glasses
      o No running
      o Robots are operating safelyCables remain taped down.
• The flow of activity in and around the robot playing fields. This includes referees, scorekeepers, field reset attendants, queuers, teams, game announcers, etc.
• Insuring that volunteers have the resources they need and receive breaks.

The Playing Field: The field supervisor is responsible for verifying the playing fields are built to specification, correctly set up, repaired when needed, and disassembled at the end of the competition.

- Field Repair: Tools, spare parts, and repair materials should be on-hand should the playing field or field elements become damaged. Spare parts are game-dependent and will vary from year to year.
- Field Set-Up: Playing field construction should start before the first event of the season. The field supervisor is responsible for verifying that the playing fields are set up properly. Initial playing field verification should be done one week or more prior to competition day. Set up the playing fields the day before the competition. Set-up should take approximately one hour per field depending on the complexity of the game elements; this time will get shorter with experience.
- Field Reset: Field reset starts when referees finish scoring a match and ends when teams, robots, referees, etc. are on station for the next match. Efficient flow of action during field reset is critical to keeping the competition running on schedule.

Job Description: The FIRST technical advisor (FTA) is the lead technical volunteer, an advocate for teams, and an advisor to the head referee. An FTA's time is primarily spent providing technical support to students setting up their robots for a match. Additional duties include, managing technical volunteers, setting up and tearing down the robot playing fields, overseeing inspection, performing playing field maintenance, and providing technical support for the FTC Live scoring system. **Minimum age: 21 and can be affiliated with a team**

- Setting up the competition area and testing the wireless environment
- Be sure to have all passwords of the computers or devices being used
- If a WTA or CSA is not available, the FTA should do a wireless survey, conduct wireless tests, and select candidate Wi-Fi channel(s) for teams to use during match play.
- Collaborate with the scorekeeper to set up the Match Timer Display, Audience and Field Displays
- Verify that the reserved wireless channels for the competition playing fields are clear and that low ping times are observed for a test robot controller-driver station pair operating on these channels.
- Verify that the lead robot inspector and lead field inspector are good to go before the scheduled start of inspection. Periodically visit these volunteers while inspections are underway.
- Meet with the head referee prior to the opening ceremony to discuss the flow of match-to-match activities.
- Attend the opening ceremonies and be prepared to start the first match directly following the ceremony.
- The remainder of the day will be spent overseeing the technical volunteers around the competition playing field(s), assuring that the Wi-Fi channels are free from interference, and performing robot triage.
- Unexpected robot behavior will happen during the competition. It is the FTA's responsibility to determine if a robot issue or an external issue like wireless interference caused the unexpected behavior.

Prior to the start of qualification matches, the FTA should meet with the head referee to confirm how they will work together across the match workflow timeline.

Non-Allowed Wi-Fi Communication No Team, Team member, or Competition attendee can set up their own Wi-Fi 802.11 (2.4GHz or 5GHz) wireless communication in the venue. Non-allowed wireless communications include, but are not limited to: a) Cellular hot spots (for example, cell phones, tablets, MiFi). b) Ad-hoc networks. c) Communication between portable Nintendo consoles. d) Bluetooth communication with Robots in the Competition Area. No Team, Team member, or Competition attendee shall interfere with a Team's Wi-Fi communication with their own Robot.

Game Announcer - <u>Minimum age: 13 and can be affiliated with a team</u> - The game announcer's role is vital to a successful event. Being informed, knowledgeable, and comfortable in your role will directly translate into a better event and make the event more enjoyable for the teams and spectators. The game announcer's role is working with the emcee to:

- Introduce teams.
- Provide play-by-play commentary to the teams and audience.
- Report the scores. The game announcer should primarily speak only for team introductions, play-by-play commentary, and score announcement. The game announcer role is to be an audible FIRST Tech Challenge presence at an event.

Emcee It is the emcee's job to be a visual presence, to inform the audience, and to keep the event lively and moving forward. The emcee must embody the spirit and professionalism of FIRST Tech Challenge, while being fun, energetic, creative, and organized.

Opening Ceremonies After the affiliate partner or tournament director has confirmed that all guest speakers and judges are present, the show begins. The opening ceremonies script, which has been prepared by the affiliate partner/tournament director, is used by the emcee, A/V crew, and affiliate partner to ensure synchronization. Work together with the tournament director and technical director – they are the "directors" of the show.

Let the Games Begin! During the qualification matches, after the emcee introduces each team by number, the game announcer completes the introductions (full name on first intro only, short name thereafter); then the emcee counts down "3, 2, 1, Go" to start the match. The game announcer provides play-by-play commentary and time remaining announcements. The referees score the match and the game announcer announces the score as it is displayed by the A/V crew. Make timed announcements at 1 minute played, 30 seconds remaining, 10 seconds remaining, and the countdown for the last 5 seconds. Additionally, work on getting a rhythm between the game announcer and the emcee. Often the crowd noise is so loud that you cannot hear one another. Establishing a rhythm, such as making eye contact to connect, ensures that you don't talk at the same time. **Alliance Selection** The emcee runs the alliance selection in the same area as the playing fields.

Closing and Awards Ceremonies The closing and awards ceremony happen once the final matches are complete. The emcee/game announcer should work with the tournament director and judge advisor to ensure everyone knows the flow of the ceremony.

Technical Tips Routinely check to make sure your headset is in the best position to pick up your voice and not riding too high or too low on your head. If using a handheld microphone, hold it close to your mouth and speak into it, not over it. Confirm that your microphone is off before speaking off-line.

Job Description: The robot inspector is responsible for ensuring that each robot is built of allowable parts, sized correctly, and is safe to operate. The robot inspection involves, interacting with student team members, examining hardware, filling out a checklist for every robot, and placing a label or other unique tag on the robot after passing inspection. **Minimum age: 21 and can be affiliated with a team**

It is the responsibility of the robot inspector to:
- Greet the team. Inspectors are generally the first volunteer a team will interact with.
- Go through the inspection checklist with the team.
- Assess the team's robot and identify if there are illegal parts on the robot.
- Identify potential concerns of entanglement (loose cables) or safety.
- Help the team to be successful.
- Be fair and apply the same thoroughness for every team.
- Treat all teams with Gracious Professionalism®.

Illegal Parts When a robot inspector comes across a team that has an illegal part installed, the inspectors should not automatically fail the team. First, the Inspector should ask themselves the following questions: 1. Is the part a safety issue? 2. Would the team be able to compete if the part was removed? 3. Does the part give the team a competitive advantage or disadvantage? 4. Could the robot achieve the same ability with legal parts? If the answer to question #1 is yes, the team must fail inspection. We want all teams to compete, however safety issues on a robot are nonnegotiable and must be fixed for the team to compete. Questions #2 and #3 have some gray area. It is up to the Inspector to decide what is fair for the affected team and for their fellow competitors. Question #4 helps the Inspector to assess the extent of the illegal construction. FIRST Tech Challenge's goal is to make sure that all teams follow the rules to ensure the competition is fair for all. However, there are circumstances when Inspectors can pass a team if the violation does not give the team a competitive advantage. Exceptions for illegal parts should only made at the first qualifying tournament or meet the team attends. Teams competing in their second competition or higher should have already been made aware of illegal parts and made proper changes to their robot.

Robot inspectors should feel empowered to let the team use the illegal part if:
- This is the team's first event;
- There is no competitive advantage to the illegal part; and The robot's abilities would be significantly affected if the illegal part were removed. The robot inspector must coach the team and advise that they cannot compete in the next competition with the same illegal part.

An illegal part gives a team a competitive advantage if the part enables a robot to perform an action that could not be performed using allowed parts, or perform an action more efficiently, faster or reliably. If the inspector doesn't recognize a part of the robot, ask a student for additional information. If necessary, ask the team to identify the rule or post to the Q&A Forum that allows the part.

FIRST® Tech Challenge Judge Quick Guide

Job Description: The primary role of a judge is to interview teams, and to decide which teams deserve an award based on team interviews, the robot, match play, and the engineering portfolio. Judges are paired in groups of 2-3 and interview a set number of teams before the competition begins as well as conduct interviews in the pit area. **Minimum age: 21 and CANNOT be affiliated with a team**

During the event, judges will:
- Conduct team interviews.
- Review team engineering portfolios.
- Review Control Award submission forms (if submitted)
- Update Judging Feedback Request forms (if submitted)
- Watch competition matches (at traditional events).
- Decide the three top ranked teams for each judged award.
- Using the process outlined in this manual, come to consensus with other judges on the recipient of each award.
- Share their notes on top ranked and award-winning teams with the judge advisor and other judges for use in the award ceremony script.

Judge Match Observer – **Traditional Events Only:** Most of the judges will be assigned to award panels and will not have much time to see the teams and robots in action. Some judges will be asked to serve as judge match observers. Their role is to watch the teams who best display Gracious Professionalism® , the action on the field, and collect data on the quality of the robot performance in the competition. These observers will keep notes on each team during a match, collecting observations about: Gracious Professionalism® :
- How the team responds to wins or losses.
- How the team interacts with their alliance partner.
- How the team interacts with the event volunteers.
- How the team interacts with other teams.
- How the team members interact with one another.
- How the team approaches their conversation with the head referee in the Question Box.

Read more about this role and it's responsibilities HERE!

What is a Mentor: Mentoring is an important part of the FIRST program and contributes to the program's success. Every adult on a FIRST team is a mentor, simply because he or she leads through guidance and example. It is important to remember students need guidance, structure, encouragement, and most of all, a fun experience! **Minimum age: 18 and can be affiliated with a team**

When done correctly, this learning process builds and expands team members' self-confidence and knowledge. If the process has a strong foundation and works properly, adult team members come away with as much as students do.

A Mentor's Role Includes:
- Inspiring students in science and technology.
- Actively sharing knowledge and experience with the teams to help foster intellectual growth. Motivating and engaging students in meaningful activities.
- Balancing effective work habits with FUN!
- Allowing students to do as much of the work as possible.
- Encouraging the team to welcome and include all members.
- Providing students with opportunities to make choices, both good and bad.
- Encouraging students to take risks and be inventive.
- Allowing and encouraging independent thought.
- Creating, encouraging, and facilitating open, honest communication within the team.
- Fostering a reciprocal environment of trust and respect for every member and their ideas. FIRST® Tech Challenge Mentor Manual | 11 Gracious Professionalism® - "Doing your best work while treating others with respect and kindness - It's what makes FIRST, first."
- Encouraging accountability within the team.
- Facilitating team activities and discussion.
- Developing roles within the team.
- Coordinating help.
- Maintaining equipment and purchasing supplies.
- Communicating with sponsor organizations.
- Registering for competition(s).
- Planning and scheduling meetings, visits, and trips.
- Acting as a liaison between team members, mentors, parents, and volunteers.
- Informing students and parents about what is expected of them in terms of their commitment to the team each step of the way.
- Being a champion for Gracious Professionalism and role modeling the principle within the team

Read more about this role and it's responsibilities HERE!

Responsibilities: Pit administration volunteers are a vital role at an event. They are usually stationed in the team pit area and end up answering many questions throughout the day from teams, coaches, mentors, and spectators. This role is a fast-paced, customer service role, rather than an administrative role. The event pit administrator is responsible for making sure the event attendees have all the information they need about the event, resources, schedule, and timing. Responsibilities of the pit administration volunteers may vary from region to region, so it is important to check with the tournament director about specific responsibilities on event day. At minimum, this will include:

• Greeting teams as they arrive at the event.
• Confirming that teams have completed their consent and release forms and team rosters (if also in charge of team registration).
• Reporting any medical or non-medical incidents in our FIRST Reporting Portal.
• Collect/return lost and found items.
• Setup and breakdown of pit area.
• Assistance with general inquiries from teams, coaches, mentors, and spectators.
• It is an event best practice for all engineering portfolios to be brought to team interviews. Team portfolio responsibility belongs with the judges. Work with the Judge Advisor to create instructions for engineering portfolio collection and help share them with the teams upon check in

Pre-Event Day Responsibilities: To prepare for the event, make sure to enroll in the BlueVolt FTC Pit Administrator course which can be accessed through your dashboard once you apply for the pit administrator role at an event. You must also make sure to speak with the tournament director to see if there are administrative duties that will need to be completed. These duties might include printing required forms, putting together team registration packets, or putting necessary paperwork into a file box for the event.

Event Layout and Schedule: Knowing the event layout and event schedule will help keep the overall event running on schedule. Plan to get to the event early to locate:

• Where judging sessions are held.
• Where robot inspections are being held.
• Where the drivers meeting will be held.
• Queuing paths for teams.
• When lunch will be held, and where to pick up food (if applicable.)
• Where workshops are being held (if there are any at the event.)
• Where opening, closing, and awards ceremonies will be held.

Minimum age: 18 and can be affiliated with a team

Job Description: A queuer's main responsibility at events is to help teams get from the pit area to the competition fields on time so the event can run smoothly and on schedule. Queuers should speak to the tournament director to find out if there are any additional requirements, such as meetings before the event or run-throughs of the queuing path before the event. The approximate training time is one hour. **Minimum age: 13 if mature and can be affiliated with a team**

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 and teams to and from the competition will help keep all the matches running on time. Lead queuers will also properly stage teams in holding areas, while ensuring 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. Queuers should arrive early on event day to review the flow of the robot traffic paths. It is 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.

Queuer responsibilities include:
• Escort 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 help teams depart from the field. The lead queuer may also opt to assign some of the queuers as runners. Runners are there to find teams to queue up for the next match. Although teams are expected to report to the queuers before their match, it is often necessary to find a team that has not reported for their upcoming match.

Be sure to obtain a pit map and a team list from the tournament director.

<u>FIRST® Tech Challenge Referee and Head Referee Quick Guide</u>

Referee Role Descriptions: Referees have two main role distinctions; observing matches to call penalties and tracking the status of the match score. Four referees will be assigned to each field. There will be two referees responsible for tracking and calling penalties as they occur during the match. The other two referees track the score for either the red or the blue alliance. After completion of the match, the referees will work together to finalize the score and account for any penalties assessed during the match. Every 5 matches, the referees will trade responsibilities and continue to rotate responsibilities throughout the remainder of the matches. **<u>Minimum Age: 21. Head ref CANNOT be affiliated with a team</u>**

Penalties - Observes matches, identifies rule violations, and "calls" them. Referees help the competitors to avoid breaking the rules of the game. Referees participate in deliberations regarding contested calls, working directly through the head referee.

Scoring - Scoring referees monitor the status of the game and scoring elements during match play. There will be one referee assigned to the blue alliance side of the field, and the other to the red alliance side of the field. Some tournaments will track the status of the field on paper, using score sheets. Other tournaments may use live scoring, and the referee will use an app installed on either a phone or tablet to track the status of the field.

Required Reading:

<u>Game Manual Part 1</u> – Traditional Events, Section 4 – The Competition Pay attention to the tournament definitions and the tournament rules.
<u>Game Manual Part 1</u> – Traditional Events, Section 7 – The Robot Ideally, this section of the game manual is managed primarily by the inspection process. Referees must be familiar with and aware of the general rules for robot construction. Referees can, as appropriate, require a robot to go back for inspection if there is a concern about a violation of the robot construction rules.
<u>Game Manual Part 2</u> – Traditional Events It is key to familiarize yourself with the game overview, game definitions, and game rules. Referees must understand the set of rules that can trigger penalties for an alliance. Penalties come in several weights, minor penalties, major penalties, disablement, and yellow or red cards. A table summarizing rules and their associated penalties can be found in Game Manual Part 2, Section 4.8. The table is a summary; the body of the game manual will always supersede the summary. It is also essential for referees to be up-to-date with the state of the game rulings that have taken place. Game rulings can be found in the FIRST Tech Challenge Game Forum. They are updated throughout the season. They should be read and understood immediately prior to the tournament. Updates stop for the week on Thursdays at approximately 12:00PM Eastern time during tournament season.

Match Play
Queuing and Entering the Field Prior to the Match

• Check for badges – the two drivers, coach, and the human player must have a badge. Coaches will have a dot or other designation on their badge. At some events, badges are not provided. If this is the case, ask the tournament director or the program delivery partner about methods to identify coaches and drivers.
• Remind the coach not to touch the controls during the match.
• Check for safety glasses; be sure that everyone has them on.
• Remind the drive team to remain in the alliance station.
• Ensure that the field has been reset properly.

After the Match, the Referees Shall

• Consult with the scoring referee to ensure the status of the field has been recorded correctly, and that all penalties have been recorded properly.
• Signal to teams that they can remove their robots from the playing field.
• The head referee will communicate with the teams as necessary

Yellow/Red Cards
In addition to rule violations explicitly listed in the Game Manual Part 2 – Tradidional Events, yellow cards and red cards are used in the FIRST Tech Challenge to manage team and robot behavior that does not align with the mission of FIRST.

Egregious or repeated (3 or more) robot or team member behavior at the tournament can result in a yellow and/or red card. Yellow cards are additive, meaning that a second yellow card is automatically converted to a red card. A team is issued a red card for any subsequent incident in which they receive an additional yellow card, for example, earning a second yellow card during a single match.

Read more about this role and it's responsibilities HERE!

Minimum age: 21 and can be affiliated with a team

FIRST Tech Challenge Live Setup
Setup of FTC Live is usually completed the day before the event. The Program Delivery Partner (PDP) or tournament director will be able to guide you on what has been completed the day before. The transfer of the event data that has been configured in the cloud-based FTC Scoring system to FTC Live should occur no more than three days prior to the event. On the morning of the event, you will need to turn on the scoring computer and displays, and open the FTC Live software.

Pre-Match Responsibilities
● Work with PDP or tournament director to establish when teams are declared "no show".
● Work with PDP or tournament 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 the team list, as necessary.
● Generate the inspection schedule, if requested.
● Generate the judging schedule, if requested.
● After every team has passed inspection, generate the match schedule.
● Communicate match schedules to key volunteers.

Game Play
The scorekeeper and the emcee/game announcer or head referee 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 during alliance selection and generate matches for the elimination matches.

Awards
The scorekeeper may be asked to enter the awards into FTC Live and print the awards ceremony script for the emcee/game announcer.

To learn more about the supporting FTC Scoring System necessary to track team's points please click HERE!