FIRST Technical Advisor Manual

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V26-27.1	Initial 2026-27 Season Release

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Overview

Job Description

The *FIRST* Technical Advisor (FTA) is a highly visible leadership role responsible for ensuring the efficient flow of matches at the competition field. FTAs advocate for teams, resolve field and robot control issues, and work with other volunteers and staff to ensure a safe and successful event.

The FTA is a key volunteer position at any *FIRST* Tech Challenge event, but the responsibilities and skills required may be different depending on the size of the event and which other volunteer roles are staffed. At smaller events with reduced volunteer staffing, the FTA may perform some of the responsibilities of the Field Supervisor, Technical Director, Control System Advisor (CSA), and Lead Robot Inspector (LRI) roles. At larger events, events with multiple divisions, or events with unusual needs, the FTA may provide leadership to other individuals in these roles.

Regardless of a particular event's needs, the FTA can expect to spend their time communicating about technical matters, setting up and tearing down events, and working to ensure a successful event.

Requirements	
Technical	High
Physical	Medium
Administrative	High
Communication	High
Pre-event Training	High

Time Commitment

Significant pre-event training is required (at least 4–8 hours). FTAs are expected to be present at events whenever the event is open to teams and/or the public. Typically, this means FTAs are among the first volunteers to arrive and among the last to leave each event day.

Attire

- Comfortable closed-toe, closed-heel shoes, much of the day will involve standing and walking.
- ANSI Z87.1 or regional equivalent certified safety glasses are required in team pits and competition areas.
- As one of the event leaders, comfortable professional wear is encouraged.

Training and Certification

Read and complete all tasks in the `Pre-Event Training` section.

Any volunteer who applies to a role will be able to get into the Learning Management System (LMS) using the *FIRST* Training button. Roles with the training required will appear in the 'roles missing certification' area. For more help, you can read more about how to access your training.

If you have applied for a role but have not received access to the training, please email training@firstinspires.org. A separate confirmation of the role assignment will come later.

FTAs should contact the Event Director to collaborate on event planning and learn about pre-event meetings, venue walkthroughs, and setup plans.

All Volunteers are expected to read and comply with the Volunteer Handbook.

Roles and Responsibilities

> ***FIRST* is fun for all.** The most important role of a volunteer is to provide a safe, fun, and welcoming environment to all *FIRST* participants. When executing the duties of your role, always make decisions with the team experience in mind. Ask for help from event leadership if you feel your required duties conflict with the best team experience.

Core Responsibilities

The responsibilities and skills required by the FTA role may be different depending on the size of the event and which volunteer roles are staffed.

- Together with the Event Director and other Event Leadership Volunteers, ensure *FIRST* Tech Challenge events **provide an exceptional team experience** where participants feel safe and supported.
- Collaborate with the Event Director to **create and execute the Event Technical Checklist**.
- Act as a **liaison between *FIRST* and event staff** and volunteers by providing guidance on topics related to the field, robots, and game.
- Communicate with *FIRST* and local Program Delivery Partner(s) to **report on successes and issues** at events with the goal of continuously improving team experience.
- Provide **leadership over field operations** and volunteers; perform the duties of Field Supervisor at events where such a role is not staffed.
- Provide **leadership over technical operations** and volunteers; perform the duties of Technical Director at events where such a role is not staffed.
- Collaborate with the Lead Robot Inspector (LRI) to ensure strong **leadership over the inspection process**; perform the duties of Lead Robot Inspector (LRI) at events where the role is unstaffed.
- In collaboration with the LRI, FTA Assistant(s), and Control System Advisor(s), take reasonable steps to **ensure that teams can participate** to their highest level possible and provide guidance regarding the challenges they face.
- With the Head Referee, **ensure matches are carried out** effectively, fairly, and promptly.
- **Mediate and de-escalate conflicts** that may arise between participants, volunteers, and staff.
- Serve as a model for Gracious Professionalism®.

Core Skills

Highly successful FTAs develop the following skills, regardless of event structure:

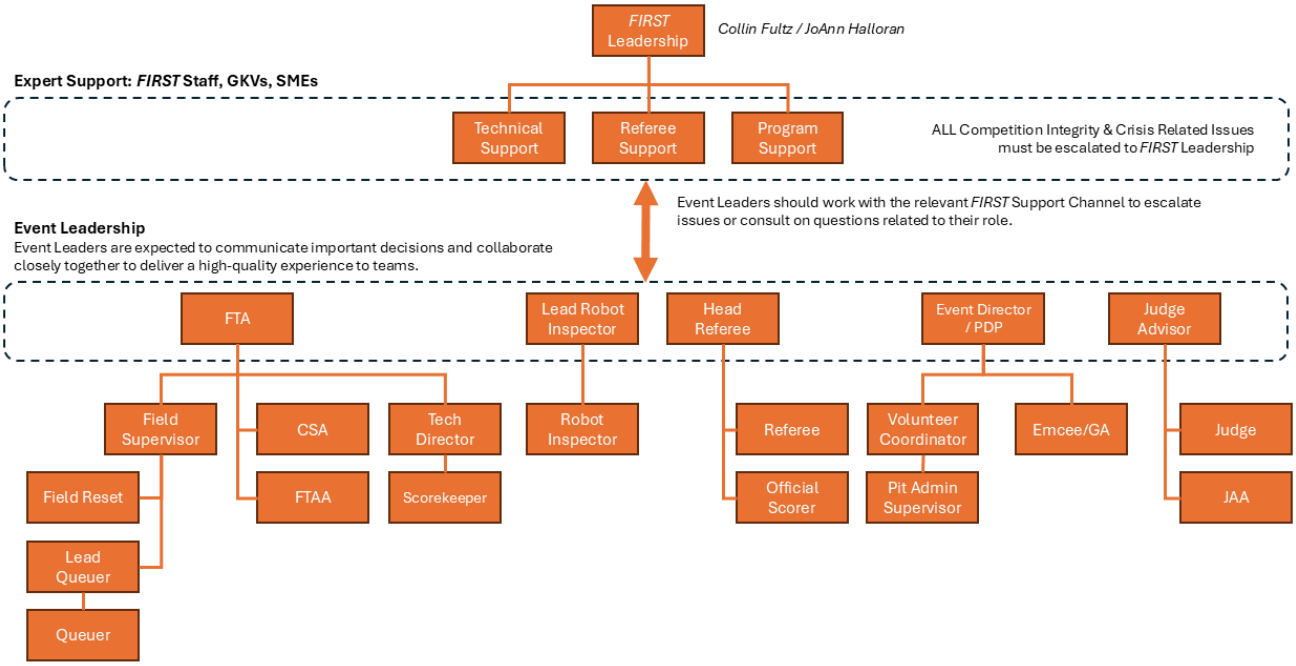
- **Empathetic and clear communication** with volunteers and participants of all ages.
- **Leadership and decision-making skills** to work with technical volunteers and teams, as needed.
- **Technical problem-solving** in:
  - The current season's playing field,
  - FTC-Live scoring system and the desktop and mobile systems used to operate it,

- Wi-Fi and Wi-Fi direct systems used for robot control and scorekeeping activity,
- Common materials used by teams in the construction of their robots, and
- The Android-based control systems used by teams.

Reporting Structure

FTAs report directly to ***FIRST* staff** and **Global Key Technology Volunteers** for technical support, and act as their representatives at events. They collaborate with the other Event Leadership volunteers to successfully deliver a high-quality experience to teams.

FTC 2026-2027 Decision Authority Matrix



At larger events, the FTA provides leadership to the **Field Supervisor**, **FTA Assistant**, **Technical Director** and **CSA** roles. Some large events, especially those with multiple divisions, may introduce a hierarchy of FTAs (Lead FTA, Division FTAs). See the Tournament Guide for recommended staffing of field and technical roles.

At smaller events where any of the Field Supervisor, CSA, Technical Director, or LRI roles are unstaffed, the FTA will assume the responsibilities of those roles to the extent that their time allows. It is **not** expected that an FTA will perform all the responsibilities of these roles at smaller events; this manual and other training resources will help FTAs prioritize their time amongst the areas of focus.

In practice, the FTA will:

- **Collaborate with the other Event Leadership volunteers** to solve problems, communicate concerns, and ensure alignment on important event management details.
- Empower Field Supervisors and FTA Assistants to manage the flow of matches and maintain the fields. In the absence of these volunteers, the FTA should focus on **troubleshooting issues** that may delay match play and **fixing the field,** as necessary.

- Collaborate with the Lead Robot Inspector to complete the inspection process and re-inspect robots as necessary. In the absence of an assigned LRI, the FTA should **assume the role** during the inspection period and **perform any re-inspections** requested during the event.
- Empower CSAs to provide in-depth technical support to teams. In the absence of a CSA volunteer, the FTA can provide **high-level triage and advice** to teams as time allows.
- Empower the Technical Director to manage the electronic systems and wireless environment at the event. In the absence of an assigned Technical Director volunteer, the FTA should **ensure support for scorekeeping** activities and address any wireless environment **issues that affect team experience** when reported by teams or volunteers.
- Empower Scorekeepers to **support the efficient flow of matches**. In the absence of an assigned Scorekeeper volunteer, the FTA should perform, or enable another volunteer to perform, the required match starts and score posting actions.

Before the Event

FIRST Tech Challenge events squeeze a lot of activity typically into a single day. One of the keys to running a smooth and successful event is for teams and volunteers to show up prepared. Teams spend countless hours preparing for competition day, and we ask our volunteers to prepare too. It is important that, prior to the event, the FTA reviews the `Pre-Event Training` resources listed in the checklist below. These training materials will help FTAs to pass the required certification test.

The training materials provide the technical knowledge needed to keep a competition running smoothly and fulfill FTA responsibilities at an event. Scheduled monthly key role discussion calls provide an opportunity to ask questions and share ideas and feedback with other FTAs. Learning ahead of time will go a long way towards keeping the event running smoothly and on time.

Mastering *FIRST* Tech Challenge technology requires specialized study. The robot electronics and behaviors are unique to the *FIRST* Tech Challenge program and completing the pre-competition checklist below will help the FTA prepare for their highly visible volunteer role and help assure a fun and successful competition day. The underlined document names are hyperlinks to public documents on the *FIRST* Tech Challenge website. The remaining documents are stored in the *FIRST* Training learning management system (LMS) and in the FTC Resource Library.

Outlined below are responsibilities an FTA has before the event day. Make sure to check with the Event Director to see if they need help setting up before the event.

Pre-Event Training

FIRST Technical Advisors must complete the required reading in this section and are required to pass a certification test prior to serving in this role. Resources for training and certification:

FIRST Technical Advisor Pre-Event Training List	
Requirement	Resource
Required	Welcome to *FIRST*
Required	*FIRST* Technical Advisor Manual (this document)
Required	Competition Manual, specifically: • Section 1 — Introduction (Competition Integrity Contract) • Section 5 — Event Rules • Section 8 — Game Overview • Section 9 – ARENA • Section 10 – Game Details • Section 11 – Game Rules • Section 12 – ROBOT Construction Rules • Section 13 – Tournament • Section 14 — League Play Tournaments (if applicable)
Required	Field Operations Guide, which contains training and advice for managing the fields and related volunteers
Required	Field Reset Guide
Required	Event Technical Checklist, which guides Event Directors and FTAs on the technical planning of an event
Required	Control System Troubleshooting Guide, which reviews common issues with the Android-based control system
Required	Robot Wiring Guide
Required	Wi-Fi Event Planning Guide and included Wireless Event Checklist
Encouraged	Team Updates (published every Thursday), which may contain important updates to the Competition Manual
Encouraged	FTC Live Setup Guide provides guidance on event data transfer, setting up FTC Live software, hardware and network, and workflow for event management system features.
Encouraged	REV Control System Docs
Encouraged	Attend the monthly FTA conference calls
Encouraged	Join the *FTC Technology Support Volunteer* Slack workspace by invitation from your local Program Delivery Partner
Encouraged	Complete Strategies for Inspiring Success for All modules.
Encouraged **Required** if serving as Field Supervisor	Playing Field Resources • Initial Field Element Assembly Guide and Event Field Setup Guide • Field Mitigation Guide • Field Acceptance Checklist
Informational	Watch the game animation video for an overview of the game
Informational	Review the FTC Q&A System, a resource for teams that may be useful for rule clarifications.

FIRST Technical Advisor Pre-Event Training List	
Required	Complete the *FIRST* Technical Advisor Certification Test (For volunteers outside of North America without a *FIRST* Dashboard Account use the PDF to self-certify)

Pre-Event Preparation Work

The FTA should perform the following tasks prior to every event:

- Discuss event planning and setup with the Event Director using the Event Technical Checklist.
- Verify with the Technical Director (or, if that role is not staffed, ensure) that a wireless survey of the venue has been conducted as described in the Wi-Fi Event Guide. Select preliminary Wi-Fi channels for robot communication, the FTC-Live scoring network, and any other Wi-Fi infrastructure needed to run the event.
- Verify the field and technical volunteer staffing levels with the Volunteer Coordinator and Event Director. Recommended levels of staffing can be found in the Tournament Guide.
- Verify that the Lead Robot Inspector (LRI) has the necessary materials for the event.
- Verify with the Technical Director or Event Director that the steps described in the FTC Live Setup Guide have been completed.
- Collect and verify all passwords and codes for the computers and devices that will be used.
- Read the latest Team Updates for important changes to the Competition Manual.
- Read announcements in the `#all-announcements` channel of the *FTC Technology Support Volunteer* Slack workspace. Invitations are available from your local Program Delivery Partner.

Recommended Staffing

The FTA should collaborate with the Event Director and Volunteer Coordinator to determine an appropriate level of staffing for field and technical roles. See the Tournament Guide for recommended levels of staffing for events of various types and sizes.

Event Management System

Prior to the event, the FTA is responsible for working with the FTC Scoring Event, League, or Region Admin to configure the event in FTC Scoring (the cloud scoring software). Then, they are responsible for setting up, testing, and operating FTC-Live (the local scoring software). These responsibilities may be shared with the Technical Director or Event Director.

- In FTC Scoring, configure the event with teams, leagues (when applicable), and other event information. This requires the help of an FTC Scoring Event, League, or Region Admin.
- Within three days prior to the event, update FTC-Live and download the latest data from *FIRST*.
    - If FTC-Live is already installed, re-open the application to download automatic updates.
    - Go to FTC Scoring to download the setup wizard, if needed, and review release notes.
- 2-3 days prior to the event, FTC-Live must be pre-loaded with the event configuration. Review the process of transferring data to FTC-Live in the FTC-Live Setup Guide.
- Test the software system, tablets, and logins at least a week prior to the competition.
- Test the scoring system again during event setup and the morning of the event.

During event setup, the FTA should work with the Scorekeeper to verify that these pre-event tests were completed successfully. Issues with the setup or operation of FTC-Live may require the FTA's assistance. For more information, see the FTC-Live Setup Guide.

Event Setup

Competition setup generally occurs on the day before the event. Prior to setup, the FTA should check in with the Event Director and discuss any changes to the pre-event planning. Printed copies of diagrams and the Event Technical Checklist are valuable tools for setup. See the Tournament Guide for more information about event planning and layout.

Setting up the arena, testing the wireless environment, and testing the FTC-Live scoring system normally takes 2–3 hours for single-field events, 3–4 hours for a two-field event, and anywhere from half to a full day for larger events. See the Field Operations Guide for more information about set up of the arena. Seasonal instructions for setting up the field can be found in the Event Field Setup Guide.

Following is an overview of the FTA's focus during event setup:

- Lead the setup of the arena and all competition and practice fields, and/or empowering a Field Supervisor volunteer to lead the process.
- Advise the Event Director on decisions related to event setup.
- Collaborate with the Event Director or Technical Director to set up the FTC-Live scoring network and related infrastructure:
    - Main scoring computer running FTC-Live
    - Division scoring controllers (if necessary)
    - Wired and wireless networks
    - Audience and Field Timer displays
- Collaborate with the Scorekeeper to print a copy of FTC-Live account login information.

- Confirm Wi-Fi channel allocations for robot communication, the FTC-Live scoring network, and any other Wi-Fi infrastructure needed to run the event based on the wireless environment.

Feel free to use the tech support telephone number in `On-Call Support Numbers` to contact on-call technical support if there are any problems with setup or the wireless spectrum on event day.

Recommended Event Day Equipment and Document List

- ANSI Z87.1 or regional equivalent certified safety glasses are **required**.
- Closed-toe, closed-heel shoes that will not damage the playing field are **required**.
- Small battery-powered flashlight or headlamp.
- Multi-function Voltmeter/Ammeter/Ohmmeter with probes.
- A pair of *FIRST* Tech Challenge approved Android devices, with
  - Current FTC Robot Controller app installed on one device,
  - Current FTC Driver Station app installed on the other device, and
  - Wi-Fi Analyzer app (available from the Google Play Store) installed on a device.
- USB flash drive with current *FIRST* Tech Challenge apps (driver station, robot controller)
- Hardcopy or electronic copy of the FTA Manual (this document)
- Hardcopy or electronic copy of the Field Operations Guide
- Hardcopy or electronic copy of the Control System Troubleshooting Guide
- Hardcopy or electronic copy of the Wi-Fi Event Checklist

FTA Topics for Emphasis

The following are important topics the FTA needs to be aware of prior to event day.

Practice Matches

Practice matches (defined in Section 13.5 of the Competition Manual) are an optional part of an event. The FTA should work with the Event Director to determine whether and when to schedule practice matches. More information is available in the Practice Matches sections of the Tournament Guide, FTC-Live Setup Guide, and Field Operations Guide.

Electronic Inspection Checklists and Tracking

Automated inspection checklists and inspection status tracking are available in FTC-Live. Inspectors can use tablets or computers connected to the scoring network to complete the inspection checklists and track team inspection status. Pit displays show inspection status, and it is recommended to set audience displays to show inspection status using FTC-Live video switch controls.

Robot Sensor Calibration

Events may specify a window of time for teams to calibrate their robots' sensors on the competition field(s) under competition lighting conditions. The FTA should work with the Event Director to determine whether and when to schedule this opportunity. See the Sensor Calibration section of the Field Operations Guide for more information about sensor calibration.

FTA Notepad

The FTC-Live scoring software has an optional FTA user role that can be used to take notes related to team and match issues via a tablet or computer. FTAs, FTA Assistants, and CSAs use the notepad to report & track robot issues during the event

OpMode Initialization
Teams participating in a match are required to initialize an OpMode (even if it is their TeleOp program) as part of their pre-match setup. Teams with version 11.0 or above of the FTC Driver Station app have an enhanced indicator of match readiness under certain conditions. See Section 11 – Game Rules of the Competition Manual and the Pre-Match Setup section of the Field Operations Guide.

Disabled Robots
The FTA should advise the Head Referee as soon as possible if a robot is non-functional. If this occurs before the start of the match, the team may be allowed by the FTA or Head Referee to remove their robot while match play continues. Only a Referee can declare a robot is disabled during a match as this may impact match outcomes.

Question Box
Teams may use the question box to ask the FTA questions in addition to asking the Head Referee questions. See the Question Box section of the Field Operations Guide for examples.

Event Day

Report Time

The Event Director or Volunteer Coordinator will confirm the time you should arrive typically via email the week before the event. FTAs are expected to be present at events whenever the event is open to teams and/or the public. Typically, this means FTAs are among the first volunteers to arrive. When you arrive onsite, check in with the Volunteer Coordinator and Event Director.

Schedule Mindset

A valued measure of event quality is starting and finishing on time. FTAs are well-positioned to ensure a smooth and successful event. For a deeper discussion of this topic and strategies the FTA can use for success, see the Schedule Mindset section of the Field Operations Guide.

Event Day for the *FIRST* Technical Advisor

The following is an overview of the FTA's focus on event day:

- Check in with the Event Director throughout the day and advise them on important decisions.
- Verify that the Lead Robot Inspector is prepared for the scheduled start of inspection. Periodically check the status of inspection and provide leadership when necessary.
- Meet with the Head Referee to discuss the match workflow and if there are any topics the Head Referee would like the FTA to cover during the driver's meeting.
- Oversee practice matches and robot sensor calibration as described in the Practice Matches and Sensor Calibration sections of the Field Operations Guide if applicable.
- Collaborate with the Scorekeeper to test the scoring system. It is recommended to run test matches to ensure game sounds are clearly audible.
- Oversee creation of the qualification match schedule. Before publication, verify the draft against the event `Public Schedule` and seek approval of the timing from the Event Director.
- Attend opening ceremonies and be prepared to start the first match immediately afterwards.

- Lead field operations and field staff volunteers during qualification matches and playoff rounds as described in the Field Operations Guide.
- Lead Control System Advisors in their goal of providing in-depth technical support to teams.
- Address wireless environment issues as needed.

At smaller events where the FTA covers multiple roles, it is not expected that the FTA will perform all their duties. Ensuring the safe and efficient flow of matches is the highest priority.

Volunteer Interaction

As an event leader, the FTA interacts and collaborates with many volunteers on event day. The following is an outline of key volunteer relationships the FTA should maintain.

Event Director
On event day, the FTA and Event Director work together to execute the Event Technical Checklist. Successful events stem from a high level of trust and understanding between the FTA and Event Director, along with the planning they completed before event day. The FTA advises the Event Director on best practices outlined in the Tournament Guide, Field Operations Guide, and FTC-Live Setup Guide and leads others according to the Event Director's decisions.

Head Referee
As a fellow event leader, the Head Referee and FTA collaborate to ensure that matches are carried out effectively, fairly, and promptly. A gracious and professional relationship between the FTA and Head Referee is critical to a smooth and successful event. *FIRST* strongly recommends that FTAs and Head Referees follow the **FTA & Head Referee Workflow** outlined in the Field Operations Guide. Before the start of matches, the FTA and Head Referee should meet to discuss the workflow. The FTA can assure the Head Referee that field staff will provide timely assistance to teams using the steps documented in the Control System Troubleshooting Guide and make the difficult decision to start a match with a non-functional robot when necessary.

Technical Director
At events that staff the Technical Director role, the FTA should check in with the Technical Director during event setup and early on event day to ensure that the technical systems supporting the field are ready for action. Familiarity with the volunteers and technical systems will be helpful for quickly resolving any issues that arise during the event.

Volunteer Coordinator
Upon arrival at the event, the FTA should check in with the Volunteer Coordinator. If any of the roles that the FTA leads (Field Supervisor, Control System Advisor, etc.) are staffed at the event, this serves as an opportunity to confirm the final level of staffing and meet any unfamiliar volunteers.

End of the Day

After the event, the FTA leads the teardown of the arena. This can be a chaotic period, and it is often worthwhile for the FTA to organize the efforts of other volunteers.

At the end of the day, walk away from the event knowing you have done your absolute best to be an exemplary role model and ensure that the competition was fair for all teams. These are the ultimate goals of the *FIRST* Technical Advisor position.

Team Interaction and Support

When interacting with teams, please always consider the team perspective. The teams have put significant time and effort into preparing for each event and may be feeling very stressed about everything working out as they have planned. **Event Day is a very big deal for all teams, and we are here to help!**

While it is our job to help guide the teams to a successful event, it is their responsibility to follow the rules and be on time for judging and matches.

If you feel there is an issue with an individual or several individuals from a team that warrants specific intervention beyond just a kind reminder, please ensure the correct stakeholders for the team are aware. Here is a generally acceptable process when working with a student or team who you need to change their behavior:

The ABCs of Managing Team Behaviors	
Ask for an Adult	Do not directly reprimand a student one-on-one without an adult from their team present. Ask the student to bring an adult who is responsible for the team to meet you, before moving forward with any discussion about the concerns at hand.
Be aware of the Environment	Is the environment conducive for the feedback you are about to give? Is it loud in the area where you are? Are there other teams around that may hear the reprimand? Moving the conversation to a quieter, more private space can be helpful.
(Offer a) Clear Explanation	Explain the concern to the team and offer clear examples of the behavior that is concerning.
Discuss any Questions	Offer the opportunity for students and adults to ask clarifying questions
Explain Next Steps	Outline with the students and adults what the next steps are if the issue is not corrected. Certain behaviors may include the risk of yellow cards

Note: the only person at an event who can give an official warning or issue a yellow/red card is the Head Referee. Please refer these more severe issues to the Head Referee and notify the Program Delivery Partner.

Volunteers are discouraged from passing any negative feedback about any teams directly to the Judges or Judge Advisor (JA), because it is not possible to know all the contributing factors around such a complaint or observation. If there are issues which are repeated or egregious, follow the process for Reporting Other Issues or Concerns and inform the Program Delivery Partner. The Judge Advisor may seek feedback from the Event Director to determine if there is any relevant information to provide the Judges with their evaluation process.

Teams may only be completely disqualified from awards consideration for very rare egregious actions and only with approval from *FIRST* HQ. The Event Director and/or JA should call the on-call number to discuss the issue.

Emergencies

The Program Delivery Partner, Event Director and the event site host organization are responsible for having safety and security plans in place for each event. Included in the plan should be topics such as:

- A map of all the emergency exits
- Knowledge of where on-site medical support is located.
- Shelter in place plans in the case of severe weather
- Evacuation plans

Teams should have their own safety plans before attending the event. Here are some team-focused recommendations for Preparing to Safely Attend a *FIRST* Event.

Lost Children

FIRST Tech Challenge events can be very hectic, and it can be easy for a child to get lost amongst the shuffle of a busy event. Ensure you have a plan prior to the event in the instance of a lost child.

In some cases, the team roster will list Coach phone numbers which can be used to reunite team members, in some regions they collect "Day-of" cell phone numbers from each team at check in. Coordinate your plan with your Program Delivery Partner.

Code Adam Guidelines (www.missingkids.com/CodeAdam) are also a great resource.

Medical Incident Reporting

Event volunteers are not responsible for diagnosing student injuries, handing out medication, or first aid equipment. You and other event volunteers should refer medical issues and emergencies to a medical professional on site, such as an EMT. If an incident or illness occurs at an event, the Event Director, Pit Administrator, or another trained delegate should do the following:

- Call 911 if there is any question whether the injured person/persons require urgent medical attention.
- Respond to the scene immediately. Bring a clipboard, pen, or a electronic device to complete the incident report on the *FIRST* Reporting Portal.
- Complete the incident report for the injured party.

www.firstinspires.org/report

The Event Director or Pit Administration volunteers are responsible for completing incident reports.

Best Practices for Incident Reporting	
Be Calm	Anyone handling incident reporting should have a calm demeanor. They should be able to collect information and talk to witnesses without assessing fault.
Be Concise	In all conversations with the injured, witnesses, spectators, and/or media always say "the incident is being investigated" without any further comment. It is not the job of the report collector to provide any opinions on the situation at hand.
Be Risk Conscious	Do not imply liability or any payment, as no one knows for sure until all the facts are collected.
Be Prepared	Those taking in incident reports should be able to communicate with the insurance company if necessary. They should also be aware of who they need to share incidents with, including the local Program Delivery Organization or the Event Director.

Although most incidents will not result in a claim, it is better to act on the side of caution and report them. Should an incident result in a claim after the event, the documents will be on file, complete with witnesses and a written report.



www.firstinspires.org/report

Youth Protection Reporting
Issues that are non-medical but are of concern to a participant/participants should also be reported. Anything that happens during an event that made a youth volunteer, team member or spectator feel uncomfortable or threatened should be addressed.

As appropriate and if you feel safe doing so, speak directly with the offending party and try to quickly and calmly defuse the immediate issue. Call the Event Director and/or the Program Delivery Partner and inform them of the issue and seek assistance as needed with any immediate remediation of the issue.

Ensure all issues are reported in a timely manner using the *FIRST* Reporting Portal. Youth Protection Concerns encompass a wide variety of one-time or ongoing issues such as suspected abuse, bullying, harassment, discrimination, questionable behavior, or violation of the *FIRST* Code of Conduct.

Reporting Other Issues or Concerns
Feedback about issues such as game play, rule changes, awards, and event management (other than medical/safety issues) are considered program related concerns and not youth protection issues and should be shared with FIRST via customerservice@firstinspires.org or by contacting support.



help.firstinspires.org/s/contactsupport

Please note that match results and award results are final and that we will not review match videos.

Safety

An important priority for all volunteers is to observe their event areas to help promote a safe and orderly space for all the participants. It is likely that various volunteers and event participants will bring concerns to your attention, but you should also be proactive in identifying areas of concern.

Prioritize working with the teams to help identify and correct potential safety issues in the area. Please review the section about `Team Interaction and Support` for the best ways to work with teams on making changes.

Safety Glasses and Closed Toe Shoes

Volunteers, teams, coach/mentors, and spectators are required to have safety glasses and wear closed-toe and closed-heel shoes in some areas at an event. This is required in team pit areas where work is being performed and in the immediate vicinity of competition fields and practice fields with active robots. No one should enter these areas without proper Personal Protective Equipment (PPE). Some events will have volunteers with spare safety glasses to pass out. Other events may not have spares to provide.

Pit Spaces

Specific rules governing what teams can have and do in their pit space are covered in the Competition Manual, but the Event Directors may add additional restrictions which must be published before the event based on limitations set by the venue.

Common areas where teams need help to stay safe and within the rules:

- No open flames or sparks.
- Power tools are generally permitted if they are not causing damage to the venue.
- Aisles, walkways, and doors should be clear of obstructions.
- Teams may set up practice spaces if they are fully within their designated space.
- No structure may be taller than 10 feet.

Important Tools

Public Schedule

The Program Delivery Partner or the Event Director should publish the public schedule of events before the event. This schedule will have a high-level overview of all the activities for the event. It is important that everyone at the event does their best to stay true to the public schedule so that teams and volunteers who have planned their day around these times have a good experience.

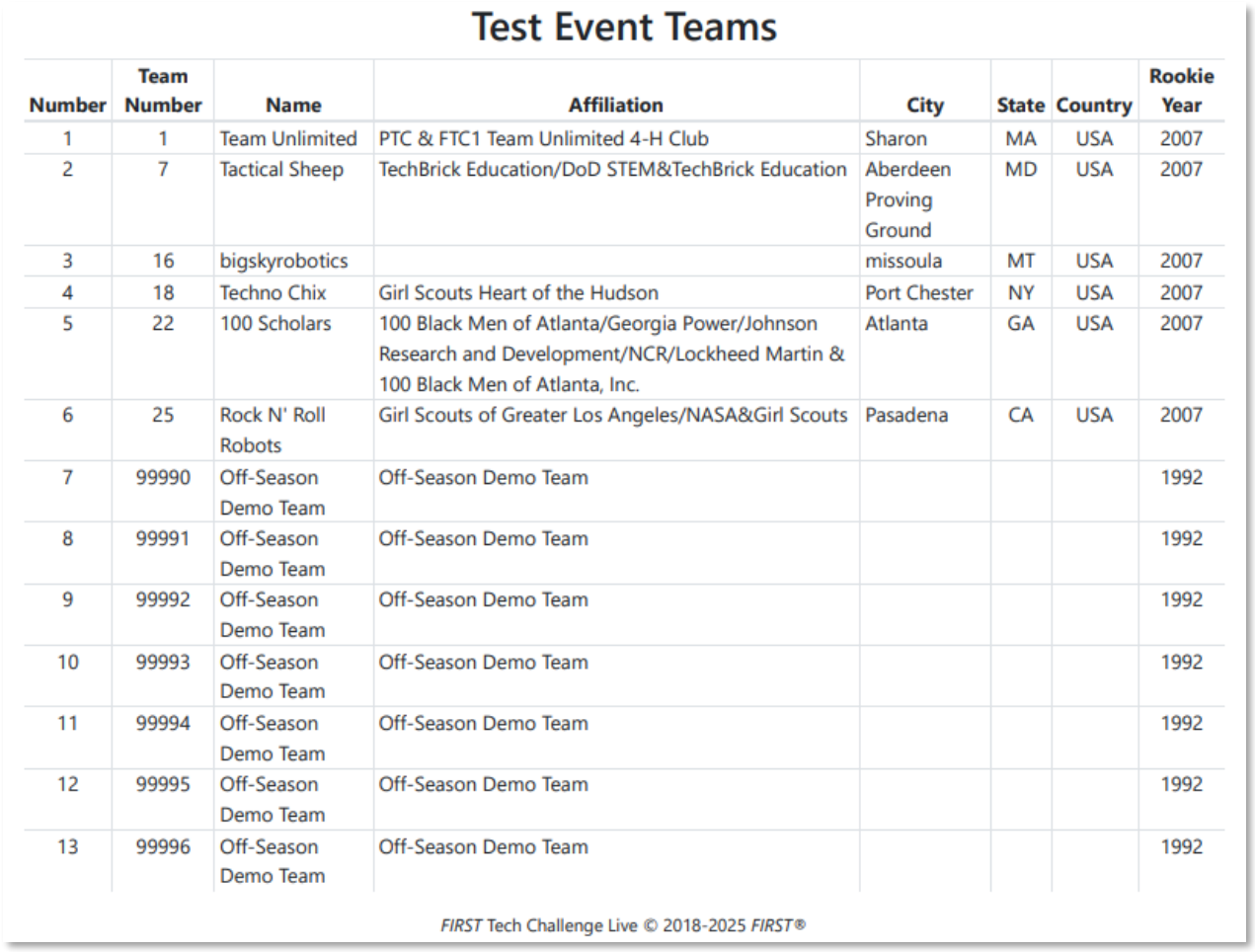
Time	Agenda
7:15 am	Doors Open for Staff & Key Volunteers
7:30 am	Judges and Inspectors Report
8:00 am	Doors Open for Teams
8:30 am	Judging & Inspection Commences
10:15 am	Team Check-in Hard Deadline (Check the Competition Manual)
10:30 am	Match schedule is generated and distributed to teams. (Check the Competition Manual) *Note to Scorekeeper: 6 Matches total* (Check the Competition Manual)
10:40 am	Drivers' Meeting with Head Referee & Opening Ceremony
11:00 am	Qualification Matches 1 - 8 *Note to Scorekeeper: 7-minute cycle-time*
12:00 pm	Lunch
12:45 pm	Qualification Matches 9 - 45 *Note to Scorekeeper: 5-minute cycle-times*
3:50 pm	Qualification Matches Projected End
4:00 pm	Alliance Selection
4:20 pm	Double Elimination Rounds 1 - 4
5:10 pm	Award Ceremonies Start & Double Eliminations Round 5
6:20 pm	Projected End of Event
7:00 pm	Doors Close
Occasionally things that happen out of the event's control may impact the schedule. In these cases, work closely with the Event Director to understand the updated agenda.	

SAMPLE

Figure 1: Example Schedule for a 30 Team Event

Registered Teams List

The Program Delivery Partner may provide a list of teams registered for the event or the scorekeeper can export a report of all the registered teams for the event. Sometimes this list may change the day of the event based on which teams show up. The Scorekeeper report will have the most accurate information about who is competing at an event. Notes that teams may be competing only in the judging portion of the event and not have a robot present.



Test Event Teams

Number	Team Number	Name	Affiliation	City	State	Country	Rookie Year
1	1	Team Unlimited	PTC & FTC1 Team Unlimited 4-H Club	Sharon	MA	USA	2007
2	7	Tactical Sheep	TechBrick Education/DoD STEM&TechBrick Education	Aberdeen Proving Ground	MD	USA	2007
3	16	bigskyrobotics		missoula	MT	USA	2007
4	18	Techno Chix	Girl Scouts Heart of the Hudson	Port Chester	NY	USA	2007
5	22	100 Scholars	100 Black Men of Atlanta/Georgia Power/Johnson Research and Development/NCR/Lockheed Martin & 100 Black Men of Atlanta, Inc.	Atlanta	GA	USA	2007
6	25	Rock N' Roll Robots	Girl Scouts of Greater Los Angeles/NASA&Girl Scouts	Pasadena	CA	USA	2007
7	99990	Off-Season Demo Team	Off-Season Demo Team				1992
8	99991	Off-Season Demo Team	Off-Season Demo Team				1992
9	99992	Off-Season Demo Team	Off-Season Demo Team				1992
10	99993	Off-Season Demo Team	Off-Season Demo Team				1992
11	99994	Off-Season Demo Team	Off-Season Demo Team				1992
12	99995	Off-Season Demo Team	Off-Season Demo Team				1992
13	99996	Off-Season Demo Team	Off-Season Demo Team				1992

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Figure 2: Competing Team Report

Volunteer Roster

The Volunteer Coordinator or the Program Delivery Partner will have access to a list of applied and assigned volunteers for the event.

Event Layout/Map

The Program Delivery Partner and Event Director should publish a map of the venue before the event. In some cases, details on the map might not be available until the day of the event.

The Event Layout / Map should detail the following:

- Load-In Path
- Parking for Personal Vehicles and Busses
- Team Check-in
- Volunteer Check-in
- Competition Area
- Pit Area (May include the `Pit Map`)
- Judging Room Locations (if applicable)
- Safety Details as available (Emergency Exits, AED, Shelter in Place Locations)

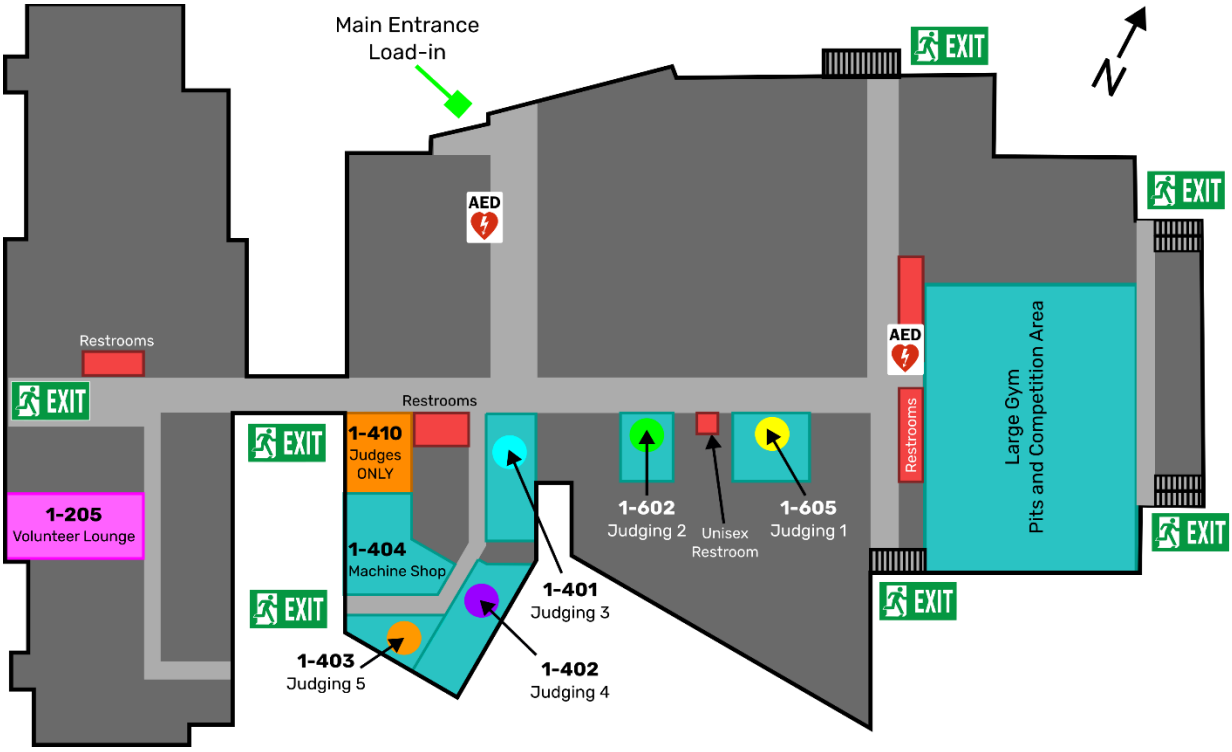


Figure 3: Example Event Map

Match Schedule

The match list will be generated on the day of the event after the teams have been confirmed. This schedule will list which teams will play in which alliance (Red or Blue) and it will also list a match start time see Figure 4. Some events will have more than one competition field and/or more than one division, and each division will have its own schedule.

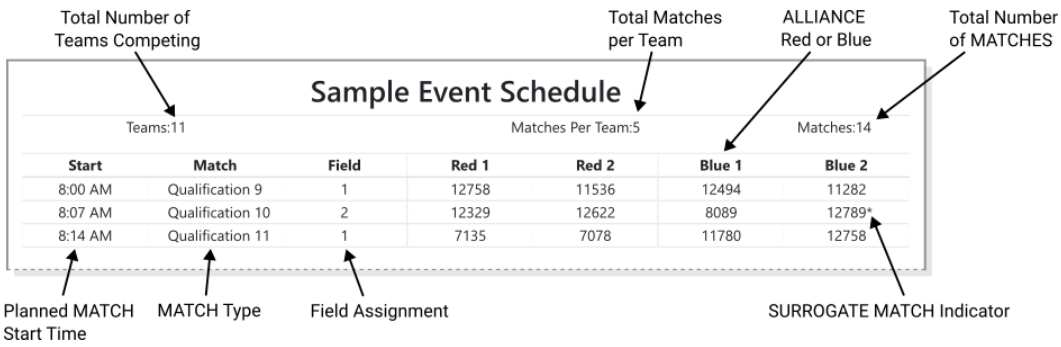


Figure 4: Example Match Schedule

Pit Map

Pit maps are typically provided by either the Event Director or by the Scorekeeper. Having a map of where each team is in the pit is key, as teams, parents or Queuers might need to find Pit Maps created in FTC Scoring will appear on the FTC-Events page.

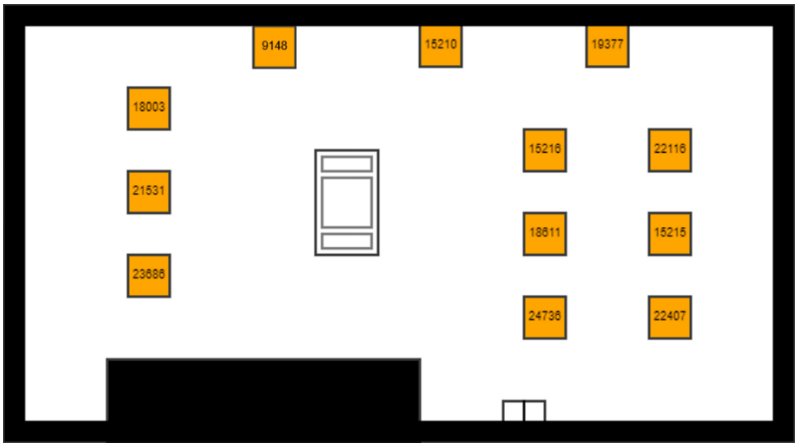


Figure 5: Example Pit Map for a small 12-team Qualifier Event

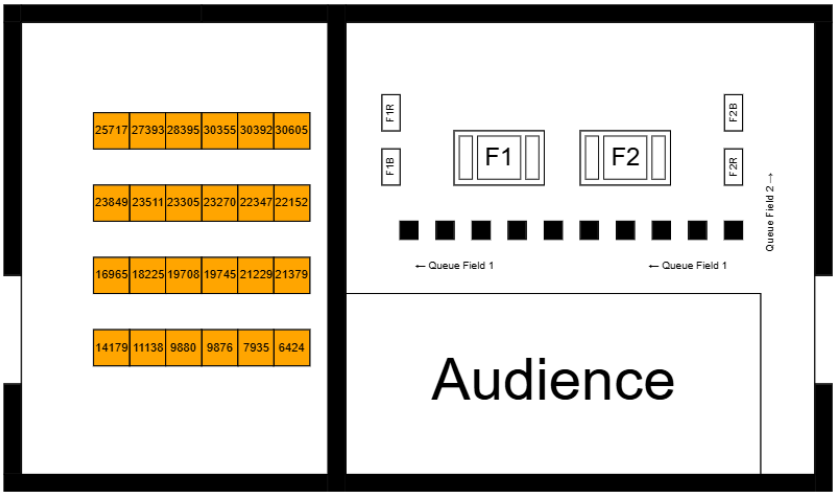


Figure 6: Example Pit Map for a 24-team Qualifier Event



Figure 7: Example Pit Map for a 72-team Regional Championship Event

Useful Links and Information

On-Call Support Numbers

These numbers are for *volunteer support only*. Teams should not use these numbers to call about rulings or technical assistance.

Administrative, Judge, Referee and Non-Technical Issues:	(603) 206-2412
Scoring System (FTC Live) or other Technical Issues:	(603) 206-2450

Call or use the **built-in chat feature on FTC Live** available for events with internet access.

Pre-Event Support

Mon – Fri 8:30am – 5:00pm Eastern Time (UTC-4 or UTC-5)
Contact Support including live chat or email customerservice@firstinspires.org

Program Resources

Event Search ftc-events.firstinspires.org	Game and Season Resources ftc-resources.firstinspires.org/ftc/game
FIRST Tech Challenge Blog	Event Resources ftc-resources.firstinspires.org/ftc/event
FIRST Tech Challenge Website firstinspires.org/robotics/ftc	Volunteer Resources ftc-resources.firstinspires.org/ftc/volunteer

Feedback

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