

Referee Manual

	Revision History
Revision	Description
V25-26.1	Initial 2025-26 Season Release
V25-26.2	Fixed QR code export quality on last page
V25-26.3	Fixed Safety section, edited paper scoresheet access

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Overview

Job Description

Referees are Field Staff with two main roles related to match gameplay. Referees observe matches to call rule violations and track the status of the match score. Four Referees will be assigned to each field in addition to a Head Referee. Two Referees are responsible for tracking and calling rule violations as they occur during the match, while the other two Referees track the scoring achievements of the alliances. After completion of the match, the referees will work together under the guidance of the Head Referee to finalize the score and account for any violations assessed during the match.

Violations

Referees observe matches, identify rule violations, and "call" them. Referees help the competitors 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, robots, and scoring elements during gameplay. There will be one Referee assigned to stand on the blue alliance side of the field, and the other to the red alliance side of the field. Most events will use live scoring, and the Referee will use an app installed on either a phone or tablet to track the status of scoring achievements on the field. Occasionally in extenuating circumstances, some events may track the status of the field on paper, using scoresheets.

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

Time Commitment

Referees should expect to spend 10-12 hours at a full day event or 5-6 hours at a league meet. Approximately 4-6 hours of pre-event training and planning is required for Referees.

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 or side shields with prescription glasses are required in team pits and competition areas.



- Generally, attire that allows a volunteer to comfortably and appropriately squat, kneel, and stand without entanglement hazards is advised.
 - Wear neat, dark preferably black pants or shorts.
 - Wear a shirt underneath the Referee shirt. It is recommended to be black or white with no visible logos.
 - Attire and accessories may not display a team affiliation (e.g., team shirt, school hat, the same distinct safety glasses as a particular team) or objectionable logo.
 - o Fun and appropriate Referee, game, or robot-themed attire may be worn.
- Some events will provide a black and white Referee shirt to help distinguish Referees from other Field Staff. Referees may bring and wear their own identical Referee shirt, if they have one.

Training and Certification

Read and complete all tasks listed 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 <u>read more</u> 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.

The Head Referee or Event Director may inform the Referees of additional requirements, such as meetings before the event, practice matches, or a run-through of the event space before the event is encouraged or required.

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



Roles and Responsibilities

FIRST is fun for all. The most important role for a volunteer is to provide a safe, fun and welcoming environment for 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

Referees are responsible for observing gameplay during matches, issuing warnings and penalties for rule violations, and tracking scores. While Referees at *FIRST* events help the competitors to avoid breaking the rules of the game, they also must apply consistent rulings and escalations in line with the Competition Manual. Clear explanations of rule violations should be provided to teams when giving the appropriate penalty for the rule violation in order to provide them with the opportunity to avoid future violations.

Core Skills

Experience and skills needed:

- Thorough knowledge of the competition, game, and rules of play.
- Strong assessment skills.
- Strong communication and diplomacy skills.
- Ability to collaborate with others, work as a member of a team.
- Attention to detail.
- Ability to move about the field.
- Ability to stand for long periods of time.

Prerequisites

- Prior FIRST experience is required
- Must be 18 years of age or older, and post high school or equivalent

Reporting Structure

Referees report to the Head Referee.



Before the Event

Pre-Event Training

Referees must complete the required reading in this section and are required to pass a certification test prior to serving in this role. Referees must be confident and comfortable with the game rules to be able to reliably make calls during the fast pace of a *FIRST* Tech Challenge event. Learning ahead of time will go a long way towards keeping the event running smoothly and on time.

Resources for training and certification:

	Referee Pre-event Training List		
Requirement	Resource		
Required	Complete Welcome to FIRST.		
Required	Watch the game animation video for an overview of the game.		
Required	Review the Referee Volunteer Manual. (this document)		
	Review the Competition Manual – specifically:		
Required	Section 9: ARENA		
Required	Section 10: Game Details		
	Section 11: Game Rules (G)		
	Review <u>Team Updates – Combined</u>		
	 Team Updates are posted on a weekly basis. These releases 		
	occur on Thursdays around noon (US Eastern Time).		
Required			
	Referees are required to read the team updates throughout the		
	season and are encouraged to sign up for the <u>Team Update</u>		
	notification emails to help stay up to date.		
Required	Review Referee Live Score Tracking Tablet Guide.		
Required	Review the Referee Training Materials.		
	Complete the Referee Certification Test in the FIRST Learning		
Dogwinod	System.		
Required	(For volunteers outside of North America without a FIRST Dashboard		
	Account use the PDF to self-certify.)		

Additional Information & Resources

Referee Additional Resources			
Resource Description			
Field Reset Guide	A quick guide on how to reset the field.		
FTC Team Q&A System	This is a resource for teams; however, Referees may also find these useful to understand the questions teams ask.		
Referee/Head Referee Volunteer Calls	Monthly optional volunteer calls to provide support for Referees and Head Referees.		



Referee Additional Resources		
FTC Volunteer Materials	General resources for all FTC volunteers.	
<u>FIRST General Volunteer</u> <u>Materials</u>	General resources for all <i>FIRST</i> volunteers.	

Event Day

Report Time

The <u>Event Director</u> or <u>Volunteer Coordinator</u> will confirm the time Referees should arrive typically via email the week before the event. In most cases, Referees should arrive at least one hour prior to any scheduled matches.

Upon onsite arrival, check-in with the Volunteer Coordinator and report to the <u>Head Referee</u>.

Referee Meeting

The Head Referee will hold a meeting the morning of the event with the Referees to talk about the flow of the day. This is a good opportunity for the Referee to know which field they will be working on (if there are multiple fields) and which Referees they are working with. The Head Referee should work with the Referees to come up with a communication plan to make sure penalties and scores are recorded correctly. It is important that Referees communicate well during the matches to ensure the matches run smoothly and on time. This is also an opportune time for Referees to report their conflicts of interest and gain clarification on rules.

Drivers' Meeting

Prior to qualification matches, most events will hold a drivers' meeting. This is an opportunity for the Head Referee to address the teams prior to the start of qualification matches. A number of topics can be discussed in the drivers' meeting, including safety reminders, or even rule infractions that the Referees have seen at past events, with the intention of helping teams avoid making the same mistakes at this event.

Referees are encouraged to listen to the drivers' meeting to learn the guidance that is provided by the Head Referee.

Practice Matches

If an event schedule includes practice matches, it is encouraged for some Referees to be present to provide teams with an experience to approximate qualification and playoff matches. This is a good opportunity for Referees to practice their in-match responsibilities, including helping with pre-match setup, scoring live on tablets, calling rule violations, completing Refereed discussions, and providing feedback to teams. Referees are not required for practice matches, but there is value for both teams and volunteers for some Referees to be present.



Qualification & Playoff Matches

Referees should plan to be present for all qualification and playoff matches that have been scheduled, subject to their scheduled volunteer times. Referees are crucial to the event executing the match schedule on time through their in-match duties. Referees should expect to rotate roles throughout the day.

In-Match

There should be four Referees at the field during each match, in addition to the Head Referee. Referees should split assignments between scoring and tracking rule violations. Referees should assist in ensuring teams and robots start each match in a legal configuration.

Pre-Match Setup

While the FTA owns the field during pre-match setup, Referees should ensure the correct teams are present and that teams have brought only allowed items to the field, and that robots are set up legally. Scoring Referees must confirm teams on the tablet prior to starting the match.

Referees should work with the Head Referee and FTA to ensure matches are ready to start on time. In the situation of a potential delay of match, the Head Referee should be involved.

Scoring

Referees will typically use a smartphone or tablet to track the status of the match using FTCLive, the local scoring system. Scoring Referees input the current scoring achievements and fouls earned through the tablet, which the scoring system uses to compute and display the live scores to the audience and teams on the field and audience displays. This provides an exciting atmosphere for the competition and facilitates a timely match schedule since the scores need only be reviewed after the match.

Tablets are typically set up by the Scorekeeper for the Referees to use. Detailed guides for FTCLive can be found at on <u>FTC Scoring</u> and the scoring tablet guide can be found at <u>this link</u>.

In rare circumstances, paper scoresheets can be used for events that experience technical issues. Please contact FTC Live support if you think paper scoresheets are required for your event.

Violations

Referees are expected to call rule violations during the match and ensure the appropriate violations are recorded and issued for the match. Referees calling violations should visually and verbally communicate rule violations made during the match to teams and a scoring Referee to record them as they happen, whenever possible. Referees should avoid taking their eyes off the field or drive teams and therefore should avoid recording violations. Referees are not expected to record or track fouls beyond the current match.



Post-Match

After a match has ended, Referees may briefly confer to resolve any questions about scoring achievements or rule violations and ensure that all items are input into the scoring system. Any Referee conferences should take place away from teams.

Before the Head Referee releases teams, it is recommended that Referees issue verbal warnings to teams after consultation with the Head Referee, Referees briefly inform teams of the number of fouls and their reason, and the Head Referee issues any cards to teams. These should all be brief and informative. Discussions of why violations occurred, how they could be prevented, and any disputes should move to the question box.

Team Interaction and Support

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

In general, Referees should direct questions to the question box to ensure that questions are being appropriately escalated to the Head Referee. Referees should not offer their feedback or commentary on any matches from the event during the event. Consider any Referee discussion or calls from the event as privileged information that should be kept private. Avoid offering opinions on gameplay strategies, interpretations of rules, or critiques of videos of matches.

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

Note: the only person at an event who can give issue a yellow/red card is the Head Referee. Please refer these more severe issues to the Head Referee.

Be cautious about passing on any negative feedback about any teams directly to the Judges or Judge Advisor (JA), because it's not possible to know all the contributing factors around such a complaint or observation.

Conflict of Interest

"Conflict of Interest" – a conflict between the private interests and the official responsibilities of a person in a position of trust. A key volunteer that has a conflict of interest, or even the perception of a conflict of interest can affect a team's experience, even if decisions that were made throughout the day were not biased in any way.

All Referees should report their conflicts of interest to the Event Director/Volunteer Coordinator when applying for volunteer roles. Referees should additionally report their conflicts of interest to the Head



Referee. A volunteer who does not disclose their conflict of interest can compromise the integrity of *FIRST* Tech Challenge events.

Throughout the event, a Referee with a conflict of interest should:

- Avoid being on the same field as their team(s), whenever staffing allows, at the discretion of the Head Referee.
- Avoid making decisions about their team that may impact the outcome of a match, remove
 themselves from any situation that could be perceived as having a conflict of interest, and hold
 all teams to the same standards.
- Not wear items indicating a team affiliation or alignment.
- Not visit their team in the pits/stands/around the event while wearing Referee attire.
- Not pay their team particular attention.
- Not join their team in receiving an award during an awards ceremony.

More information about Conflicts of interest can be found at: Conflict of Interest

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 <u>Preparing to Safely Attend a FIRST Event</u>.

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 (<u>www.missingkids.com/CodeAdam</u>) 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 an electronic device to complete the incident report on the <u>FIRST</u> 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. The incident reporting person should follow the best practices for incident reporting:

	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	Do not imply liability or any payment, as no one knows for sure until all the	
Conscious	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.

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



www.firstinspires.org/report



member or spectator feel uncomfortable or threatened should be addressed.

As appropriate and if you feel safe doing to, 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 <u>FIRST Reporting Portal</u>. Youth Protection Concerns encompasses a wide variety of one-time or ongoing issues such as suspected abuse, bullying, harassment, discrimination, questionable behavior, or violation to the <u>FIRST</u> Code of Conduct.

Reporting Other Issues or Concerns

Feedback about issues such as gameplay, 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's 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

All volunteers, teams, coach/mentors, and spectators are required to have safety glasses and wear closed-toe and closed-heel shoes while in the pit and competition areas. It is important to watch out for anyone entering these areas without proper Personal Protective Equipment (PPE) and to ask them to put on proper PPE before entering. Some events will have volunteers staffed at the pit entrance 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 as long as they are not causing damage to the venue.



- Aisles, walkways, and doors should be clear of obstructions.
- Teams may set up practice spaces as long as they are fully within their designated space.
- No structure may be taller than 10 feet.

End of the Day

At the end of the day, Referees must return their scoring devices (smartphone or tablets) to the Scorekeeper/scoring tables. Be sure to check with the Head Referee or Event Director whether or not black and white Referee shirts (if provided) are to be returned at the end of the day. Referees may assist other volunteers with the teardown of the event.

Outside Events

After the event is over, your role has ended. Please do not provide additional feedback or commentary on any matches from the event after the event. Consider any Referee discussion or calls from the event as privileged information that should be kept private.

If asked game or gameplay questions, you should direct teams/students/mentors/coaches to the official resources, the <u>FIRST Tech Challenge Team Q&A</u>.

Online Interactions

Referees need to be aware of their interactions with teams/coaches/mentors while active on social media or online communication platforms. Care should be taken to remember that outside of an event, your role as a Referee has ended. You should refer all questions to sources for official answers like the forum.

Because of your volunteer role, teams may identify you as a source of information and support and seek you out to ask questions. You should avoid offering opinions on gameplay strategies, interpretations of rules, or critiques of videos of matches. Conversations that take place at events with teams, students, or other key volunteers should not be shared or discussed.



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				
Occasiona	ally 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.				

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.

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

Figure 2: Competing Team Report



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)

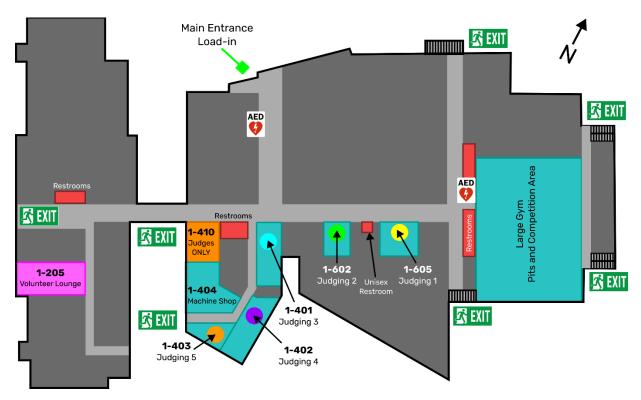


Figure 3: Example Event Map



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. Some events will have more than one division, in which case each division will have its own schedule.

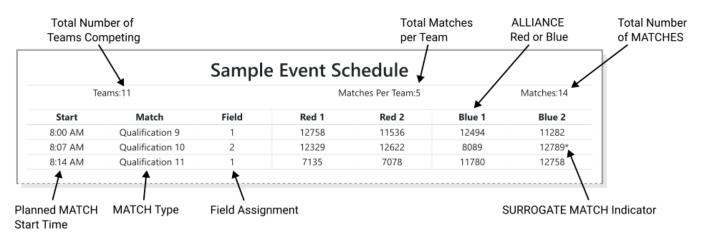


Figure 4: Example Match Schedule

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. Below are two sample pit maps in Figure 5 and Figure 6. Pit Maps created in FTC Scoring will appear on the FTC-Events page.

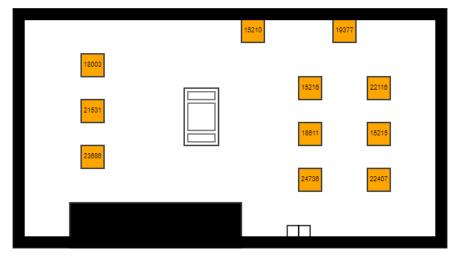


Figure 5: Example Pit Map for a small12-team Qualifier Event



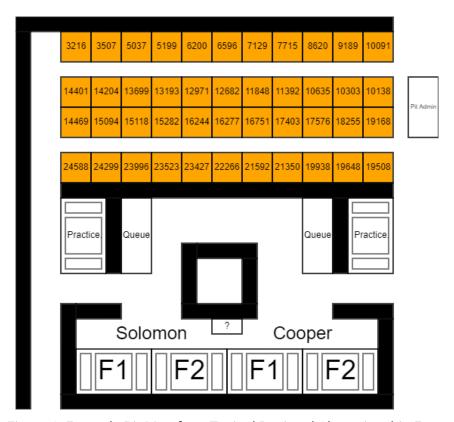


Figure 6: Example Pit Map for a Typical Regional Championship Event



Useful Links and Information

On-Call Support Numbers

On-Call Support

These numbers are for <u>volunteer support only</u>. 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)

<u>Contact Support</u> including live chat or email <u>customerservice@firstinspires.org</u>

Program Resources



FIRST Tech Challenge Website



Event Search



Game and Season Resources



FIRST Tech Challenge Blog



Volunteer Resources



Team Email Blasts

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