

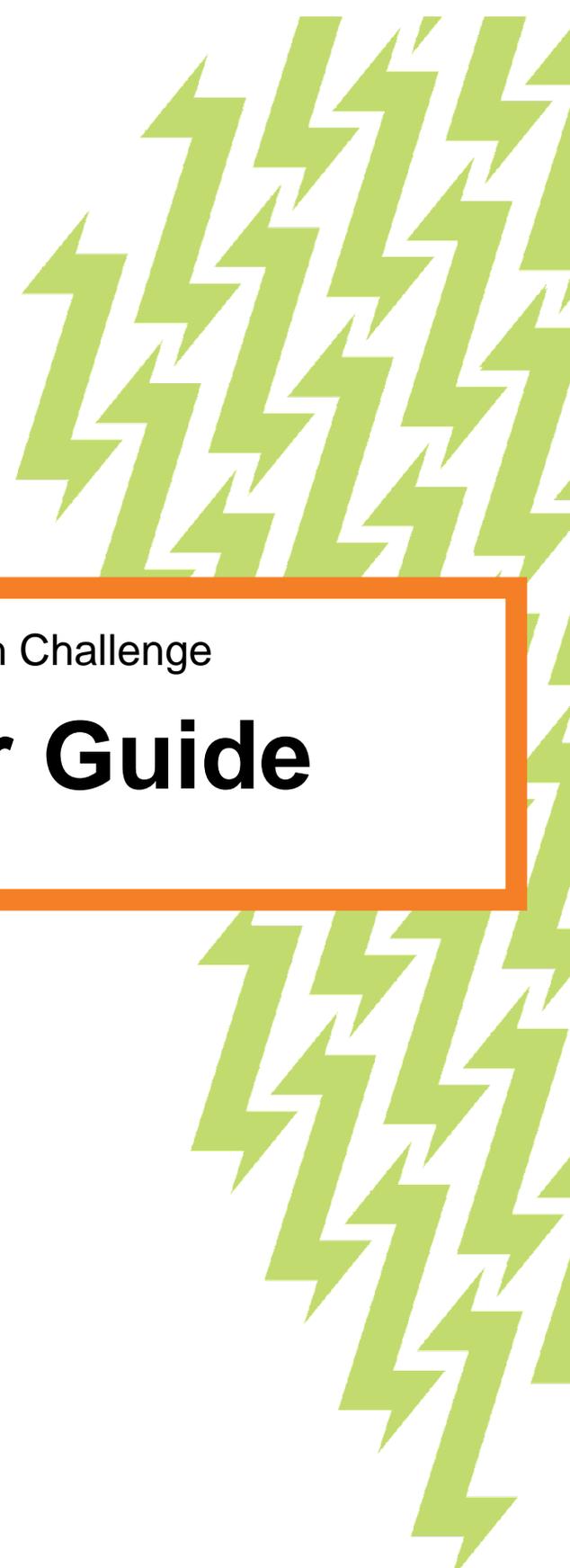


FIRST® ENERGIZE<sup>SM</sup>  
presented by Qualcomm

[firstinspires.org/robotics/ftc](http://firstinspires.org/robotics/ftc)

2022-2023 FIRST® Tech Challenge

# Scorekeeper Guide



## Sponsor Thank You

Thank you to our generous sponsors for your continued support of the *FIRST*<sup>®</sup> Tech Challenge!



# Raytheon Technologies

## Volunteer Thank You

Thank you for taking the time to volunteer for a *FIRST*<sup>®</sup> Tech Challenge event. *FIRST*<sup>®</sup> and *FIRST*<sup>®</sup> Tech Challenge rely heavily on volunteers to ensure events run smoothly and are a fun experience for teams and their families, which could not happen without people like you. With over 6,500 teams competing yearly, your dedication and commitment are essential to the success of each event and the *FIRST* Tech Challenge program. Thank you for your time and effort in supporting the mission of *FIRST*!

Revision History		
Revision	Date	Description
1.0	10/04/22	Initial Release
1.1	11/10.22	Update to iOS 15 or greater. Updated Add/Edit Team disclaimer.

## Contents

Introduction	7
What is FIRST® Tech Challenge?	7
<i>Gracious Professionalism</i> ®	7
FIRST Privacy Policy	7
FIRST Volunteer Rig`12qhts and Responsibilities	8
NOTICE OF NON-DISCRIMINATION	8
Job Description	8
Volunteer Training and Certification	8
Volunteer Minimum Age Requirement	9
Key Volunteer Role Minimum Age Requirement	9
Bring a Friend!	9
Intro to Scorekeeping - Overview of Responsibilities	10
Pre-Event Day Responsibilities	10
Event Day Responsibilities	11
FIRST Tech Challenge Live Setup	11
Pre-Match Responsibilities	11
Game Play	11
Generate Alliances	11
Awards	11
Post-Event Responsibilities	12
Introduction to the FIRST Tech Challenge Scoring System and FIRST Tech Challenge Live software	12
What is the FIRST Tech Challenge Scoring System?	12
What is the FIRST Tech Challenge Live software	12
System Hardware	13
System Requirements	13
Windows	13
Mac	13
Android Tablet (for Real-time Score Tracking)	14

iOS Tablet (for Real-time Score Tracking)	14
System Layout	14
Basic Configuration with Paper Scoring	14
Advanced Configuration with Real-Time Scoring	15
Other Configurations NOT Supported by FTC Tech Support	16
School Network	16
Cellular Hotspots	17
Download and Installation	17
Important Tips for Running the System Software	17
Minimum Hardware Configuration	17
Scoring Server Minimum Requirements (Windows/Mac/Linux)	17
Network Requirements	17
Downloading the Software Package	18
Launching the FIRST Tech Challenge Live Server	18
Launching the Server Using Windows	18`
Launching the Server Using macOS	20
Using an Alternate HTTP Port (Advanced Topic)	22
Using an Alternate HTTP Port on a Windows Computer	22
Using an Alternate HTTP Port on a Mac Computer	23
Navigating to the Server Using an Alternate Port	24
Setting Up a Traditional Event	25
IMPORTANT Season Changes - Setting Up an Event	25
Getting Version Number and IP Address	26
Logging in to the System	26
Logging in with Default Accounts	27
Navigating the System's Home Screen	27
Set Up an Event – Automatic Import	28
Setting up an Event – Key-Based Setup	31
A. Region Admin and Event Admin (FTC Scoring System):	31
B. Scorekeeper (FTC Live)	33
Set Up an Event – Offline Event	34
Region Admin or Event Admin (FTC Scoring System):	34
1. Scorekeeper (FTC Live)	36
Setting Up an Unlisted Event (optional for teams)	37
Sandbox Mode Set Up During Event Transfer	40
FTC Live Event Dashboard	41

Creating Default User Accounts	42
Adding/Editing Teams for an Event	44
Adding a Team Individually	46
Adding Teams by State or Province	47
Importing a List of Teams	47
Warning and Icon Meanings for Add/Edit Teams	48
Adding/Editing Sponsors for an Event	48
Creating the Match Schedule	49
Optional Inspection Schedule and Tracking	51
Configure Inspection Tracking	51
Configure Inspection Schedule	52
Match Control and Scoring	53
Event Home Page	53
Examples of Scoring Workflows	54
Scoring Using Paper Scoresheets	54
Scoring Using Wireless Tablets	55
Match Control Page	55
Match Control Buttons	56
Match Control Tabs	58
○ Settings	59
How to Display Sponsor Information	59
How to Display the Audience Key	60
Scoring/Timing Displays	61
Setting up a Display	63
Scoring Using Paper Scoresheets	65
Live Score Tracking Using a Tablet	65
Connecting a Tablet to the Server	65
Step-by-Step Example: Scoring an Event with Wireless Tablets	68
Managing Elimination Matches	76
Managing League Events (Regions with Leagues)	80
Overview of Leagues	81
League Configurations	81
Standalone League Model	82
Inter-League Model	82
Example Scenario:	82
Metro League Model	83
Creating Leagues for Your Region	84

Manage Teams for League Events	87
Create a Child League	88
Add Teams to the Child League	89
Rankings for Parent/Child Leagues	89
Managing Awards	90
Judging	90
Giving an Award	91
Managing the List of Awards	93
Viewing / Printing the Awards Script	94
Presenting the Awards	95
Reviewing Match Results	96
Uploading Event Data to FIRST	98
Troubleshooting the System	100
Accessing the System Logs	100
Appendix A – Resources	102
Game Forum Q&A	102
Volunteer Forum	102
FIRST Tech Challenge Game Manuals	102
FIRST Headquarters Pre-Event Support	102
FIRST Tech Challenge Event On-Call Support	102
FIRST Websites	102
FIRST Tech Challenge Social Media	102
Feedback	102
Appendix B Paper Scoring	103
Configuring the Event for Paper Scoring	103
On the Match Control Page, under the “Settings” tab, deselect the “Use Live Scoring” checkbox. This will simplify the match flow for paper scoring and will automatically set the displays to not show live scores.	103
Configuring the Audience Display	103
Step-by-Step Example: Scoring with Paper sheets	103
Appendix C – Display Screens	108
Appendix D: Field Inspection Automation	113
Appendix E: FTA Notes	115

## Introduction

---

### **What is FIRST® Tech Challenge?**

FIRST® Tech Challenge is a student-centered program that focuses on giving students a unique and stimulating experience. Each year, teams engage in a new game where they design, build, test, and program autonomous and driver operated robots that must perform a series of tasks. To learn more about FIRST® Tech Challenge and other FIRST® Programs, visit [www.firstinspires.org](http://www.firstinspires.org).

### **Gracious Professionalism®**

---

FIRST® uses this term to describe our programs' intent.

*Gracious Professionalism®* is a way of doing things that encourages high-quality work, emphasizes the value of others, and respects individuals and the community.

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

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

### **FIRST Privacy Policy**

---

FIRST takes the privacy of our community seriously. As a nonprofit and a mission-driven youth-serving organization, we are compelled to understand who we are serving, how our programs are performing, and make improvements so that we can achieve our goals of making FIRST accessible to any youth who wants to be part of the fun, exciting and life-changing experience. Thus, we need to collect certain personal data from participants and volunteers to ensure we are meeting our goals and responsibilities as a youth-serving nonprofit organization.

As a volunteer, you may be asked to handle the personal data, or personally identifiable information (PII), of coaches, team members, and even other volunteers. It is critical that you understand and follow the [FIRST Privacy Policy](#) and complete any data protection and privacy training required by your role. If you have any questions regarding data protection and privacy, please reach out to the FIRST Data Governance Team at [privacy@firstinspires.org](mailto:privacy@firstinspires.org).

## **FIRST Volunteer Rights and Responsibilities**

---

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

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

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

## **Job Description**

---

- **Physical/Technical Requirements:**
  - Technical – High
  - Physical – Low
  - Administrative – High
  - Communication – High
- **Time commitment:**
  - The Scorekeeper should expect to arrive early at the event to help set up the scoring software, displays, and tablets for scoring refs and inspectors.
  - The Scorekeeper should expect to be at the event for the entire duration, approximately 8 hours for a full-day event. League Meet events are typically shorter.
- **Proper Dress:**
  - The Scorekeeper generally sits. Comfortable shoes and attire are encouraged.
  - ANSI Z87.1 certified safety glasses are required in the competition area.

### **Volunteer Training and Certification**

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

The Scorekeeper should read this manual before the event. They should speak to the Tournament Director or Program Delivery Partner (PDP) to check for additional requirements, such as meetings before the event or run-throughs of the queuing path before the event.

The Scorekeeper is required to pass the certification test prior to the event. The estimated training time is two hours.

The Scorekeeper should familiarize him or herself with the [FIRST Tech Challenge Scoring Software](#) prior to the event.

### **Volunteer Minimum Age Requirement**

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

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

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

### **Bring a Friend!**

Volunteers are a huge part of the *FIRST Tech Challenge* Program and continuing to inspire students to seek out careers in science, technology, engineering, and math (STEM). *FIRST Tech Challenge* needs your help in recruiting new volunteers to keep our programs thriving for future generations! If you have a friend or co-worker you think would be interested in volunteering at an event, there are just a few easy steps to help get them involved!

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

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

## Intro to Scorekeeping - Overview of Responsibilities

---

This guide provides a scorekeeper guidance on the responsibilities and overview of the scoring systems used in FTC. The main focus is on traditional and hybrid events that use the downloadable FTC Live software and all of its features and workflows. The *FIRST Tech Challenge* lead scorekeeper (referred to in this manual as “the scorekeeper”) is the person responsible for making sure that the scoring software is set up correctly for use at a traditional or hybrid event. The scorekeeper helps the flow of the event and provides information to the teams and to the audience. Being prepared before and diligent during the event will help to provide a positive experience for all participants. The responsibilities of a scorekeeper include:

- Participation in training prior to the event.
- Accurately entering match scores into the [FIRST Tech Challenge Live](#) (FTC Live) local software.
- Entering team and sponsor information into the scoring software.
- Generating matches for the event.
- Setting up displays for audience and field to view scores.
- Communicating match schedules to key volunteers such as Referees, Judges, Tournament Directors, etc.
- Generating passwords and setting up tablets for real-time scoring.
- Working with Head Refs, FTAs, and Inspectors for optional tablet inputs.

Make sure to speak with the Program Delivery Partner or Tournament Director prior to the event to determine if there are additional responsibilities and time commitments to set up the scoring computers and displays. At some events, the scorekeeper may be responsible for setting up the computers, displays, etc. There are many components that are required to be set up to run the FTC Live and displays correctly.

A scorekeeper must be confident and comfortable with the system to be able to reliably record results during the hectic pace of a *FIRST Tech Challenge* event. Learning the role and equipment ahead of time will go a long way towards keeping the event running smoothly and on time.

## Pre-Event Day Responsibilities

---

Outlined below are responsibilities scorekeepers have before event day. Make sure to check with the tournament director to see if they need help setting up before the event, and when you should be there to set up the scoring equipment. Many events set up the fields and A/V equipment the night before, which may also include loading the most current version of FTC Live onto the scoring computer, configuring the event with *FIRST Tech Challenge* Scoring system (FTC Scoring), and setup of the display screen. Be sure to check with the tournament director or PDP to understand what is being prepared ahead of time, and what needs to be done on the morning of the event. Reading the section [Setting Up a Traditional Event](#) will also prepare you for pre-event responsibilities for the 2022-2023 season.

- Review the [Scorekeeper Quick Start Guide](#) and the Scorekeeper User Manual.
- Make sure to update to the most up-to-date version of FTC Live.
- Contact the PDP or event admin to transfer the configured event in FTC Scoring to the downloaded FTC Live scoring system. Scorekeepers can also be given the event admin role to do the event configuration in the FTC Scoring system.

- Watch the pre-recorded Scorekeeper training videos. This will help familiarize with the system and how it operates.
- Passing the scorekeeper certification test in BlueVolt is required.
- Familiarize yourself with the scoring software FTC Scoring (PDP can assign you a role), and FTC Live (traditional and hybrid events)
- (Optional) Attend a Monthly Key Role Discussion Q&A call. This will provide the opportunity to ask questions or provide feedback to other scorekeepers. If you cannot join a call, the recordings are stored in the learning management system.

## Event Day Responsibilities

### **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.

**Important** – generate matches only **AFTER** all teams have checked in and passed inspection. **DO NOT EVER** generate and distribute the Match List prior these steps, as

### **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.

Other event-day duties may be assigned, as needed.

## Post-Event Responsibilities

---

After all matches have been played and all scores have been recorded, the event score results must be submitted to *FIRST*. See the section [Uploading Event Data to FIRST](#) for more information.

## Introduction to the *FIRST* Tech Challenge Scoring System and *FIRST* Tech Challenge Live software

---

### ***What is the FIRST Tech Challenge Scoring System?***

The *FTC Scoring* system is a cloud-based event management software that has multiple functions to allow you to input and track vital information during a remote, hybrid or traditional event.

The system allows a PDP/event admin or a team administrator to generate and track the following for a remote event:

- Team information
- Sponsor information
- Match results

For a traditional event, *FTC Scoring* system is used for:

- Event creation
- Event configuration:
  - League creation and setup
  - Team lists
  - Division creation and setup
  - Adding sponsor information

### ***What is the FIRST Tech Challenge Live software***

*FIRST* Tech Challenge Live is a downloadable software program that has multiple functions to allow you to input and track vital information during a traditional event only. It works in coordination with the setup of events in the *FTC Scoring* system prior to an event.

The system allows a scorekeeper to generate and track the following for a traditional event:

- Team information (Add/Edits and Participation and Eligibility)
- Sponsor information
- Match schedules
- Inspection schedules
- Judging schedule
- Match results (including an option for real-time score tracking)
- Alliance selection for elimination and final matches.

This software will also allow you to display sponsor information and team match results to teams and spectators. This manual will go through step-by-step instructions on how to run the program correctly and efficiently.

## System Hardware

### System Requirements

The *FIRST Tech Challenge Live* software is available on the Windows and Mac platforms. It is a browser-based application, meaning that you interact with the system exclusively through a web browser. The system supports real-time score tracking, inspection tracking, head ref notes and FTA notes. Live score data can be entered into the system using a tablet.

### Windows

- Windows 7 or 10
- Java 8 or higher (available from [www.java.com](http://www.java.com), only needed for the laptop running system software).
- Google Chrome version 80 and higher; Firefox is not supported.
- Support for Wi-Fi if connecting to a wireless network.
- Ethernet adapter if connecting to a wired network.

### Mac

- macOS Sierra or greater
- Java 8 SDK or higher (available from [www.java.com](http://www.java.com), only needed for the laptop running system software)
  - Note – Unlike the Windows environment, macOS requires the Java Development Kit (JDK) to run. Windows only requires the Java Runtime Environment (JRE) to run.
  - If you install the JDK software onto your Mac, you should not need to install the JRE software. The JRE should already be included as part of the JDK
  - The JDK software can be downloaded from the following Oracle web link:
    - <https://www.oracle.com/technetwork/java/javase/downloads/index.html>

**Java SE Development Kit 8 Downloads**

Thank you for downloading this release of the Java™ Platform, Standard Edition Development Kit (JDK™). The JDK is a development environment for building applications, applets, and components using the Java programming language.

The JDK includes tools useful for developing and testing programs written in the Java programming language and running on the Java platform.

See also:

- [Java Developer Newsletter](#): From your Oracle account, select **Subscriptions**, expand **Technology**, and subscribe to **Java**.
- [Java Developer Day hands-on workshops \(free\) and other events](#)
- [Java Magazine](#)

JDK 8u191 [checksum](#)  
JDK 8u192 [checksum](#)

**Java SE Development Kit 8u191**

You must accept the [Oracle Binary Code License Agreement for Java SE](#) to download this software.

Accept License Agreement  Decline License Agreement

Product / File Description	File Size	Download
Linux ARM 32 Hard Float ABI	72.97 MB	<a href="#">jdk-8u191-linux-arm32-vfp-hflt.tar.gz</a>
Linux ARM 64 Hard Float ABI	69.92 MB	<a href="#">jdk-8u191-linux-arm64-vfp-hflt.tar.gz</a>
Linux x86	170.89 MB	<a href="#">jdk-8u191-linux-i586.rpm</a>
Linux x86	185.69 MB	<a href="#">jdk-8u191-linux-i586.tar.gz</a>
Linux x64	167.99 MB	<a href="#">jdk-8u191-linux-x64.rpm</a>
Linux x64	182.87 MB	<a href="#">jdk-8u191-linux-x64.tar.gz</a>
Mac OS X x64	245.92 MB	<a href="#">jdk-8u191-macosx-x64.dmg</a>
Solaris SPARC 64-bit (SVR4 package)	133.04 MB	<a href="#">jdk-8u191-solaris-sparcv9.tar.Z</a>
Solaris SPARC 64-bit	94.28 MB	<a href="#">jdk-8u191-solaris-sparcv9.tar.gz</a>
Solaris x64 (SVR4 package)	134.04 MB	<a href="#">jdk-8u191-solaris-x64.tar.Z</a>
Solaris x64	92.13 MB	<a href="#">jdk-8u191-solaris-x64.tar.gz</a>
Windows x86	197.34 MB	<a href="#">jdk-8u191-windows-i586.exe</a>
Windows x64	207.22 MB	<a href="#">jdk-8u191-windows-x64.exe</a>

Figure 1 - Accept the License Agreement, then select the Mac OS X x64 version to download.

- Google Chrome 80 and higher
- Support for Wi-Fi if connecting to a wireless network
- Ethernet adapter if connecting to a wired network

### **Android Tablet (for Real-time Score Tracking)**

- Android Marshmallow (6.x) or greater
- Google Chrome 80 and higher
- Support for Wi-Fi

**Note:** Some event hosts prefer to use Amazon Kindle tablets for real-time score tracking. Kindle tablets can be configured to work well with the FTC Live. Kindle tablets, however, do *not* typically have Google's Chrome Browser installed. Additional steps are required to get the Chrome software running properly on a Kindle tablet. Details on installing Chrome on a Kindle tablet are beyond the scope of this documentation.

**Also note:** that some Kindle tablets have an operating system that is based on an older version of Android (Lollipop). These Kindle devices can still be used with the FTC Live.

### **iOS Tablet (for Real-time Score Tracking)**

- iOS 15 or greater
- Google Chrome
- Support for Wi-Fi

## **System Layout**

The *FIRST Tech Challenge Live* software is flexible and can be used in a variety of configurations. This section provides an example of a basic configuration and an example of a more complex configuration. These configurations are supported by FTC tech support during events. There are other configurations that will not be supported due to too many variables, such as cellular data and school networks. Please work with your venue IT and FTA to determine which set up is best suited to your events.

### **Basic Configuration with Paper Scoring**

The most basic configuration requires a single laptop that will serve as both the scorekeeper computer and as the field display computer. This configuration also includes an external monitor (to serve as a field side display), and a printer (to print match schedules and scoresheets).

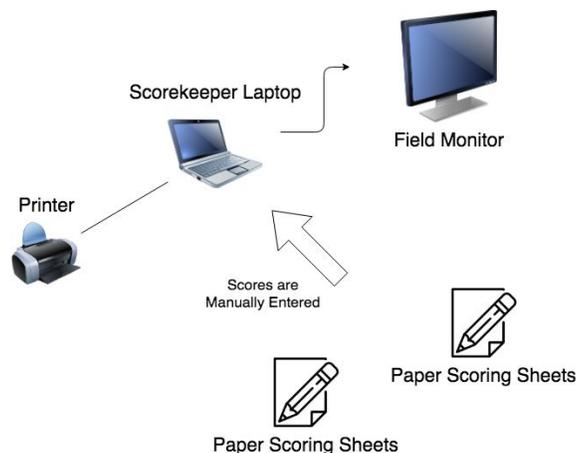
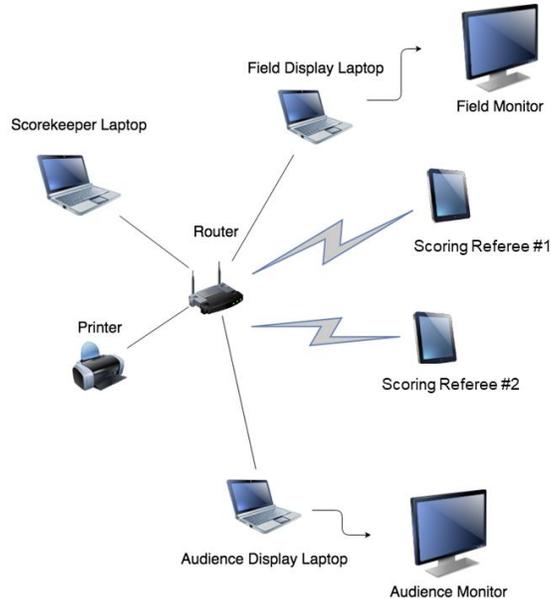


Figure 2 - A very basic layout with paper scoring.

### **Advanced Configuration with Real-Time Scoring**

The system also supports real-time score tracking using a pair of wireless tablets.



*Figure 3 – An advanced configuration with support for real-time tracking.*

This advanced configuration includes the following components:

- Scorekeeper Laptop – A laptop that has the FTC Live scorekeeping software installed. This laptop acts as a server for the whole system. It is also used for match control and scorekeeping (such as reviewing, editing, and committing scores).
- Printer – Used to print match, judging and inspection schedules, reports, and other useful documents.
- Network Router with Wi-Fi support – Used to connect system components together.
- Field Display Laptop – A laptop that uses a web browser and a network connection (wired or wireless) to access the system server and display field-related information during an event. It is connected to a large screen monitor.
- Audience Display Laptop - A laptop that uses a web browser and a network connection (wired or wireless) to access the system server and display spectator-specific information during an event. It is connected to a large screen monitor.
- Scoring Referee Tablets (x2) – Referees use these tablets to track, in real time, the score during a match. After a match is complete, referees can review, edit and submit their scores to the system. The tablets use a wireless connection and a web browser to access the system server.
- Additional tablets can be used for real-time inspections, head referee notes and FTA notes.

Important Tips:

- You will need to know the IP address of your computer that is running the system software (i.e., the scorekeeper laptop in this example). When another device, such as a referee tablet or a display computer, wants to access the system, the user will have to provide the IP address of the scorekeeper laptop to the web browser in order to access the system functions. The server IP is shown in the

header bar of every page of FTC Live. If the displayed IP does not work, consult with your IT administrator on what the IP address is for your server.

- Wireless activity for FTC Live should operate on a Wi-Fi channel that will not interfere with the control of the competition robots.
- Audio cues (such as the match start or match stop sound effects) for a public announcement (PA) system can be pulled from any of the Display computers. It is recommended that a single computer is used as the source of the PA audio (to avoid audio synchronization issues).

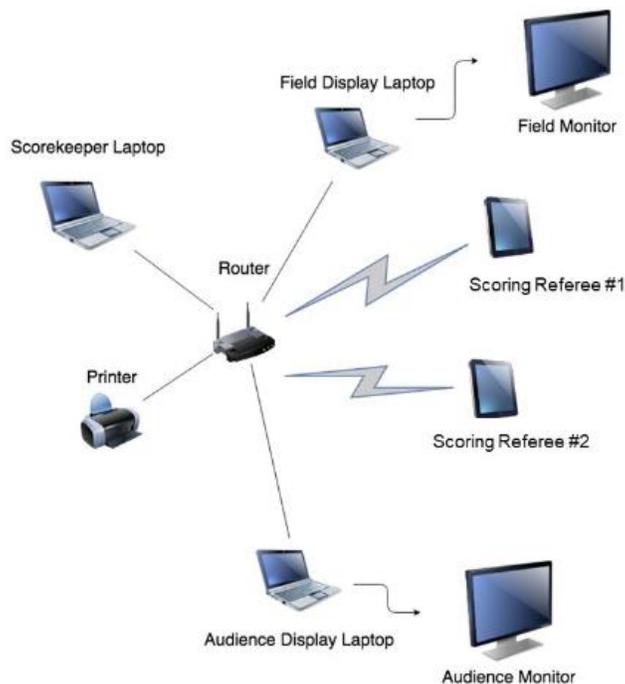
#### Best Practices:

- Use a dedicated, standalone router.
- All displays and tablets should be on router's local LAN.
- If supported use a 5Ghz Wi-Fi channel.
- Disable any firewall on the computer that will be running the server.
- Optional scorekeeping internet access should be bridged via second ethernet adapter (usb wifi dongle).
- If doing so, ensure that scorekeeping server is picking up the right adapter's IP address.

### **Other Configurations NOT Supported by FTC Tech Support**

#### *School Network*

- May not always work.
- School networks often have aggressive internal firewalls.
- School networks often block traffic entirely from unknown devices.
- Organizers must work with school IT staff to set up and test the network prior to the day of the event.
- Day of event setup in an unfamiliar school very often results in failure and calls to the FIRST support line.
- FIRST cannot provide day of event network or setup support for setups that use a school network.



### Cellular Hotspots

- Reports that this has worked for some people.
- FIRST does not test this configuration.
- Hundreds of different phones across dozens of different Android or iOS versions make it impossible for FIRST to provide support.
- FIRST cannot provide day of event network or setup support for setups that use a cellular hotspot.

## Download and Installation

---

### Important Tips for Running the System Software

Here are some tips before you get started:

- Disable any firewall, or open appropriate ports, on the computer that will be running the server.
- Disable any ad blocking software on devices that will interface with the server. The ad blocking software occasionally misinterprets server resources as ads.
- Ensure that Google Chrome is installed and is the preferred browser.
- Important note: Firefox browser is not supported!
- If it has been more than a few days since the software was released and you have internet access, perform a data download before creating the event to ensure team info is up to date. "Event Admin" dropdown -> Manage Server -> Data Download.

### Minimum Hardware Configuration

For most events, the hardware requirements to run the FTC Live scoring software are very modest.

#### Scoring Server Minimum Requirements (Windows/Mac/Linux)

- Intel Core i5 Processor
- 4 GB of RAM
- 300 MB of available disk space
- CAT 5 Ethernet adapter (USB connected would be OK if built-in not available)
- 802.11 WiFi adapter

**Note:** If you are running a large event, such as a dual division event, a higher performing computer might be warranted.

### Network Requirements

The selection and configuration of the network hardware can be more critical than the selection of the server hardware to the success of your live scoring event.

- Use a dedicated (i.e., not shared with other users or applications), local network to connect your scoring devices.
- To avoid latency issues, the scoring server should be local to your event (and not run through a remote Internet/Cloud connection).
- Scoring network should be on its own secure network (i.e., not open to the public). This should minimize the risk of malicious activity from occurring towards FTC Live.
- Use a wired connection whenever possible (with the exception of the real-time scoring referee tablets, which are typically wireless devices).
- If you need to use a wireless connection, work with your FTA and venue IT staff to make sure you select a wireless channel that does not interfere with the competition robots.

- Check with your venue’s IT staff to see if a WiFi Blocker is present. If one is present, you will not be able to use wireless scoretracking devices unless the staff disables this function.
- Use a modern (made within the past 5 years) switch/access point that is powerful enough to accommodate the number of devices needed at your event:
  - *FIRST* has received credible reports of older, “underpowered” switch/access points being unable to support a large enough number of devices operating on the FTC Live network.
  - Use an appropriately sized network device that will be able to accommodate all your scoring-related devices simultaneously.

### **Downloading the Software Package**

The *FIRST* Tech Challenge Live software is available for download from the following link:

<https://github.com/FIRST-Tech-Challenge/scorekeeper/releases>

The software is stored as a compressed archive file and is available in .zip format. There are a few releases each season so make sure the version for the event is up-to-date.

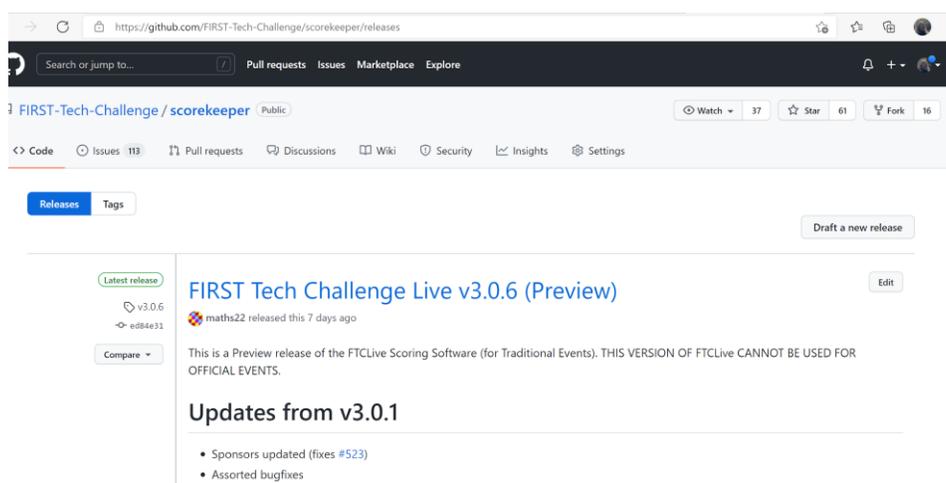


Figure 4 - Releases begin with the phrase "FIRST-Tech-Challenge-Live".

To use the software, unzip the downloaded file into the folder of your choice. *FIRST* suggests that users save the file on the computer’s desktop to easily access the program. The software will run from this directory.

To extract or unzip the file, right-click select the archive file and select the appropriate option to extract the compressed files to your computer.

Important Note: Keep the version up-to-date for the latest feature updates and bug fixes. Delete previous versions from your Desktop to enable use of the most recent version.

### **Launching the FIRST Tech Challenge Live Server**

Once you have successfully extracted the contents of the archive file, you will need to launch the system server. This server will run in a window on your computer. You will access this server through your Chrome web browser.

### **Launching the Server Using Windows**

Use Windows Explorer to navigate to the main program directory. Find the Windows *batch* file called “FIRST-Tech-Challenge-Live-Windows.bat” and double-select it to launch the server.

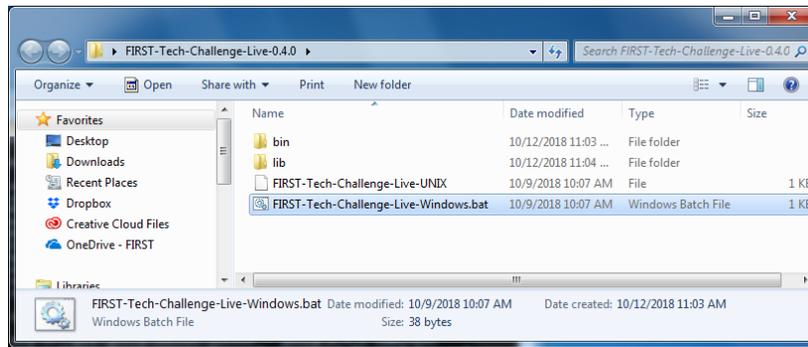


Figure 5 – Double-select the *FIRST-Tech-Challenge-Live-Windows.bat* batch file to launch server.

It is safe to ignore the warning and select “Run” to run the software.

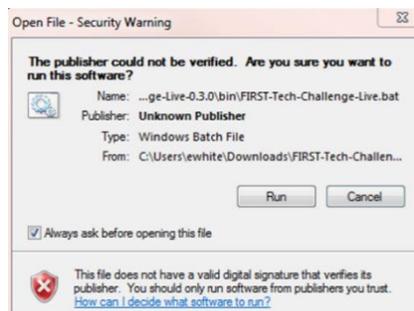


Figure 6 - Windows 7 users might see a warning message similar to this one.

**Note:** If you are a Windows 10 user you might need to select the “More info” link on the warning message and then the “Run anyway” button to run the software.

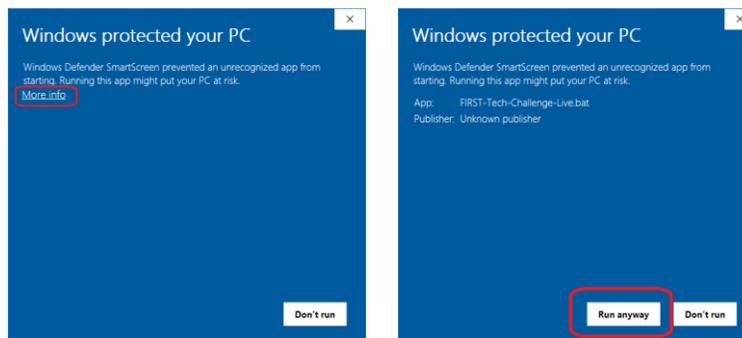
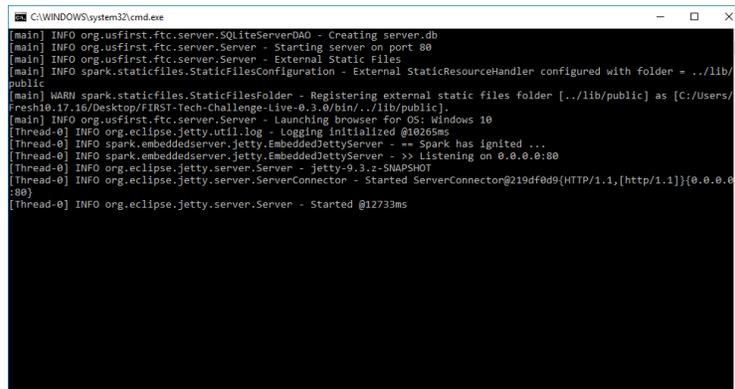


Figure 7 - Select “More info” then “Run anyway” to run the software.

A black terminal window will pop open and will need to remain open while you are using the software. This is the window in which the system server is running.



```

C:\WINDOWS\system32\cmd.exe
[main] INFO org.usfirst.ftc.server.SQLiteServerDAO - Creating server.db
[main] INFO org.usfirst.ftc.server.Server - Starting server on port 80
[main] INFO org.usfirst.ftc.server.Server - External Static Files
[main] INFO spark.staticfiles.StaticFilesConfiguration - External StaticResourceHandler configured with folder - ../lib/public
[main] WARN spark.staticfiles.StaticFilesFolder - Registering external static files folder [../lib/public] as [C:/Users/Fresh10.17.16/Desktop/FIRST-Tech-Challenge-Live-0.3.0/bin/./lib/public].
[main] INFO org.usfirst.ftc.server.Server - Launching browser for OS: Windows 10
[Thread-0] INFO org.eclipse.jetty.util.log - Logging initialized @10265ms
[Thread-0] INFO spark.embeddedserver.jetty.EmbeddedJettyServer - => Spark has ignited ...
[Thread-0] INFO spark.embeddedserver.jetty.EmbeddedJettyServer - >> listening on 0.0.0.0:80
[Thread-0] INFO org.eclipse.jetty.server.Server - jetty-9.3.2-SNAPSHOT
[Thread-0] INFO org.eclipse.jetty.server.ServerConnector - Started ServerConnector@219df0d9[HTTP/1.1,[http/1.1]]{0.0.0.0:80}
[Thread-0] INFO org.eclipse.jetty.server.Server - Started @12733ms
  
```

Figure 8 - The batch file will launch the system server in a terminal window.

After the server is started, the batch file will launch your default web browser and display the main webpage (web address of “localhost”).

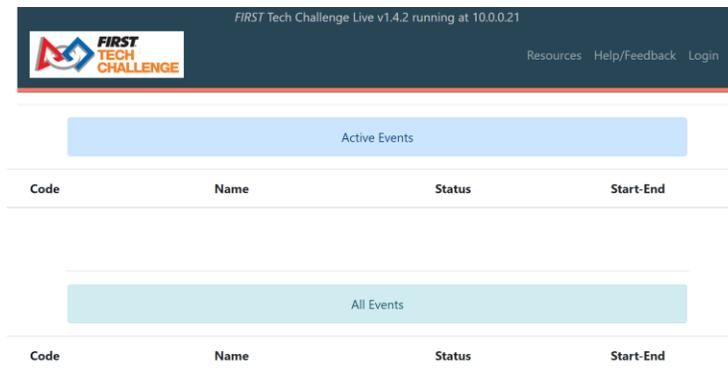


Figure 9 – The software should launch your default browser and display the system’s main page.

### Launching the Server Using macOS

Using Finder, navigate to the main directory of the program folder and locate the script file named “FIRST-Tech-Challenge-Live-UNIX”. Double-select the file to run the script.

**Note:** macOS might warn you that the application was downloaded from the Internet. If you see this warning, select the “Open” button to allow your computer to run this application.

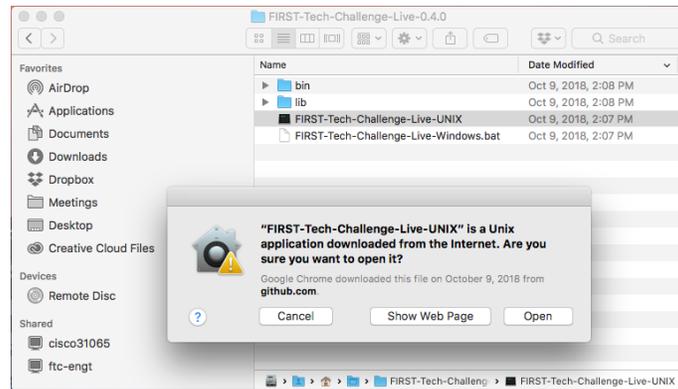


Figure 10 - If prompted, select the "Open" button to allow your Mac to run the software.

For Mac computers, the user account that is running the scorekeeping software typically needs administrative access on the computer to run the software properly. When you launch the "FIRST-Tech-Challenge-Live-UNIX" script, the software will check to see if you are running the script with administrative access. If it does not think it has administrative access, the application will prompt you for your Mac's password. A macOS terminal will appear and the system will prompt you to login using your user password. Type in the password and press return.

```

tom — FIRST-Tech-Challenge-Live-UNIX — sudo • FIRST-Tech-Challenge-Live...
Last login: Fri Oct 12 12:09:14 on ttys002
Toms-MacBook-Pro:~ tom$ /Users/tom/Desktop/FIRST-Tech-Challenge-Live-0.4.0/FIRST
-Tech-Challenge-Live-UNIX ; exit;
Welcome to FIRST Tech Challenge Live!
This application requires super user status.
If prompted, please enter in your account password.
sudo ./FIRST-Tech-Challenge-Live
Password:
  
```

Figure 11 - If prompted, type in your user password for your Mac account and press RETURN.

If successful, the terminal window will show that the scorekeeping server is running. Note that while you are using the software, you should keep the server running in the background on your Mac computer. You can minimize the terminal window, but do not close the window or the system will stop working. After the server is started, the batch file should also launch your default web browser and display the main system webpage (with a web address of "localhost", see Figure 11).

**Note:** On some Macs, the system will launch the main page in a Safari browser, even though you might have Chrome set as your account's default browser. If this happens, *FIRST* recommends closing the Safari window and open a Chrome window instead. Specify the address of "localhost" in the Chrome window to access the scorekeeping server.



```

tom — FIRST-Tech-Challenge-Live-UNIX — java • FIRST-Tech-Challenge-Live-...
League ranking for seacost
League ranking for queen_city
combined ranking
[null, null, null, null]
[main] INFO org.usfirst.ftc.global.SQLiteGlobalDAO - Loaded active event granite_event3_18
League ranking for gate_city
League ranking for seacost
League ranking for queen_city
combined ranking
[null, null, null, null]
[main] INFO org.usfirst.ftc.global.SQLiteGlobalDAO - Loaded active event granite_meet4_18
[Thread-0] INFO org.eclipse.jetty.util.log - Logging initialized @4295ms
[main] INFO org.usfirst.ftc.server.Server - Launching browser for OS: Mac OS X
[Thread-0] INFO spark.embeddedserver.jetty.EmbeddedJettyServer - == Spark has ignited ...
[Thread-0] INFO spark.embeddedserver.jetty.EmbeddedJettyServer - >> Listening on 0.0.0.0:80
[Thread-0] INFO org.eclipse.jetty.server.Server - jetty-9.3.z-SNAPSHOT
[Thread-0] INFO org.eclipse.jetty.server.ServerConnector - Started ServerConnector@420447df{HTTP/1.1,[http/1.1]}{0.0.0.0:80}
[Thread-0] INFO org.eclipse.jetty.server.Server - Started @4425ms

```

Figure 12 - If successful, the terminal will show that the server software is running.

### **Using an Alternate HTTP Port (Advanced Topic)**

By default, when you launch the server, the software tries to use the default HTTP port (port 80) when it launches the web server that is used by the scoring software. In some cases, the default port might not be available on the laptop that is running the system's server.

Or, if a Mac user does not have administrative privileges on the computer (which is needed to use the default port), then they can still run the software if they specify an alternate HTTP port for the scorekeeper server.

For these cases, it is possible to change the port by passing the new port value as a command line argument. Note that this is an advanced topic. Most scorekeepers will not need to know how to change the port.

### **Using an Alternate HTTP Port on a Windows Computer**

Open a Windows command line terminal ("cmd.exe") and navigate to the "bin" subdirectory of the scorekeeping software's program folder. In the Command window, type in the following command

```
FIRST-Tech-Challenge-Live.bat -p <port number>
```

Where <port number> is replaced by the value of the port number you'd like to use ("8080" for example). Press RETURN and the software should invoke the webserver and use the port specified in the command line.

```

C:\Windows\system32\cmd.exe
C:\Users\teng\Desktop\FIRST-Tech-Challenge-Live-0.4.0\bin>dir
Volume in drive C has no label.
Volume Serial Number is EE2E-26EE

Directory of C:\Users\teng\Desktop\FIRST-Tech-Challenge-Live-0.4.0\bin

10/12/2018  11:03 AM    <DIR>          .
10/12/2018  11:03 AM    <DIR>          ..
10/09/2018  02:08 PM             7,177 FIRST-Tech-Challenge-Live
10/09/2018  02:08 PM          4,633 FIRST-Tech-Challenge-Live.bat
                2 File(s)      11,810 bytes
                2 Dir(s)  60,864,454,656 bytes free

C:\Users\teng\Desktop\FIRST-Tech-Challenge-Live-0.4.0\bin>FIRST-Tech-Challenge-Live.bat -p 8080_

```

Figure 13 - Include the argument "-p 8080" to launch the server on port 8080.

When the install script launches your web browser it should include the port number (in this example, ":8080") when opening the web page for the address "localhost".

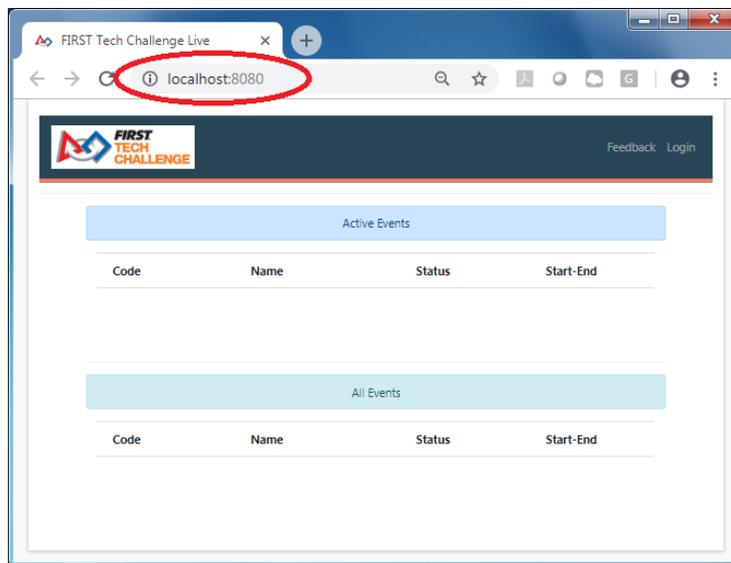


Figure 14 – If you changed the port number, then you must include the new value in the address when accessing the server.

### Using an Alternate HTTP Port on a Mac Computer

One advantage of using an alternate HTTP port number on a Mac is that it does not require administrative access to run the software. This is useful if your user account is restricted and does not have administrative privileges.

You will need to use a terminal window to launch the software using a different HTTP port. The terminal program is in the "Utilities" subfolder of the macOS "Applications" folder.



Figure 15- The terminal application is in the “Utilities” subfolder of the “Applications” folder.

Launch the terminal app from the Utilities folder. You will need to type commands into the terminal window to navigate to the *FIRST* Tech Challenge Live directory and then to launch the server software. Note that macOS is a case sensitive operating system so if you copy the commands in the example below, make sure the capitalization is correct.

For example, assume that the software is in a folder on the Desktop of the current user and has the name “FIRST-Tech-Challenge-Live-0.4.0”. You will need to type in the following command at the terminal prompt to change to the “bin” subdirectory.

```
cd ~/Desktop/FIRST-Tech-Challenge-Live-0.4.0/bin/
```

If you successfully changed to this “bin” subdirectory, you can invoke the software using the following command (don’t forget the “.” before the name of the file):

```
./FIRST-Tech-Challenge-Live -p <port number>
```

Where <port number> is replaced by the desired port number value (for example, “8080”). The software should invoke the system server and use the port specified in the command line. When the install script launches your web browser it should include the port number (in this example, “:8080”) when opening the web page for the address “localhost” (see Figure 16).

### **Navigating to the Server Using an Alternate Port**

If you launched the server with an alternate HTTP port, then when you want to connect to the FTC Live server, you must specify the port number as part of the server address. For example, if the system is listening on port 8080, then you must append a “:8080” to your web address when navigating to the server. If you do not specify the port at the end of the address, the web browser might fail to connect to the scorekeeping server.

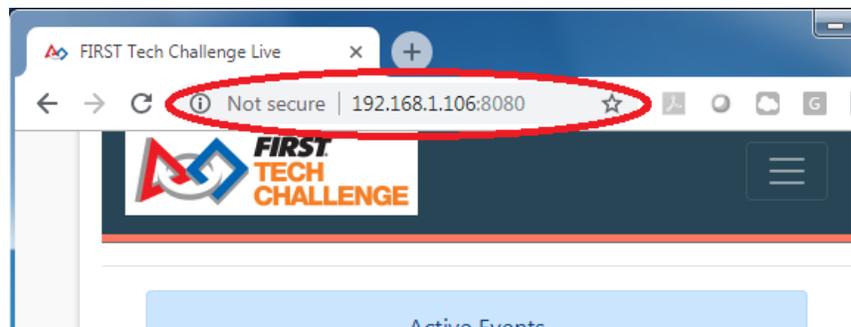


Figure 16 – Specify the port number in the address if your scorekeeping server is using an alternate port number<sup>3</sup>) days of the event.

## Setting Up a Traditional Event

### **IMPORTANT Season Changes - Setting Up an Event**

Setting up a traditional event requires the PDP/Admin to create the event in FTC Scoring. Most event setup MUST be done in the cloud-based FTC Scoring system before the event, and some setup can be made easier if done ahead of time.

**Event Creation:** All events are synchronized within the cloud-based FTC Scoring system ([FIRST Tech Challenge Scoring \(ftc-scoring.firstinspires.org\)](https://firsttechchallenge.com/ftc-scoring)) automatically within a day of entry into FIRST's event creation portal. All official events must be created this way. Official events are imported into FTC Live from FTC Scoring system within three (3) days of the event. After the event concludes, event results are uploaded from FTC Live through the "Send Results to FIRST" page which will post results to [FTC Event Web : Home \(firstinspires.org\)](https://firstinspires.org)

**Event Configuration:** Several parts of event setup MUST be done ahead of time in FTC Scoring system. The event configuration task is the responsibility of the PDP or a designated administrator. For the 2022-2023 season, a PDP can assign event creation to an Event Request Manager and the event configuration process to the Regional Manager or Event Admin role.

Prior to the event, data must be imported into the FTC Live version that will be running at the event. There are several ways to accomplish this, depending on who is present and the availability of internet access at the event venue.

Here is a summary table of which method is recommended for a given scenario:

Internet access at setup time?	Event Admin/PDP access to FTC Scoring system at set-up time?	Recommended method
YES	YES	Automatic Import (A)
YES	NO	Key-Based Setup (B)
NO	NO	Offline Setup (C)

## Getting Version Number and IP Address

Start by opening FTC Live software. Due to software updates, it is useful to know the version number of the FIRST Tech Challenge Live software that you are currently running. It is also helpful to know the IP address of the scorekeeping server. This information can be obtained from the top of the browser screen when viewing the FIRST Tech Challenge Live pages.

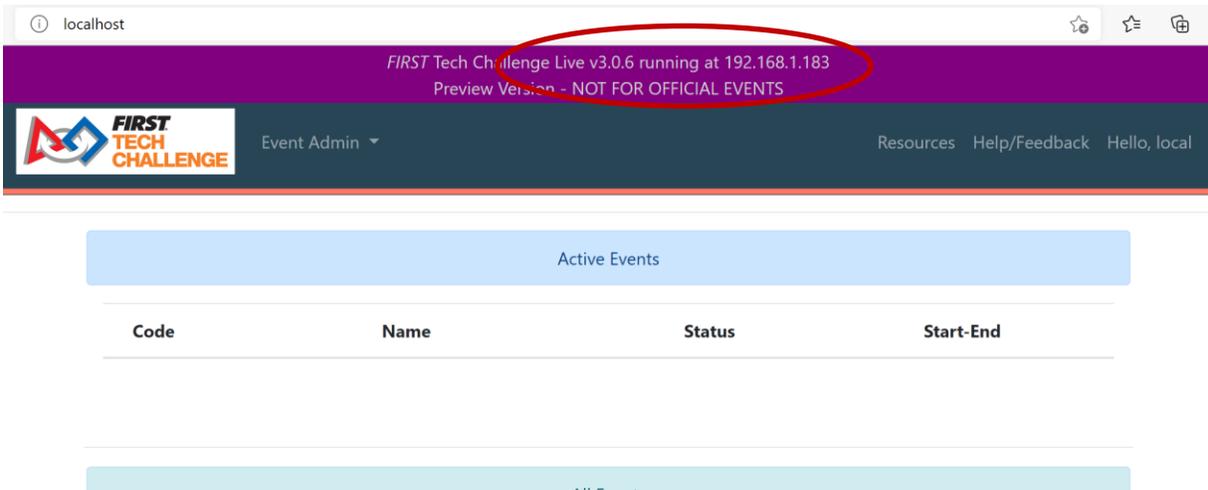


Figure 17

The software version number and the system IP address

## Logging in to the System

- Select “Login” at the top-right corner of the screen.
- Log in with the username “local” and leave the password field blank to access the event admin access.

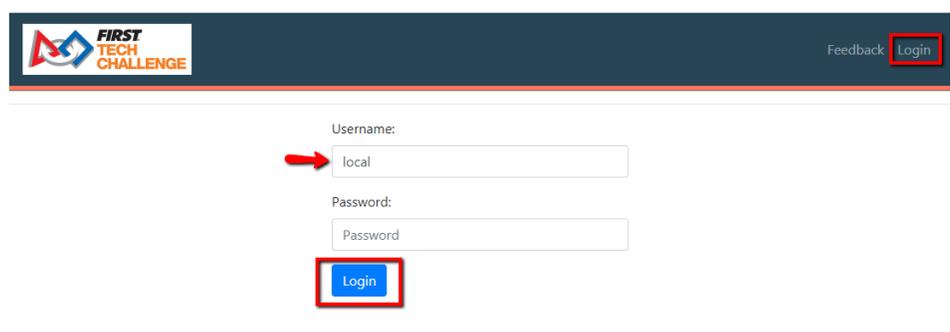


Figure 18 - Log in to the “local” account to gain access to the system.

**Important Note:** the “local” user account is the primary administrative account for the system. It is only available locally on the computer that is running the server application. Users should take care to secure this computer to make sure an unauthorized user will not access the “local” account.

## Logging in with Default Accounts

The default account has username `local` and no password.

Username:

Password:

Login

Figure 19 - The login page allows for a default account.

## Navigating the System's Home Screen

Once you have logged in to the system, the home screen should look like the following image:

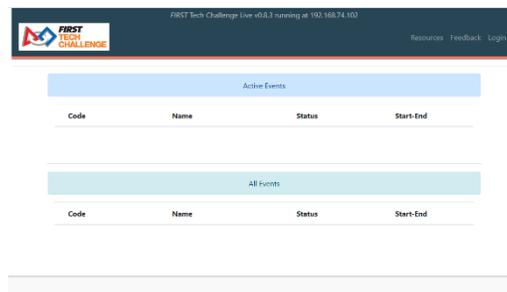


Figure 20 - Selecting the FIRST Tech Challenge logo (upper left-hand corner of window) will take you to the system's home screen.

**Note:** If you do not have any events defined for your system, these lists will be empty.

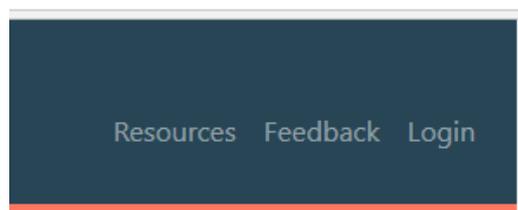


Figure 21 – Feedback, resources, and account info links are available in the upper right hand corner of the home screen.

In the upper right-hand corner of the screen you will find:

- Resources: Opens a directory of scorekeeper-related documents, including printable scoresheets.
- Feedback: Submit your concerns to the *FIRST Tech Challenge Live* software developers.
- Login: User account information, you can also select the “Hello, local” link to get information about your current user account.

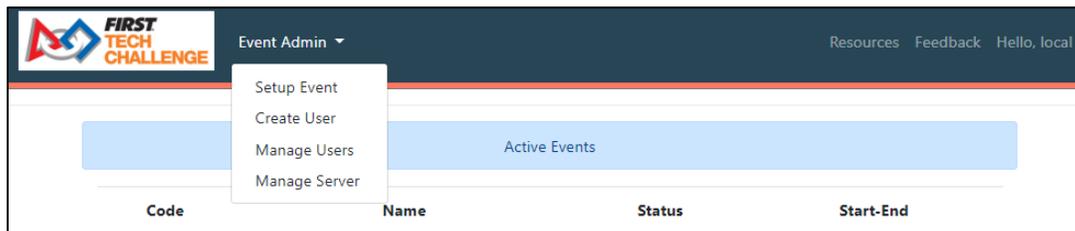


Figure 22 –After login, Event Admin appears.

There are options available in the “Event Admin” menu:

- **Setup Event:** This will allow you to create a single event using an event key found on the “Play Event Locally” page in the FIRST Tech Challenge Scoring system or to enter the .db file for an Offline Event or to hold an unlisted scrimmage.
- **Create User:** This gives you the option to create individual user accounts for users that may only require access to a subset of the software features.
- **Manage Users:** When you have a list of users for the events, this section will allow you to manage the users and their system access.
- **Manage Server:** This allows you to manage the server for an event.

### Set Up an Event – Automatic Import

The FTC Scoring system will automatically import the event into FTC Live. This method requires internet access and event management access to the event on FTC Scoring system, but is the easiest.

1. Run FTC Live. When the browser window pops up, login, but do nothing else.  
(Top banner is **DARK BLUE**)

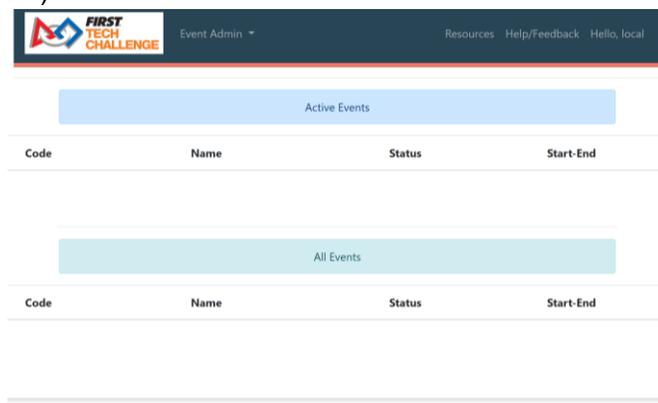
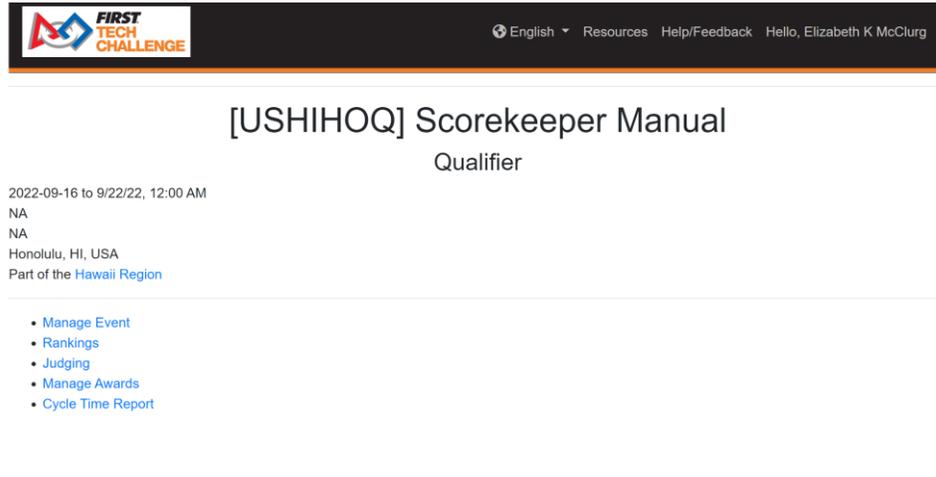


Figure 23 - Page once logged in

2. Navigate to FTC Scoring system ([ftc-scoring.firstinspires.org](https://ftc-scoring.firstinspires.org)): (Top banner is **BLACK**)
  - a. Log into an account with Admin access (Region Admins (PDPs), Region Managers and Event Admins) to the desired event.
  - b. Open the event’s home page, then select “Manage Event.”



**[USHIHOQ] Scorekeeper Manual**  
Qualifier

2022-09-16 to 9/22/22, 12:00 AM  
NA  
NA  
Honolulu, HI, USA  
Part of the [Hawaii Region](#)

- [Manage Event](#)
- [Rankings](#)
- [Judging](#)
- [Manage Awards](#)
- [Cycle Time Report](#)

Thank you to our sponsors!

Figure 24 - The selected event appears.

- c. Select “Play Event Locally”.

**USHIHOQ Dashboard**  
Scorekeeper Manual  
Qualifier

Step	Action	Status
-	Feature Flags	
-	Event Info	
0	Event Users	Optional
1	Event Configuration	Optional
2	Add/Edit Teams	8 teams added
3	Add/Edit Event Sponsors	1 sponsors added
4	Add/Edit Event Announcements	Optional
5	Create Pit Map	Optional
6	Configure Judging/Inspection Tracking	Optional
7	Play Event Locally	Incomplete

Figure 25 - On selected event dashboard, select “Play Event Locally”

- d. Under the “Automatic Setup” section at the top, select “Import This Event”.

Figure 26 - Automatic Setup select "Import This Event"

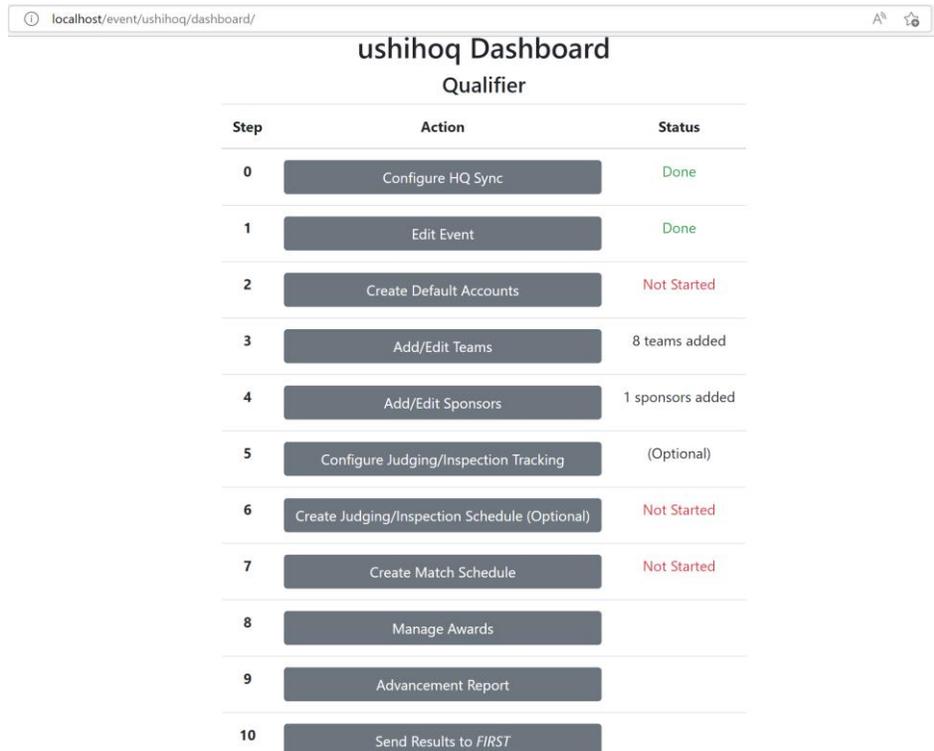
- e. This operation will open the FTC Live (**DARK BLUE** banner) software and require confirmation of the event setup from FTC Scoring.

Code	ushihq
Name	Scorekeeper Manual
Type	Qualifier
Region	USHI
Dates	9/16/2022 - 9/22/2022
Venue	NA
Address	NA
City	Honolulu
State	HI
Country	USA
League	

Figure 27 - Confirm event setup in FTC Live.

- f. Once confirmed, the Event Dashboard is transferred to FTC Live with in-person match play functions. Review the following dashboard options. Anything configured in FTC Scoring should

transfer over to “localhost” FTC Live software. Some tasks must be done in FTC Live, like “Create Match Schedule”



Step	Action	Status
0	Configure HQ Sync	Done
1	Edit Event	Done
2	Create Default Accounts	Not Started
3	Add/Edit Teams	8 teams added
4	Add/Edit Sponsors	1 sponsors added
5	Configure Judging/Inspection Tracking	(Optional)
6	Create Judging/Inspection Schedule (Optional)	Not Started
7	Create Match Schedule	Not Started
8	Manage Awards	
9	Advancement Report	
10	Send Results to FIRST	

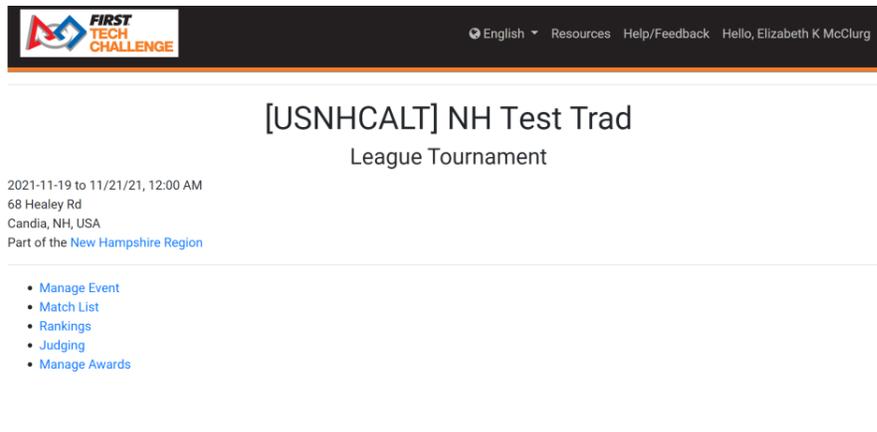
Figure 28 - Selected event dashboard in FTC Live

### Setting up an Event – Key-Based Setup

Using this method, someone with FTC Scoring system event admin permissions for the event gets a key from FTC Scoring and sends that key to the scorekeeper running FTC Live. In this scenario, FTC Live must have internet access, but the scorekeeper does not require FTC Scoring system permissions.

#### A. Region Admin and Event Admin (FTC Scoring System):

1. Login to the FTC Scoring system (ftc-scoring.firstinspires.org, **BLACK** banner) with an account with Event Management access.
2. Navigate to the event’s home page and click “Manage Event”.



**[USNHCALT] NH Test Trad**  
League Tournament

2021-11-19 to 11/21/21, 12:00 AM  
68 Healey Rd  
Candia, NH, USA  
Part of the [New Hampshire Region](#)

- [Manage Event](#)
- [Match List](#)
- [Rankings](#)
- [Judging](#)
- [Manage Awards](#)

Figure 29 - In FTC Scoring, select "Manage Event".

### 3. Select "Play Event Locally" in FTC Scoring.

[<< Back to Event Home](#)

**USNHCALT Dashboard**  
NH Test Trad  
League Tournament

Step	Action	Status
-	Feature Flags	
-	Event Info	
0	Event Users	Optional
1	Event Configuration	Incomplete
2	Add/Edit Teams	4 teams added
3	Add/Edit Event Sponsors	0 sponsors added
4	Add/Edit Event Announcements	Optional
6	Play Event Locally	In Progress
7	Advancement Report	Optional

Figure 30 - On the selected event dashboard, select "Play Event Locally".

- Under “Manual Setup”, copy the Event Key, and send it securely to the scorekeeper or FTA. Do not give this key to anyone else.

The screenshot shows the 'Setup Local Play' interface. At the top, there is a navigation bar with the FIRST Tech Challenge logo, language options (English), and user information (Hello, Elizabeth K McClurg). Below the navigation bar, there is a link to '<< Back to Event Dashboard'. The main heading is 'Setup Local Play'. Underneath, there are three sections: 'Automatic Setup' with an 'Import This Event' button, 'Manual Setup' with a text block explaining the event key and a 'Download' button, and 'Offline Setup' with a 'Download' button. The event key is displayed as: 6f75b9c2-586f-46b0-8aed-003829f29a9a.

Figure 31 - Copy the event key, under "Manual Setup"

## B. Scorekeeper (FTC Live)

- In FTC Live (**DARK BLUE** banner), login as local admin.
- From the “Event Admin” dropdown menu at the top, select “Setup Event”.

The screenshot shows the 'Event Admin' dropdown menu. The menu is open, showing options: 'Setup Event', 'Create User', 'Manage Users', and 'Manage Server'. The 'Setup Event' option is circled in red. The background shows the 'Active Events' section with a table header: Code, Name, Status, Start-End.

Figure 32 - Under "Event Admin," select "Setup Event."

3. Enter the Event Key sent by the Event Manager and click “Submit”.

## Setup Event

If you have internet access, you can setup an event by entering the Event Key found on the event’s “Play Event Locally” page on FTC Cloud. If you do not have internet access, proceed to “Offline Setup”.

Event Key



[Offline Setup >>](#)

Note: If you are testing the system please skip this step and continue to Offline Setup. If you do not have an Event key, ask your Program Delivery Partner or Event Manager. If they are not immediately available or does not have the key, you may skip this step for now. A key will be required to upload event results to FIRST after the event. Please remember to upload results from all official events, **especially League Meets**.

*Figure 33 - Event Key entry.*

4. It will show the event details and ask for confirmation. Make sure this is the correct event, and then hit “Confirm”.

## Set Up an Event – Offline Event

Using this method, an Admin for FTC Scoring downloads a file from the FTC Scoring system, and sends it to the Scorekeeper/FTA or brings it to the event. This method does not require internet access at the event.

### **Region Admin or Event Admin (FTC Scoring System):**

1. Prior to the event, login to the FTC Scoring system (**BLACK** banner) with an Admin account.
2. Navigate to the event’s home page and click “Manage Event”.

The screenshot shows the event management page for "[USNHCALT] NH Test Trad League Tournament". At the top left is the FIRST Tech Challenge logo. The top right navigation bar includes "English", "Resources", "Help/Feedback", and "Hello, Elizabeth K McClurg". The event details section lists the date "2021-11-19 to 11/21/21, 12:00 AM", location "68 Healey Rd, Candia, NH, USA", and notes it is "Part of the New Hampshire Region". A list of management options is provided: "Manage Event", "Match List", "Rankings", "Judging", and "Manage Awards".

*Figure 34 - "Manage Event" for selected event.*

### 3. Select “Play Event Locally” in FTC Scoring.

[<< Back to Event Home](#)

**USNHCAIT Dashboard**  
NH Test Trad  
League Tournament

Step	Action	Status
-	Feature Flags	
-	Event Info	
0	Event Users	Optional
1	Event Configuration	Incomplete
2	Add/Edit Teams	4 teams added
3	Add/Edit Event Sponsors	0 sponsors added
4	Add/Edit Event Announcements	Optional
6	Play Event Locally	In Progress
7	Advancement Report	Optional

Figure 35 - On the selected event dashboard, select "Play Event Locally".

4. Under “Offline Setup”, select “Download”. It will download a file to your computer. Send this file to the person running FTC Live or bring it to the event on a flash drive. Do not give this file to anyone not running FTC Live for this event.


English ▾ Resources Help/Feedback Hello, Elizabeth K McClurg

[<< Back to Event Dashboard](#)

## Setup Local Play

### Automatic Setup

Found FTC Scoring System version v3.0.6

[Import This Event](#)

Note: This will redirect you to the local scoring system. Once this process is completed, edits can only be made in the local scoring system.

---

### Manual Setup

Give this Event Key to the Scorekeeper or FTA. This key can be entered on the "Setup Event" page of the local scoring system to setup the event. The local scoring system must have internet access. **DO NOT DISTRIBUTE TO ANYONE NOT RUNNING THE SCORING SYSTEM AT THIS EVENT**

Event Key: 6f75b9c2-586f-46b0-8aed-003829f29a9a

---

### Offline Setup

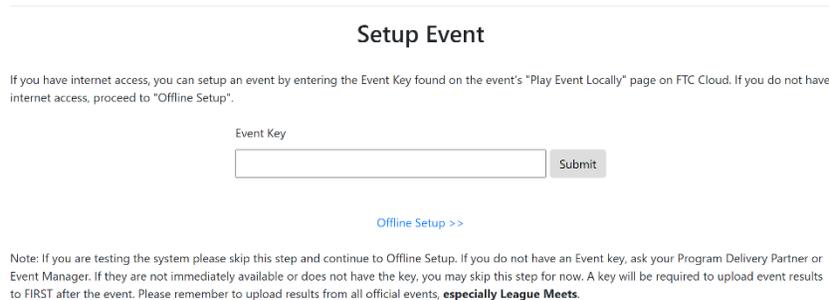
If the local instance does not have internet access, use button below to download an event file. Upload this file into the local scoring system using the "Offline Setup" page. **DO NOT DISTRIBUTE THIS FILE TO ANYONE NOT RUNNING THE SCORING SYSTEM AT THIS EVENT**

[Download](#)

Figure 36 - Download .db file and send to scorekeeper.

## 1. Scorekeeper (FTC Live)

1. In FTC Live (**DARK BLUE** banner), login as local admin.
2. From the Event Admin, select Offline Setup.



**Setup Event**

If you have internet access, you can setup an event by entering the Event Key found on the event's "Play Event Locally" page on FTC Cloud. If you do not have internet access, proceed to "Offline Setup".

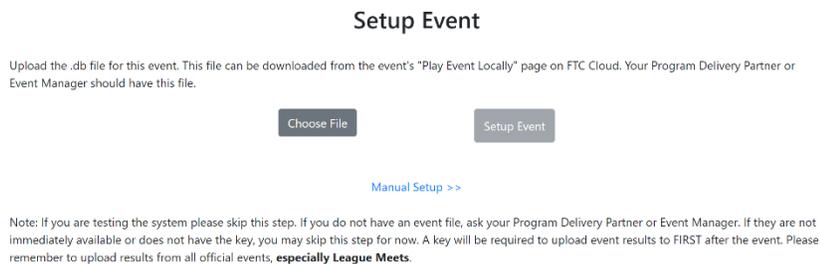
Event Key

[Offline Setup >>](#)

Note: If you are testing the system please skip this step and continue to Offline Setup. If you do not have an Event key, ask your Program Delivery Partner or Event Manager. If they are not immediately available or does not have the key, you may skip this step for now. A key will be required to upload event results to FIRST after the event. Please remember to upload results from all official events, **especially League Meets**.

*Figure 37 - In FTC Live, select the "Offline Setup" option.*

3. The .db file upload page opens, select the Choose File option, then go to the location of the .db file (USB).



**Setup Event**

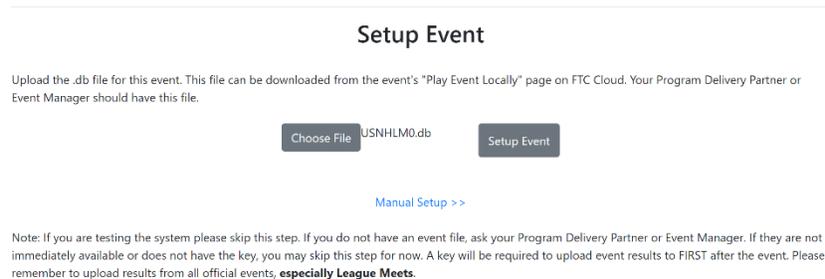
Upload the .db file for this event. This file can be downloaded from the event's "Play Event Locally" page on FTC Cloud. Your Program Delivery Partner or Event Manager should have this file.

[Manual Setup >>](#)

Note: If you are testing the system please skip this step. If you do not have an event file, ask your Program Delivery Partner or Event Manager. If they are not immediately available or does not have the key, you may skip this step for now. A key will be required to upload event results to FIRST after the event. Please remember to upload results from all official events, **especially League Meets**.

*Figure 38 - Upload the .db file.*

4. Once the file has been selected, select the "Setup Event" button to continue.



**Setup Event**

Upload the .db file for this event. This file can be downloaded from the event's "Play Event Locally" page on FTC Cloud. Your Program Delivery Partner or Event Manager should have this file.

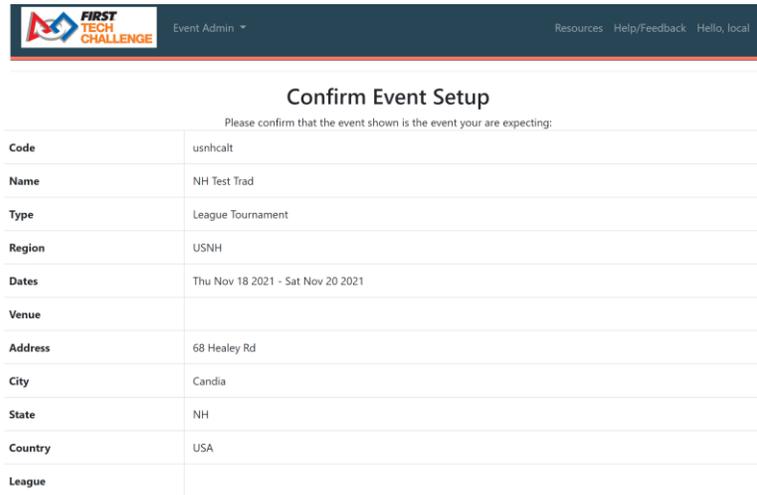
USNHLM0.db

[Manual Setup >>](#)

Note: If you are testing the system please skip this step. If you do not have an event file, ask your Program Delivery Partner or Event Manager. If they are not immediately available or does not have the key, you may skip this step for now. A key will be required to upload event results to FIRST after the event. Please remember to upload results from all official events, **especially League Meets**.

*Figure 39 - Select "Setup Event"*

- Review the information for the selected event and “Confirm or Cancel” at the bottom to transfer the event data from FTC Scoring. The dashboard for the event should appear once “Confirm” is selected.



Confirm Event Setup	
Please confirm that the event shown is the event you are expecting:	
Code	usnhcalt
Name	NH Test Trad
Type	League Tournament
Region	USNH
Dates	Thu Nov 18 2021 - Sat Nov 20 2021
Venue	
Address	68 Healey Rd
City	Candia
State	NH
Country	USA
League	

Figure 40 - Confirm the details of the event are correct.

### Setting Up an Unlisted Event (optional for teams)

If you are interested in testing the system outside of sandbox mode to experience the full features or plan to have unlisted practice matches that will not appear on [ftc-events.firstinspires.org](https://ftc-events.firstinspires.org) please use the following workflow for these purposes.

Note: This workflow does not include any syncing with the cloud-based FTC Scoring system.

- Log into the downloaded version of FTC Live and login as the Event Admin using “local” as the user name with no password.
- Once logged in, go to the “Event Admin” drop-down to select “Setup Event”.

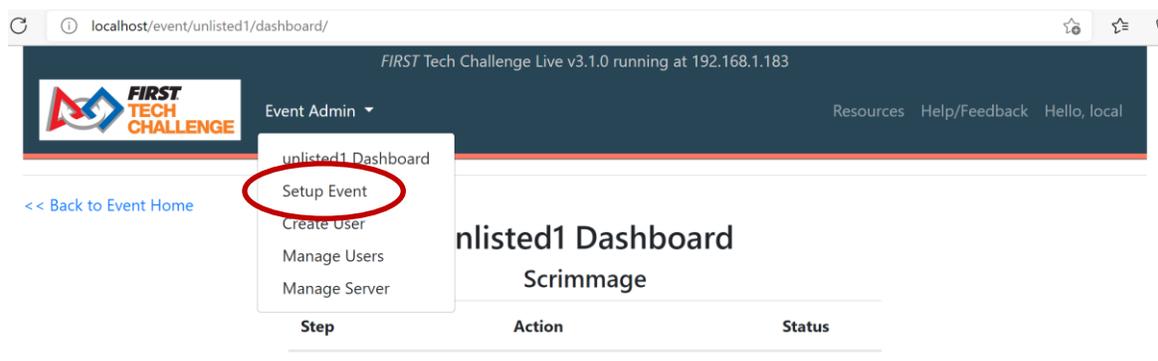


Figure 41 – Drop-down menu to select “Setup Event”

- Select the “Offline Setup” option and disregard the “Note”.

FIRST Tech Challenge Live v3.1.0 running at 192.168.1.183

**FIRST TECH CHALLENGE** Event Admin ▾ Resources Help/Feedback Hello, local

## Setup Event

If you have internet access, you can setup an event by entering the Event Key found on the event's "Play Event Locally" page on the [online FTC Scoring System](#). If you do not have internet access, proceed to "Offline Setup".

Event Key

[Offline Setup >>](#)

Note: If you are testing the system please skip this step and continue to Offline Setup. If you do not have an Event key, ask your Program Delivery Partner or Event Manager. If they are not immediately available or does not have the key, you may skip this step for now. A key will be required to upload event results to FIRST after the event. Please remember to upload results from all official events, **especially League Meets**.

Figure 42 - "Offline setup" screen

- On the next screen, select “Manual Setup” to continue the process.

localhost/setup/offline/

FIRST Tech Challenge Live v3.1.0 running at 192.168.1.183

**FIRST TECH CHALLENGE** Event Admin ▾ Resources Help/Feedback Hello, local

## Setup Event

Upload the .db file for this event. This file can be downloaded from the event's "Play Event Locally" page on FTC Cloud. Your Program Delivery Partner or Event Manager should have this file.

[Manual Setup >>](#)

Note: If you are testing the system please skip this step. If you do not have an event file, ask your Program Delivery Partner or Event Manager. If they are not immediately available or does not have the key, you may skip this step for now. A key will be required to upload event results to FIRST after the event. Please remember to upload results from all official events, **especially League Meets**.

Figure 43 - "Manual setup" screen

- On the “Select Event” page, choose the “Create New Event” link.

localhost/select/event/

FIRST Tech Challenge Live v3.1.0 running at 192.168.1.183

**FIRST TECH CHALLENGE** Event Admin ▾ Resources Help/Feedback Hello, local

[<< Back to Key Entry](#) [Create New Event](#)

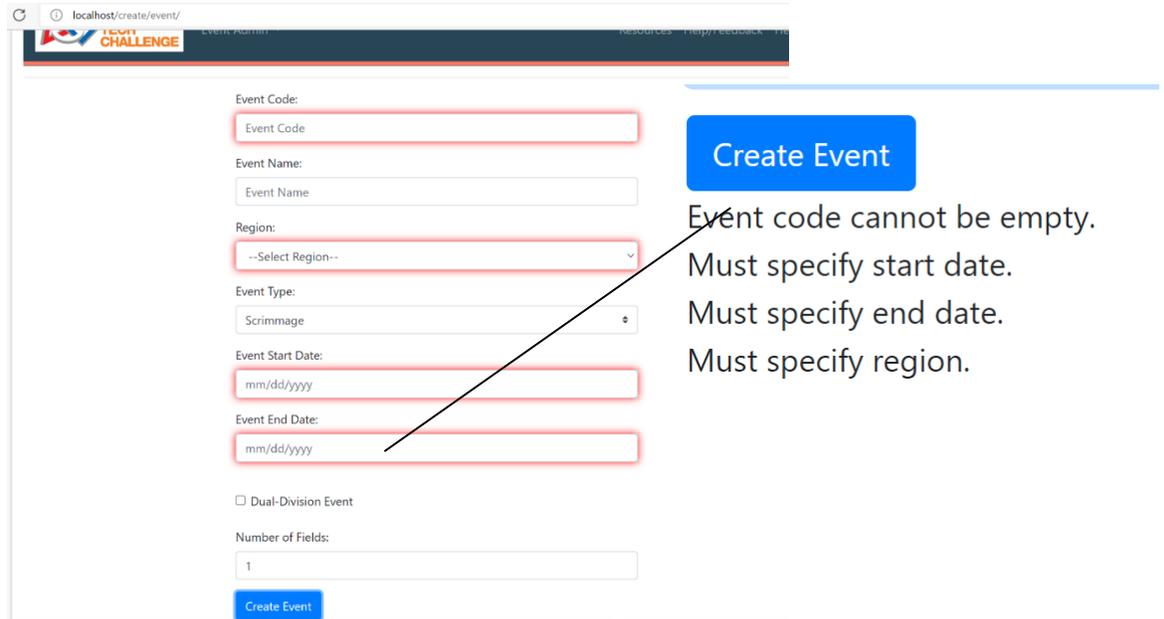
## Select Event

Use the table below to find your event. Click the row to select your event. If you cannot find your event, use the "Create New Event" link in the top right corner.

[<< Week 8](#) **Week 9: 11/15/2021 - 11/21/2021** [Week 10 >>](#)

Code	Name	Type	City	State	Country
CABCSUS2	BC Lower Mainland Scrimmage 1 - Surrey	SCRIMMAGE	Surrey	BC	Canada

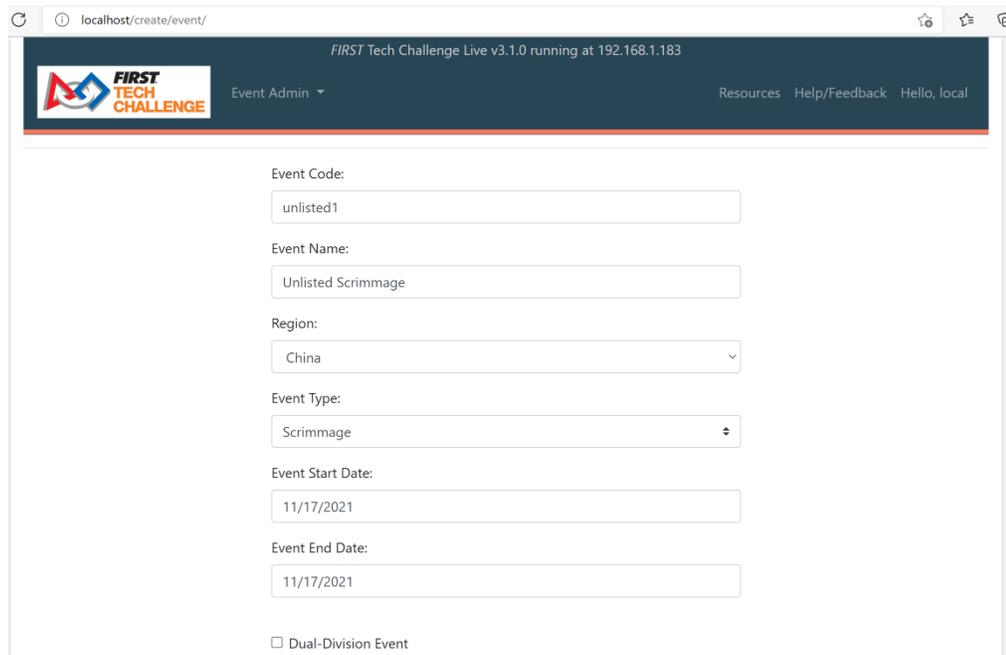
6. You will need to create an unlisted event that is not synced with the cloud FTC Scoring. The red highlighted screens denote the required fields. Once complete, select “Create Event.”



The screenshot shows a web form for creating an event. The fields are: Event Code (empty, red border), Event Name (empty), Region (dropdown menu with "--Select Region--", red border), Event Type (dropdown menu with "Scrimmage", red border), Event Start Date (empty, red border), Event End Date (empty, red border), and Number of Fields (input field with "1"). A blue "Create Event" button is at the bottom. A callout box on the right contains the text: "Event code cannot be empty. Must specify start date. Must specify end date. Must specify region."

Figure 45 - Required fields

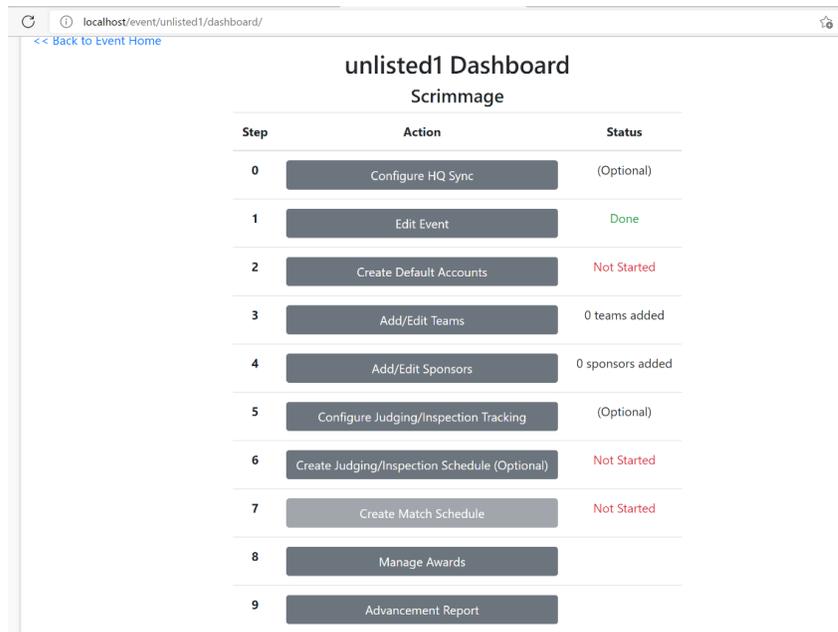
7. Example of completed event information.



The screenshot shows the same event creation form, but with the following completed information: Event Code: unlisted1; Event Name: Unlisted Scrimmage; Region: China; Event Type: Scrimmage; Event Start Date: 11/17/2021; Event End Date: 11/17/2021. The "Dual-Division Event" checkbox is unchecked.

Figure 46 - Completed event info

8. Complete steps 2-7 to get started with your event. Once these are complete you can go “Back to Event Home” to begin using the Match Control page and other features. The following sections explain how to complete the dashboard steps and use the Match Control page.



Step	Action	Status
0	Configure HQ Sync	(Optional)
1	Edit Event	Done
2	Create Default Accounts	Not Started
3	Add/Edit Teams	0 teams added
4	Add/Edit Sponsors	0 sponsors added
5	Configure Judging/Inspection Tracking	(Optional)
6	Create Judging/Inspection Schedule (Optional)	Not Started
7	Create Match Schedule	Not Started
8	Manage Awards	
9	Advancement Report	

Figure 47 - Dashboard screen

Note: “Create Match Schedule” will be unavailable until teams have been added.

### **Sandbox Mode Set Up During Event Transfer**

If an event does not have official results or is for training purposes, use the sandbox mode or an unlisted event. Sandbox mode can be accessed during the Event Key or Offline event transfer to FTC Live.

Confirm Event Setup	
Please confirm that the event shown is the event you are expecting:	
Code	uscobrq
Name	CO Broomfield Qualifier
Type	Qualifier
Region	USCO
Dates	Fri Jan 14 2022 - Fri Jan 14 2022
Venue	Prospect Ridge Academy
Address	2555 Preble Creek Pkwy
City	Broomfield
State	CO
Country	USA
League	

Setup event as sandbox.

[Cancel](#) [Confirm](#)

Figure 48 - Sandbox Mode option

### FTC Live Event Dashboard

Once you have imported an event, the local FTC Live system should display the *Event Dashboard*. You can also jump to the Event Dashboard for the event by selecting the event's "Dashboard" option from the "Event Admin" drop down menu.

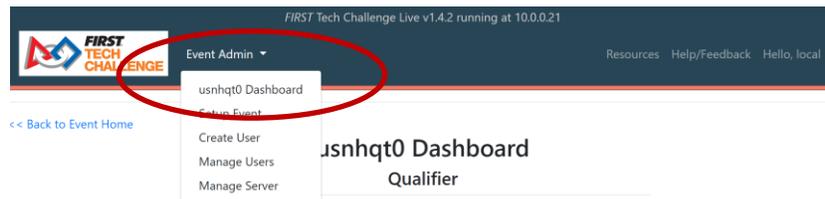


Figure 49 – You can use the Event Admin menu to navigate to the Dashboard if you have an event currently selected.

Each step has an action and a status listed on the Event Dashboard. You can select a button to perform an action.

0	Configure HQ Sync	Done
1	Edit Event	Done
2	Create Default Accounts	Not Started
3	View League Data	0 leagues
4	Add/Edit Teams	4 teams added
5	Add/Edit Sponsors	0 sponsors added
6	Configure Inspection Tracking (Optional)	(Optional)
7	Configure Inspection Schedule (Optional)	Not Started
8	Create Match Schedule	Not Started
9	Manage Awards	
10	Advancement Report	
11	Send Results to FIRST	
12	Download Archive File	

Figure 50- Event Dashboard.

**Note:** Be sure to publish event results via Send Results to *FIRST* at the conclusion of the event.

Also, in the upper left-hand corner there is a “Back to Event Home” link. Selecting this link will take you to the home page for the currently selected event.

### Creating Default User Accounts

You will need to create a set of user accounts that your volunteers can use during the event. These accounts will give scoring refs, inspectors and other users such as the FTA access to specific tasks on a tablet. Select the “Create Default Accounts” button on the Event Dashboard to display the Default Accounts screen.



Figure 51 – Press the “Generate New Random Accounts” to create a set of accounts for the currently selected event.

Press the “Generate New Random Accounts” to generate a set of user accounts that can be used to provide limited access to the system for specific users for the selected event. This may take a few seconds.

Press the printer icon in the upper right-hand portion of the screen if you want to print a hard copy of the list.

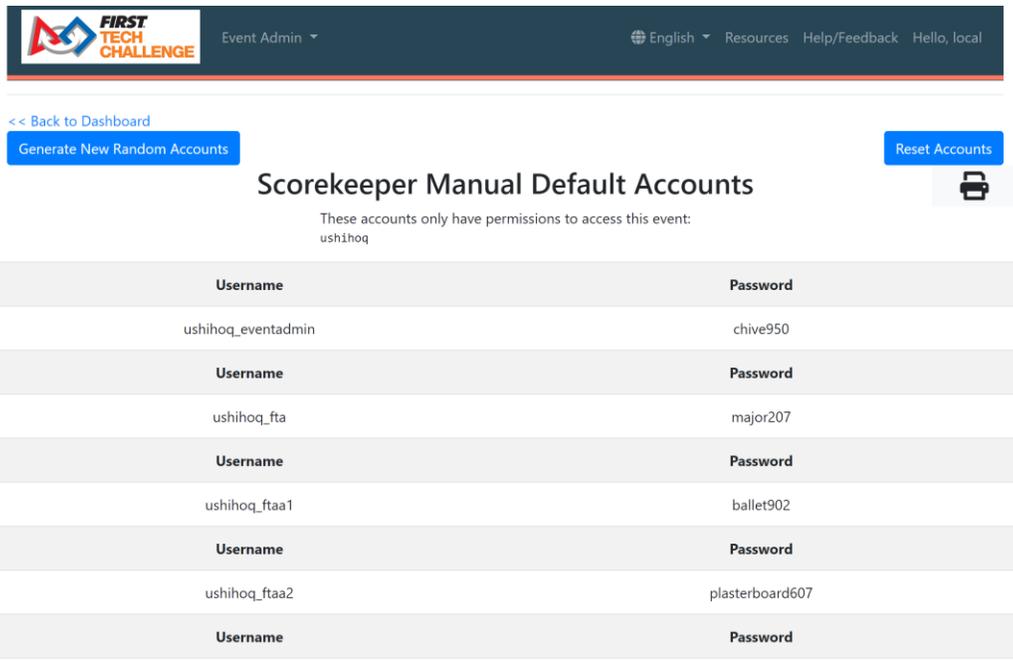


Figure 52 - Default user accounts generated by the system. Print a hard copy.

The password and access permissions for a user account can be changed by an event administrator by selecting the “Manage Users” item from the “Event Admin” menu and then using the resulting screen to review and modify information for the selected account.



Figure 53 - Manage Users to change a user account.

New users can be added by an event administrator by selecting the “Create User” item from the “Event Admin” menu. Select the “All Events” option (as shown) or select an individual event for the user. Note: one user can be selected for multiple user roles

Username:  
emcclurg

Password:  
\*\*\*\*\*

Re-enter Password:  
\*\*\*\*\*

Roles:  
You should independently verify that this user has completed all of the required training for the selected roles.

Event	Event Admin	Referee	Judge	Inspector	Lead Inspector	Head Referee
All Events	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
usnhcalt	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Create Account

Figure 54 - Example of new user added

When they are logged into the system, an individual user can also change his/her account password by selecting the “Hello” link in the upper right-hand corner. An event administrator can reset the accounts back to their originally assigned passwords by selecting the “Reset Accounts” button.

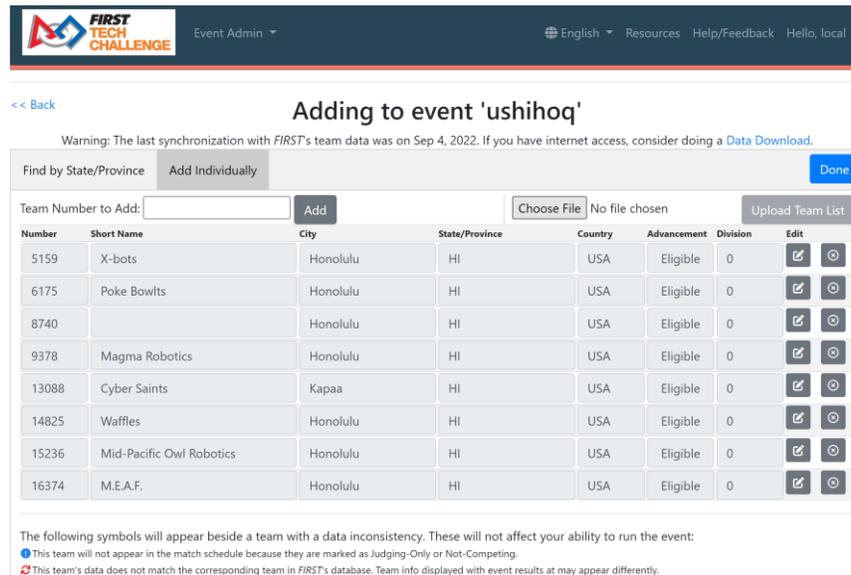
### Adding/Editing Teams for an Event

**Important Note:** Complete this step in the cloud-based FTC Scoring system NOT FTC Live, then transfer the event data to the local system. The process is almost the same for both systems, but the data should be stored in the cloud so that it will sync with [FTC Event Web : Home \(firstinspires.org\)](https://firstinspires.org). **If needed, use this in FTC Live for teams that arrive at an event that were not added at the time of data transfer. Important Note: the team must be a paid/secured team otherwise the event results will not propagate to the cloud and ftc-events.** Once the event is online again the paid team info will sync with the cloud.

0	Configure HQ Sync	Done
1	Edit Event	Done
2	Create Default Accounts	Not Started
3	View League Data	0 leagues
4	Add/Edit Teams	4 teams added
5	Add/Edit Sponsors	0 sponsors added
6	Configure Inspection Tracking (Optional)	(Optional)
7	Configure Inspection Schedule (Optional)	Not Started
8	Create Match Schedule	Not Started
9	Manage Awards	
10	Advancement Report	
11	Send Results to FIRST	
12	Download Archive File	

Figure 55 - Event Dashboard

Select the “Add/Edit Teams” button on the Event Dashboard to add or edit teams for the selected event.



Warning: The last synchronization with FIRST's team data was on Sep 4, 2022. If you have internet access, consider doing a [Data Download](#).

Find by State/Province **Add Individually** Done

Team Number to Add:  **Add**  No file chosen

Number	Short Name	City	State/Province	Country	Advancement	Division	Edit
5159	X-bots	Honolulu	HI	USA	Eligible	0	
6175	Poke Bowlts	Honolulu	HI	USA	Eligible	0	
8740		Honolulu	HI	USA	Eligible	0	
9378	Magma Robotics	Honolulu	HI	USA	Eligible	0	
13088	Cyber Saints	Kapaa	HI	USA	Eligible	0	
14825	Waffles	Honolulu	HI	USA	Eligible	0	
15236	Mid-Pacific Owl Robotics	Honolulu	HI	USA	Eligible	0	
16374	M.E.A.F.	Honolulu	HI	USA	Eligible	0	

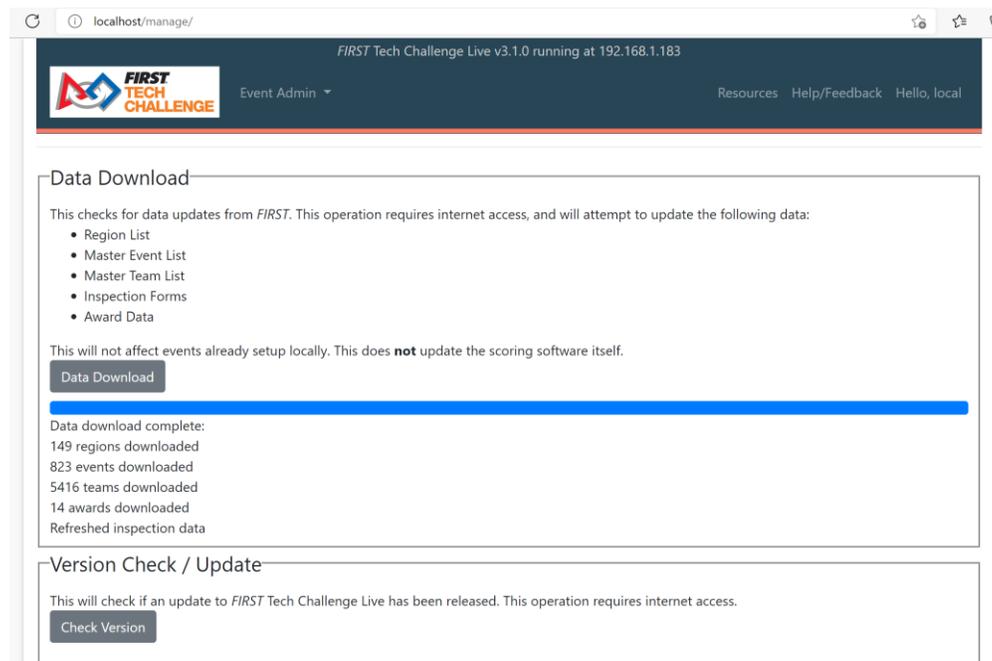
The following symbols will appear beside a team with a data inconsistency. These will not affect your ability to run the event:

- This team will not appear in the match schedule because they are marked as Judging-Only or Not-Competing.
- This team's data does not match the corresponding team in FIRST's database. Team info displayed with event results at may appear differently.

Figure 56 - Add/Edit Teams

**Note:** The cloud-based system comes with a pre-populated list of FIRST Tech Challenge teams that are registered and paid and have registered Lead Coach 1 and 2.

You may be prompted to do a “Data Download” (upper-right) to update the populated teams. Follow the prompts.



localhost/manage/ FIRST Tech Challenge Live v3.1.0 running at 192.168.1.183

**Data Download**

This checks for data updates from FIRST. This operation requires internet access, and will attempt to update the following data:

- Region List
- Master Event List
- Master Team List
- Inspection Forms
- Award Data

This will not affect events already setup locally. This does **not** update the scoring software itself.

Data download complete:

- 149 regions downloaded
- 823 events downloaded
- 5416 teams downloaded
- 14 awards downloaded
- Refreshed inspection data

**Version Check / Update**

This will check if an update to FIRST Tech Challenge Live has been released. This operation requires internet access.

Figure 57 - Data Download

Note: Check the version to make sure the event data will sync properly and is compatible with the current version of the cloud-based system.

## Adding a Team Individually

Under the “Add Individually” tab, “Edit” a team’s event status : “Matches and Judging” “Judging” and “Not Competing” or change any detailed information. This can only be done in “Add Individually”.

Team 5159

Short Name	X-bots		
City	Honolulu		
State	HI		
Country	USA		
Long Name (Affiliation)	Punahou School		
School			
Rookie Year	2011		
Robot Name			
Competing	Judging Only	Division	0
Advancement	Eligible		
Inspire	Eligible		

Figure 58 - Add a Team

- In the “Team Number to Add” field, type in the number of the team(s) you would like to add.
- Press the word “Add” to the right of the Team Number to add the team to the event.

Find by State/Province	Add Individually
Team Number to Add: 8888	Add <input type="checkbox"/> Hide

Figure 59 - Enter Team Number and hit "Add".

- If the system already has the team’s data prepopulated, the newly added team number will appear along with its team information. If the system does not have any data for the team, the remaining columns for the newly added team will be blank.
- You can remove a team by pushing the delete button towards the right side of a team listing.
- You can switch to “Find by State/Province” mode by selecting the “Find by State/Province” tab.
- If you are done adding and editing teams, press the “Done” button.

Find by State/Province	Add Individually	Done						
Team Number to Add:	Add <input type="checkbox"/> Hide Schools / Full Name							
	Choose File No file chosen	Upload Team List						
Number	Name	City	State/Province	Country	Rookie Year	Advanced	Division	Edit
8888	Infinity Factor	Hollis	NH	USA	2014		0	<input type="checkbox"/> <input type="checkbox"/>
11482	MaverBITS	Bedford	NH	USA	2016		0	<input type="checkbox"/> <input type="checkbox"/>

Figure 60 - Use the Edit or Delete buttons to modify or remove a team.

## Adding Teams by State or Province

Another option is to select “Find by State/Province” tab to add teams:

- The system should display a list of available pre-populated teams by selected region.
- Use the Country and State/Province controls to select the country and state/province to display.

Figure 61 - Use the Country and State/Province controls to select your country and state/province.

- Check boxes to add teams to the event (turns purple).
- Select single teams with the “Add Individually” tab.
- If you are done adding and editing teams, press the “Done” button.

<< Back

## Adding to event 'test\_event\_1'

	Number	Name	Affiliation	City	State/Province	Country	Rookie Year
<input checked="" type="checkbox"/>	7078	0v3r1y K0mp13x	&Family/Community	Dunbarton	New Hampshire	USA	2013
<input checked="" type="checkbox"/>	7135	Hornets	Proctor Academy	Andover	New Hampshire	USA	2013
<input checked="" type="checkbox"/>	7804	Tie Fighters	North East Precision CNC & Dover Middle School	Dover	New Hampshire	USA	2013
<input checked="" type="checkbox"/>	8089	Mainframe Meltdown	Kingswood Reg Middle School	Wolfeboro	New Hampshire	USA	2013
<input checked="" type="checkbox"/>	8888	Infinity Factor	Hollis Montessori School	Hollis	New Hampshire	USA	2014
<input type="checkbox"/>	9181	MasterMinds	Family Friends	Nashua	New Hampshire	USA	2014
<input type="checkbox"/>	10251	36 Cents	Windup Robotics 4H Club & 4-H Youth Development Organization	Windham	New Hampshire	USA	2015
<input type="checkbox"/>	10660	HBMS Silver Knights 10660	Hollis Brookline Middle School	Hollis	New Hampshire	USA	2015
<input type="checkbox"/>	11103	Tech Tonix	Family/Community	Bedford	New Hampshire	USA	2016
<input type="checkbox"/>	11115	Gluten Free	Family/Community	Hollis	New Hampshire	USA	2016

Figure 62 – Select teams and then select “Done” to add them.

## Importing a List of Teams

You can use the Add/Edit Team page to add teams by selecting and uploading a team list file.

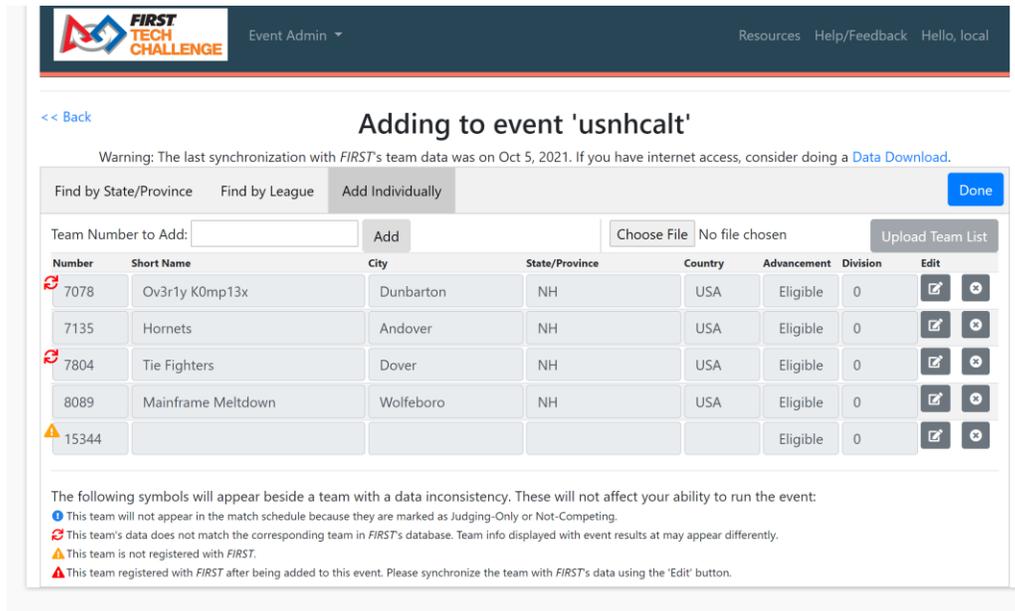
- The system can read team list files from past *FIRST* Tech Challenge seasons (prior to 2018-2019).
- An event administrator can also create a simple text file with a team number on each line of the file and use that as a team list.
- Press “Choose File” and use the pop-up file browser to find and select your team list file.
- After you have selected the team list file, press the “Upload Team List” button to upload the list data.

Figure 63 - Use the “Choose File” and “Upload Team List” buttons to select and upload a team list.

The uploaded teams should now be included in the team list for the currently selected event.

### **Warning and Icon Meanings for Add/Edit Teams**

There are a number of icons that appear beside a team with data inconsistency. NOTE: This does not affect your ability to run a traditional event using FTC Live. It does affect the match results shown on ftc-events.



The screenshot shows the 'Adding to event' interface for event 'usnhcalt'. A warning message states: 'Warning: The last synchronization with FIRST's team data was on Oct 5, 2021. If you have internet access, consider doing a Data Download.' Below the warning is a table of teams with columns: Number, Short Name, City, State/Province, Country, Advancement, Division, and Edit. The 'Edit' column contains icons for editing and deleting teams. A legend below the table explains the icons: a blue circle with an exclamation mark for 'Judging-Only or Not-Competing', a red circle with a slash for 'Data mismatch', a red triangle with an exclamation mark for 'Not registered', and a red triangle with a checkmark for 'Registered after addition'.

Number	Short Name	City	State/Province	Country	Advancement	Division	Edit
7078	Ov3r1y K0mp13x	Dunbarton	NH	USA	Eligible	0	[Edit] [Delete]
7135	Hornets	Andover	NH	USA	Eligible	0	[Edit] [Delete]
7804	Tie Fighters	Dover	NH	USA	Eligible	0	[Edit] [Delete]
8089	Mainframe Meltdown	Wolfeboro	NH	USA	Eligible	0	[Edit] [Delete]
15344					Eligible	0	[Edit] [Delete]

The following symbols will appear beside a team with a data inconsistency. These will not affect your ability to run the event:

- ! This team will not appear in the match schedule because they are marked as Judging-Only or Not-Competing.
- / This team's data does not match the corresponding team in FIRST's database. Team info displayed with event results at may appear differently.
- ! This team is not registered with FIRST.
- ! This team registered with FIRST after being added to this event. Please synchronize the team with FIRST's data using the 'Edit' button.

Figure 64 - Icons for Data Inconsistency

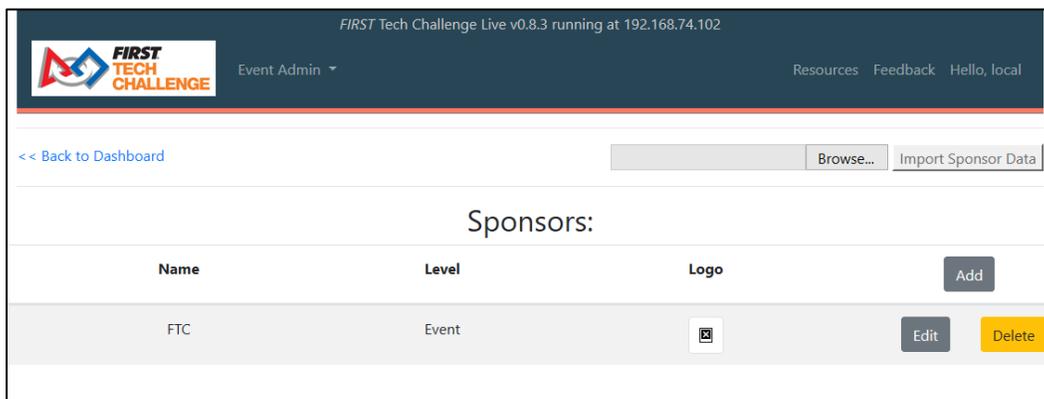
### ***Adding/Editing Sponsors for an Event***

The software comes populated with the following FTC program sponsor:

- *FIRST Tech Challenge* Season Presenting Sponsor: Raytheon

The sponsor cannot be modified and needs to be displayed at every event. In addition to the above sponsor, you may add regional or event sponsors.

Select the Add/Edit Sponsors to create or edit a sponsor list for your event.



The screenshot shows the 'Sponsors' section of the event administration interface. At the top, there is a 'Back to Dashboard' link and buttons for 'Browse...' and 'Import Sponsor Data'. Below is a table with columns: Name, Level, Logo, and an 'Add' button. The table contains one entry: 'FTC' with 'Event' as the level and a logo icon. Below the table are 'Edit' and 'Delete' buttons.

Name	Level	Logo	Add
FTC	Event	[Logo Icon]	[Edit] [Delete]

Figure 65 - You can add/edit sponsors for an event.

- Press the “Add” button to add a new sponsor for an event.
- Enter the name of the sponsor.
- Select the type of sponsor (Global, Regional, or Event).
- Select the “Create Sponsor” button to create the new sponsor.
- Use the “Choose File” and “Import Logo” buttons to import a sponsor data file. Note: .png logo files work well with the software, if available. You should always ask your sponsor for their official logo file.

[<< Back to Sponsor List](#)

Level:

Sponsor Name:

Sponsor Title:

Logo:  
 No file chosen

There are maximum size limits for the sponsor logo.  
 The image will shrink automatically if needed.

Figure 66 - When you add/edit a sponsor, you should specify the sponsor’s name and level of support.

Sponsor information can be displayed on Audience Displays by using the “Video Switch” tab of the Match Control Page (for details, see the section “How to Display Sponsor Information”).

### Creating the Match Schedule

If you have a list of at least four teams for your event, you can generate the match schedule. On the Event Dashboard, select the Create Match Schedule.

Event Admin ▾ Resources Help/Feedback Hello, local

[<< Back to Dashboard](#)

Matches per Team:  Cycle Time (min):

Total Matches Required: 7

Keep Match Start Times Private:

Minimize <C08> Breaks/Reminders:

Schedule:

Start Time	<input type="text" value="2021/10/13 10:54"/>	<input type="button" value="Remove"/>
# Matches	<input type="text" value="7"/>	
End Time	<input type="text" value="2021/10/13 11:43"/>	
Label	<input type="text"/>	<input type="button" value="Remove"/>
Start Time	<input type="text" value="2021/10/13 11:43"/>	
Duration (min)	<input type="text" value="60"/>	
End Time	<input type="text" value="2021/10/13 12:43"/>	

Total Matches Scheduled: 7 / 7

Figure 67 - Create Match Schedule main screen.

- You can edit the “Matches per Team” field (within the limitations set by the system) to adjust how many matches per team will be scheduled.
- You can edit the “Cycle Time” field to adjust the desired target cycle time for a match.
- You can press the “Default” button to use the default parameters to generate a simple match list (no match blocks or breaks included).
- You also have the option to create a more complex match schedule, with blocks of matches and breaks inserted in between.
  - Press the “Add Match Block” button to add a block of matches to the schedule.
  - Press the “Add Break” button to add a break in between matches to the schedule.
  - Adjust the start and end times for the blocks and breaks and provide labels (such as “lunch”, “morning”) for the breaks.

Note: It is important to set the start time for match play and insert any planned breaks if you intend to publish match times or use the embedded software features that track match cycle times and overall on-time status of the event.

Schedule:

Start Time: 2018/10/04 11:00	Remove
# Matches: 5	
End Time: 2018/10/04 11:35	
Label: lunch	
Remove	
Start Time: 2018/10/04 11:35	
Duration (min): 60	
End Time: 2018/10/04 12:35	
Start Time: 2018/10/04 12:35	Remove
# Matches: 5	
End Time: 2018/10/04 13:10	
Add Match Block   Add Break	

Total Matches Scheduled: 10 / 10

Figure 68 - You can create a more complex match list by adding breaks and blocks to the schedule.

- Once you configured your match blocks and breaks, you can push the “Run Matchmaker” button to run Idle Loop’s [Matchmaker](#) software. A progress bar should appear with an estimate on how much time to generate the schedule.
- **New for 22-23** There is now an additional step to “Activate” the Qualification schedule. The schedule is not shown publicly nor will the match control page load the schedule until it is activated.

Total Matches Scheduled: 7 / 7

Figure 69 - Push the Run Matchmaker button to generate the match list for your event.

- Once the match list has been generated, it will appear towards the bottom of the screen. There is an option to display or hide the suggested match times for the schedule. By default, the match times are hidden.

- There are also checkboxes for Start Time and a Condensed schedule view in the upper-right if the generated schedule.
- After you have reviewed the match schedule, you can use the “<< Back to Dashboard” link to return to the Event Dashboard.

### Optional Inspection Schedule and Tracking

Notice the Event Dashboard has been updated for the inspection schedules. “Configure Inspection Tracking” and “Configure Inspection Schedule”.

6	Configure Inspection Tracking (Optional)	(Optional)
7	Configure Inspection Schedule (Optional)	Not Started

Figure 70 - Optional Scheduling

### Configure Inspection Tracking

Check off any boxes that will be handled by a tablet. New for 22-23, activating the inspection tablets includes a new function for those tablets to do “automated robot inspection”. For more information about automated inspection read the Appendix. “Custom Tracking” can be added for additional processes.

[<< Back to Dashboard](#)

### Status Tracking Configuration:

#### Tracking Settings

- Check-In
- Judging
- Robot Inspection
  - Split Robot into Size & Hardware
- Field Inspection
  - Split Field into Tabletop & Robot Operation

Warning: Changing these parameters after starting inspection may lead to unexpected status results for Teams who have already started inspection. Inspection form checkboxes will remain correct.

#### Custom Tracking

Name	Abbreviation	Type*	Edit	Delete
------	--------------	-------	------	--------

Add Row

- \*Form Type Statuses
- **Basic:** Not Started Passed
  - **Basic with Timing:** Not Started Ready In Progress Passed Late Very Late
  - **All:** Not Started In Progress Failed Passed Ready Late Very Late

#### State Settings

- Automatically Set Late Statuses
  - Mark team as Late  minutes after their slot expires.
  - Mark team as Very Late  minutes after their slot expires.

Note: For this functionality to work, you must use the “bind status” feature in the Activities List on the Judging & Inspection Schedule Generator Page.

Figure 71 - Inspection Tracking

## Configure Inspection Schedule

Once you select this event dashboard option, the Inspection Editor page will open. Schedule judging, robot inspection and field inspection.

### Time Periods

Add time periods to determine when you want judging, inspection, and other activities scheduled.

Day  
2022-9-21

Start Time  
08:30 AM

End Time  
10:45 PM

Day	Start Time	End Time
X 2022-9-21	08:30 AM	09:30 AM
X 2022-9-21	09:45 AM	10:45 PM

### Activities

Add activities to be scheduled during time periods. A judging activity and inspection activity are created by default.

Name  
name

Duration (minutes)  
duration in minutes

Stations  
stations

Name	Duration (minutes)	Stations	Statuses	Bind Status
X Judging	15	3		▼
X Robot Inspri	15	3		▼
X Field Inspec	15	3		▼

### Generate Schedule

Sort teams by:

Figure 72 - Inspection Schedule Example

Generating the schedule will give you a list of teams, day and time for each team added to the event.

- Time Periods: allows you to break up the day into specific time blocks.
- Activities: You can also add additional event activities to the schedule using the “Activities” field on the right-hand side.
- The system sets default time and stations though this can be edited.

Note: You will need to select “Bind Status” if you want the system to flag when a team is late to a specific type of inspection, ie. judging.

Note: Do not use this software to schedule judging for Hybrid Events. Hybrid Event judging should be scheduled using the FTC Scoring cloud-based software, especially if you intend to use the embedded video conferencing capability.

## Generate Schedule

Sort teams by: 

Team Number	Team Name	Robot Inspection			Judging			Field Inspection		
		Day	Time	Station	Day	Time	Station	Day	Time	Station
5159	X-bots	21/9/2022	8:30 AM - 8:45 AM	2	21/9/2022	8:45 AM - 9:00 AM	2	21/9/2022	9:00 AM - 9:15 AM	3
6175	Poke Bowlts	21/9/2022	9:00 AM - 9:15 AM	1	21/9/2022	8:30 AM - 8:45 AM	2	21/9/2022	8:45 AM - 9:00 AM	1
8740	'lobotics	21/9/2022	8:30 AM - 8:45 AM	3	21/9/2022	8:45 AM - 9:00 AM	3	21/9/2022	9:15 AM - 9:30 AM	1
9378	Magma Robotics	21/9/2022	8:30 AM - 8:45 AM	1	21/9/2022	8:45 AM - 9:00 AM	1	21/9/2022	9:00 AM - 9:15 AM	2
13088	Cyber Saints	21/9/2022	8:45 AM - 9:00 AM	1	21/9/2022	9:00 AM - 9:15 AM	1	21/9/2022	8:30 AM - 8:45 AM	1
14825	Waffles	21/9/2022	9:00 AM - 9:15 AM	2	21/9/2022	8:30 AM - 8:45 AM	3	21/9/2022	8:45 AM - 9:00 AM	2
15236	Mid-Pacific Owl Robotics	21/9/2022	8:45 AM - 9:00 AM	2	21/9/2022	9:00 AM - 9:15 AM	2	21/9/2022	8:30 AM - 8:45 AM	2
16374	M.E.A.F.	21/9/2022	8:45 AM - 9:00 AM	3	21/9/2022	8:30 AM - 8:45 AM	1	21/9/2022	9:00 AM - 9:15 AM	1

Team	Robot Inspection			Judging			Field Inspection					
	8:00	9:00	10:00	11:00	12:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00
5159	2	2	3									
6175	2	1	1									
8740	3	3	1									
9378	1	1	2									
13088	1	1	1									
14825	3	2	2									
15236	2	2	2									
16374	1	3	1									

Figure 73 - Generated schedule

## Match Control and Scoring

If you successfully created a match schedule for your event, then you are ready to begin controlling (initializing, running, and scoring) the matches. Go to the “Back to Event Home” in the upper-left hand corner to return the homepage. The Event Homepage includes all of the links you will need for the actual event after the event dashboard setup in complete.

### Event Home Page

You can navigate to the Event Home Page from the Event Dashboard by selecting the “<< Back to Event Home” link that is in the upper left-hand corner of the screen. Depending on your user account permissions, the home page will display categorized lists of features that are available from the server. As the “local” login the following display is shown.

- Event Info – These links display important event-related information. A scorekeeper can review and print out information such as the match schedule, team rankings, and match results using these links. Also, a pit display can be launched from a link in this category.
- Inspection – Inspectors use these links to access the inspection forms & tracking.
- Referee Score Tracking – A referee would use these URL links to score for the red or blue alliance.

- Displays – Access the display menu to select the appropriate options for your event displays.
- Judging –takes you to Manage Awards. Note: this is also an option on the event dashboard.
- Event Administration – These links take the user to the event dashboard or the Match Control page.

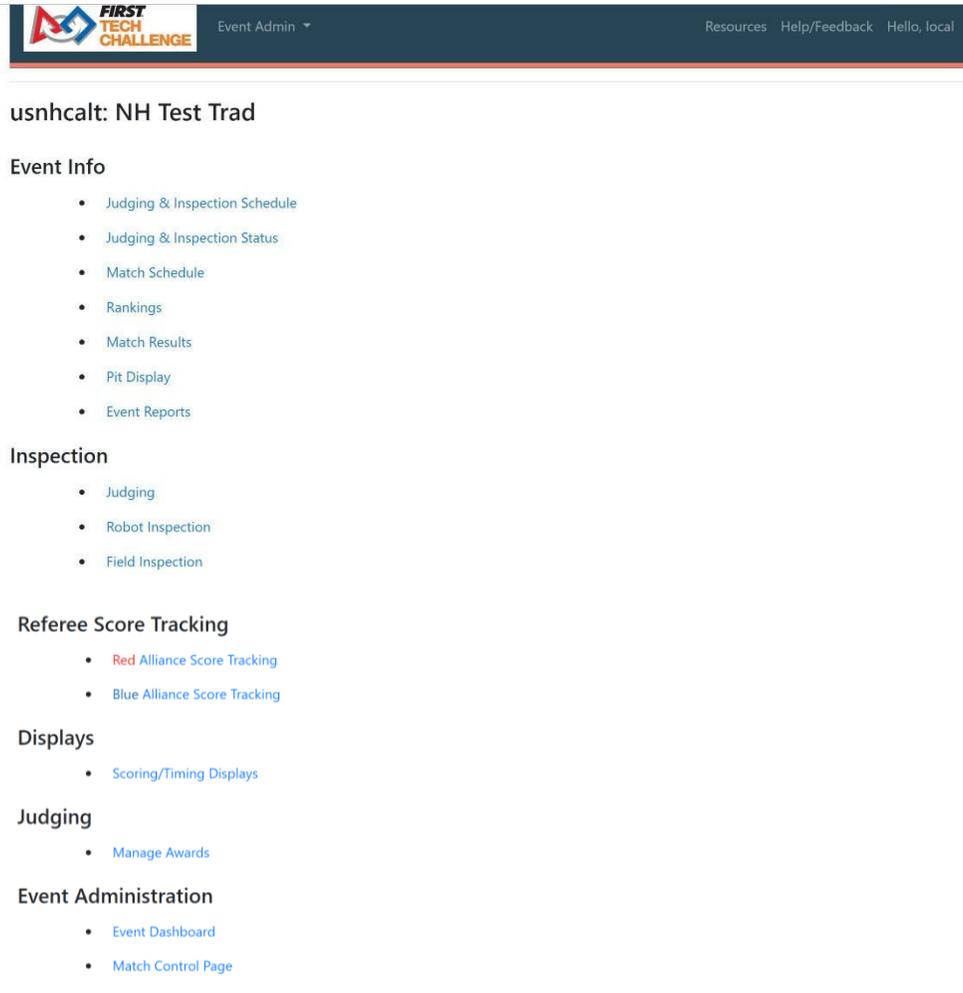


Figure 74 - Event Home page

### Examples of Scoring Workflows

Before examining the details of the Match Control features that are available with the system, it is helpful to look at the workflow for scoring an event. The following explains paper scoresheets, then live scoring with tablets.

#### Scoring Using Paper Scoresheets

The system can be used with [paper scoresheets](#) to control and score an event. For this scenario, the typical workflow is:

- Load Match
- Show Match Preview
- Randomize Field
- Run Match

- Manually Enter Scores
- Commit Results
- Display Results

For a detailed explanation of how to score with paper scoresheets or tablets watch the Scoring Referee training videos on BlueVolt or the [FTC YouTube](#) page. More information also exists in the Appendices.

Note: This role is usually the Scoring Referee.

### Scoring Using Wireless Tablets

Wireless tablets can be used for real-time score tracking, robot and field inspections. Use the “generate random accounts” usernames and passwords. Have each role sign in with the correct login.

The workflow for the scorekeeper is as follows:

- Load Match
- Show Match Preview
- Referees Submit Pre-Match Info
- Randomize Field
- Run Match
  - Referees track, then submit Autonomous.
  - Referees track, then submit Driver-Controlled.
  - Referees review, then finalize their scores.
- Commit Results
- Display Results

## **Match Control Page**

Select the “Match Control Page” link to display the Match Control Page.

usnhca1t - FIRST Tech Challenge Live v3.0.6 running at 192.168.1.183:8080

**Match Control**

Loaded Match:  
Active Match:

Buttons: Load Next Match, Show Preview, Randomize Field, Show Random, Show Match, Start Match, Commit & Post Last Match

Match	Field	State	Red Score	Red 1	Red 2	Red 3	Blue 1	Blue 2	Blue 3	Blue Score
Qualification 1	1	UNPLAYED	0	8089	7804		7078	7135		0
Qualification 2	1	UNPLAYED	0	7804	7135		8089	15344		0
Qualification 3	1	UNPLAYED	0	7078	8089		15344	7804		0
Qualification 4	1	UNPLAYED	0	7135	15344		8089	7078		0
Qualification 5	1	UNPLAYED	0	15344	7135		7804	7078		0
Qualification 6	1	UNPLAYED	0	15344	7078		7135	8089		0
Qualification 7	1	UNPLAYED	0	7804	7078		7135	15344		0

Figure 75 - Match Control Page

The Match Control Page is where the scorekeeper will spend most of their time. It is where the match timer is controlled, as well as, where scores are edited. It is recommended that the Match Control Page be used in full screen mode, and that the user not navigate away from the Match Control Page’s browser tab. If the user would like to have two or more active browser screens on their laptop (for example, if the user wanted to display the match control page and the field display page), it is recommended that user have two separate browser windows launched on their computer.

**Important Note:** Only one Match Control Page should be open per scoring server per event. More than one Match Control Page can result in confusion, and inaccurate and unpredictable match results.



Figure 76 - Loaded Match and Active Match information.

At the very top of the Match Control Page, lists information about the current “Loaded Match” and the current “Active Match”.

- Loaded Match is the next match to be played. The alliance lists turn green once the referee has submitted initialization data for that alliance. When both are green, the match start button turns green to allow for the match to start.
- Active Match shows the match currently in progress and the time left. The buttons progress through the match flow, generally from left to right. Green buttons indicate the next steps, yellow buttons indicate repeated actions (that are allowed), and red buttons indicate non-standard match flow operations, but are still allowed. Grey buttons cannot be used at the time.

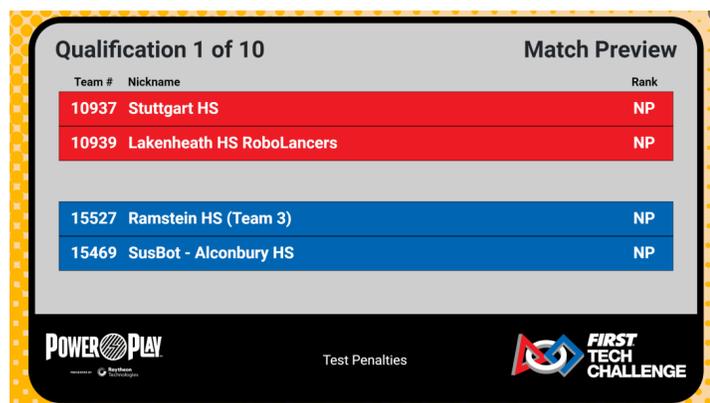
### Match Control Buttons

The buttons on the Match Control Page below Loaded and Active Match allow for the control of the match flow.



Figure 77 - Buttons allow for control of the match flow.

- Load Next Match - This button will load the next match in the schedule for play, allowing referees to input initialization data and allowing randomization of the field. To load a different match, use the Play / Replay button on the schedule tab. If no matches exist, the button does nothing.
- Show Preview - Audience Displays will show the list of teams competing in the next match, and their current rank.



- Randomize Field - This will generate a random number to use to configure the field before the match. If external randomization is enabled in settings, a tooltip will appear below the button to allow selection of a value. Clicking again will prompt for confirmation, but will allow re-randomization.
- Show Randomization - This will show the randomization value and corresponding field state on Audience Displays.

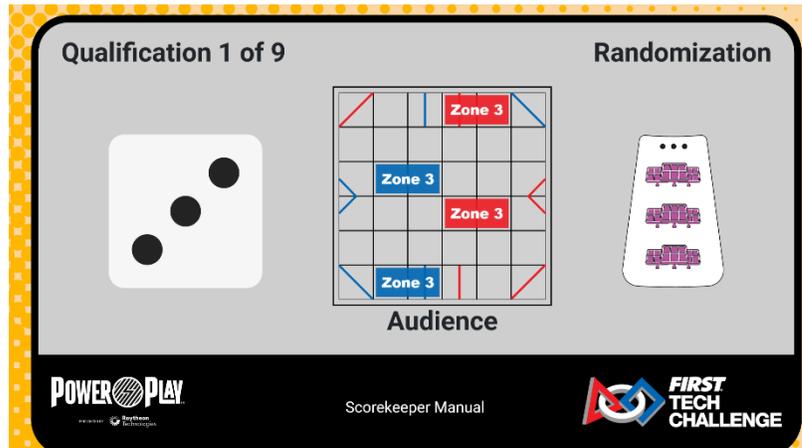


Figure 79 - Example of randomization

- Show Match - This prepares the displays for match start by showing the screen used during a match.

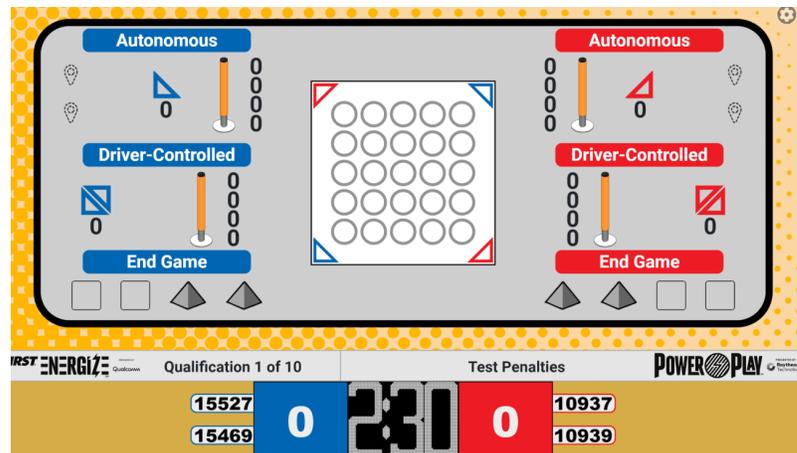


Figure 80 - Example of Show Match screen

- Start Match - Starts the match. This button is not available until after the field has been randomized. It is red until both referees have submitted initialization, but can still be clicked when red. After match start, it turns into an "Abort Match" button, which is used to reset the match timer. After an abort, the match returns to the Waiting for Init stage, and referees must refresh their pages and re-submit initialization before the start button turns green again.
- Commit & Post Last Match- This is a convenient button that is available once the previous match's scores have been submitted by referees, and the next match has not yet started. It will both save the results of the previous match, and show them on screen. This button should only be used after confirmation signal from the head referee that all data as entered by the referees is correct and no cards need to be given. Otherwise, matches can be edited, committed, and posted from the schedule tab /edit scores tab.

**Gracious Professionalism®** - "Doing your best work while treating others with respect and kindness - It's what makes FIRST, first."

### Match Control Tabs

The Match Control Page has several tabs that can be used to switch the information displayed on the screen:

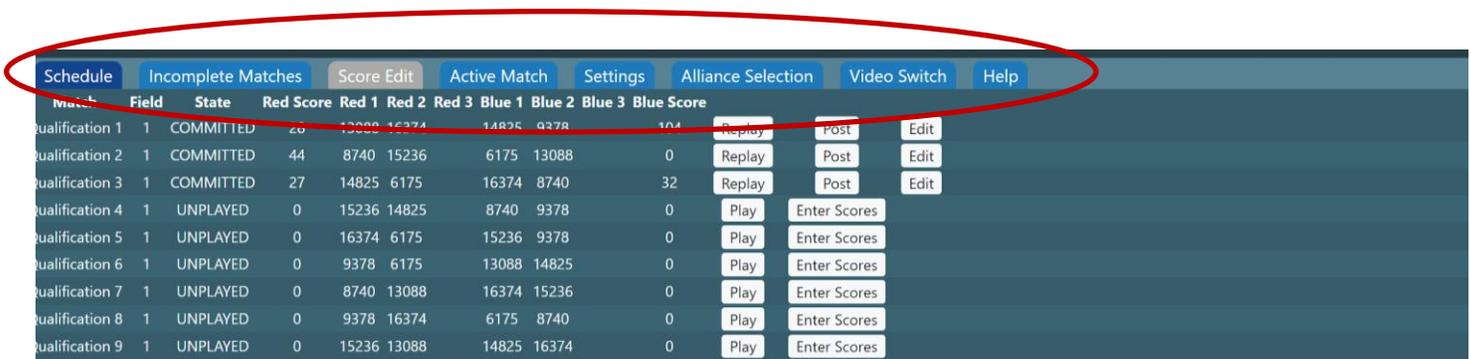


Figure 81 - Each tab changes the information displayed on the screen.

- **Schedule** - Shows list of matches, their status, teams, and scores. From this tab, which match to play can be selected, and matches can be selected to edit or show results. (Schedule is shown)
- **Incomplete Matches** - Shows the matches that have **been started but not completed** (committed to the database).

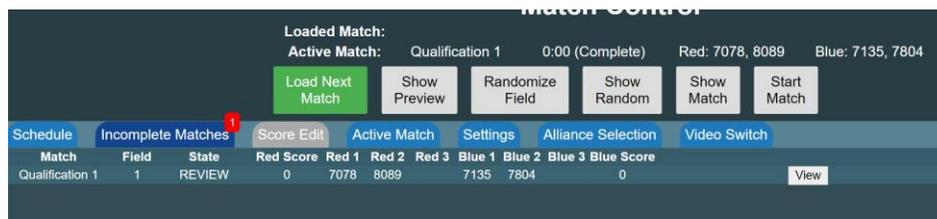


Figure 82 - Incomplete Match tab

- **Score Edit** - Used to edit scores or enter paper scoresheets. Click **Edit** on a match in the Schedule tab to load this tab.
- **Active Match** - Shows the live scoring state of the match currently being played, or the last one played. Looks like the score edit tab but cannot be edited. After a match is complete, it provides a button to edit scores.



Figure 83 - Active Match

### ○ Settings

- Test Mode – Switches the system into Test Mode, where Test & Training Matches can be created & run.
- Timeout options – described below.
- Live Scoring toggle – Deselect if using paper scoresheets.
- Control Page - option to flip alliance layout.
- Sync Settings – Allows you to change sync timing and test the HQ sync connection.
- Reset Alliance Selection, if necessary.
- **Alliance Selection** – Shows teams ranking and selects alliances.
- **Video Switch** - Used to access display options. Show sponsors, bracket, audience key, wifi reminder, ranks, and blank screen.

### Timeouts

Per GM1 <C29>, timeouts will be an 8 minutes timeout between each elimination match. There are no longer team/alliance specific timeouts. If both alliances are ready at the field the timeout can be ended before the 8 minutes. The elimination timeouts will start & display automatically when match scores are posted. Randomization of the next match on a field will silently end a timeout. If a <C08> timer is needed during qualification matches, the “Settings” tab has buttons to start, show, and end a 5 minute timer.

### How to Display Sponsor Information

You can display the list of sponsors on an Audience Display using the tabs that are available on the Match Control screen.

1. Select the Video Switch tab, then the “Show Sponsors” button.



Figure 84 - Select the "Show Sponsors" button to display the sponsor information on Audience Displays.

2. Select “Show Sponsors” button to display the sponsor information on the Audience Displays.
3. The Audience Displays should automatically begin displaying the scrolling sponsors for your event.



Figure 85 - The Audience Display with sponsor information.

### **How to Display the Audience Key**

Select the Video Switch Tab and scroll-down to Other Displays:

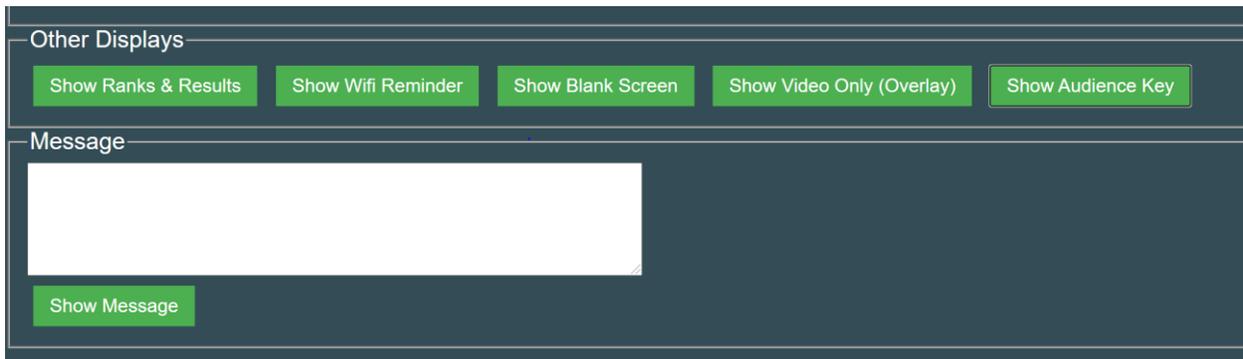


Figure 86 - Display option under Video Switch

Once you select the "Show Audience Key" the audience display will have an infographic explanation of the game elements and scoring icon changes for teams' scoring tasks.

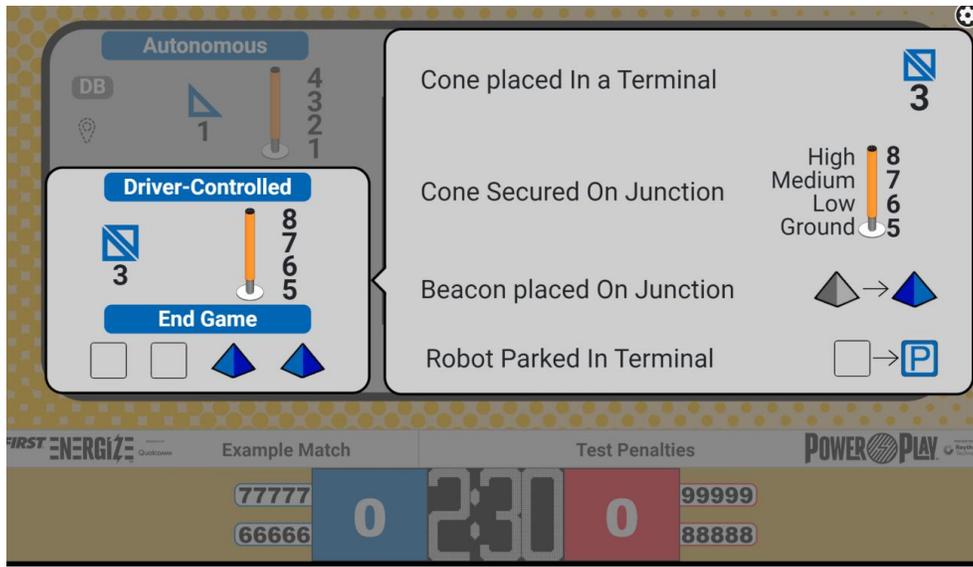


Figure 87 - Audience Key example

### Scoring/Timing Displays

A laptop or computer that is connected to the same network as the system server can be used to display scoring and timing information.

- Field Display – The Field Display provides basic match and timing information for the teams and volunteers on an active competition field. If live scoring is enabled, it also provides live score information.

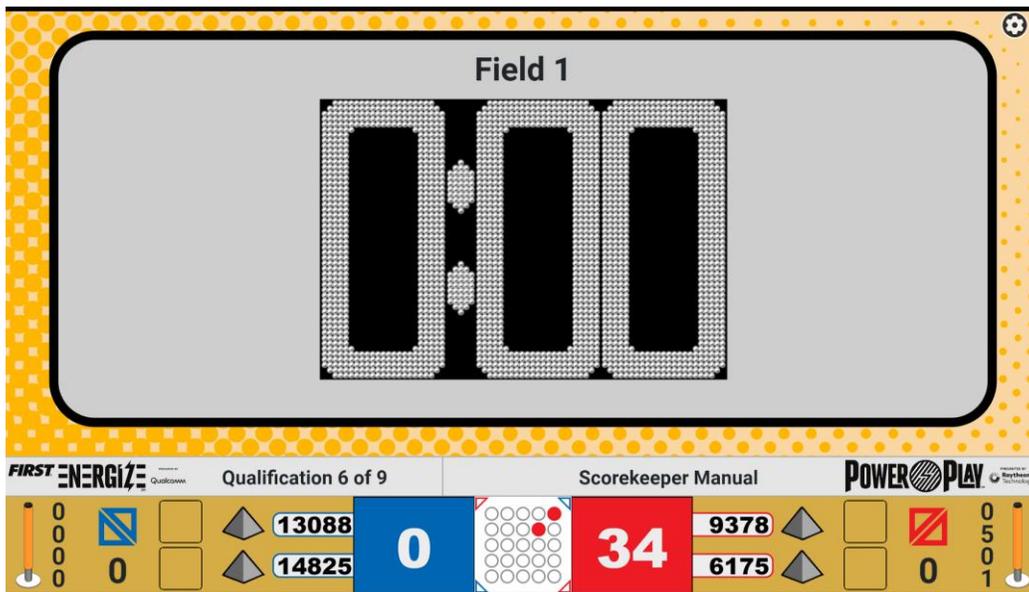


Figure 88 - Field Display

- Audience Display – The Audience Display provides match and timing information, formatted for spectators. If live scoring is enabled, it also provides score information including a graphical representation of the state of the field during a match. When the results of a match have been committed and posted, the results information should display on the audience displays.

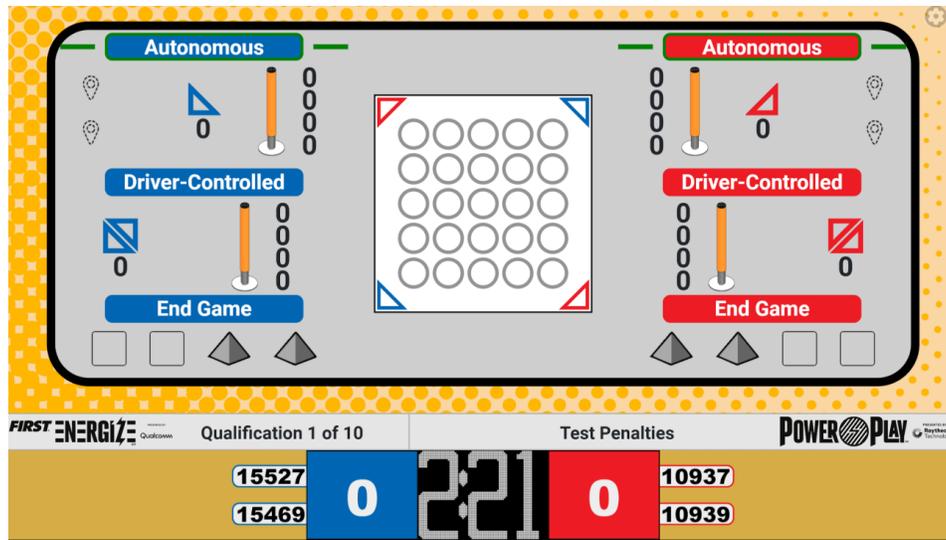


Figure 89 - Audience Display.

- Overlay Display – The blank portion of the screen is where a video feed (typically live camera footage of the match) can be overlaid onto the screen using chroma key technology.

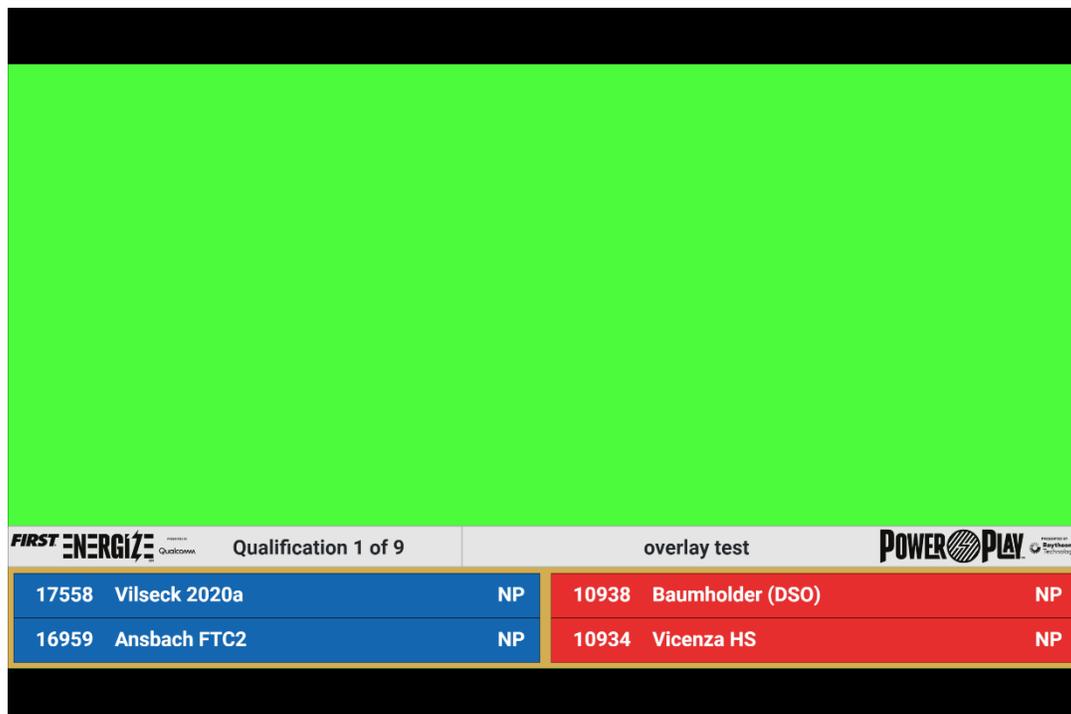


Figure 90 - Overlay Display mode.

You can have multiple devices acting as Field or Audience Displays on your network. It is strongly recommended that these devices are connected to the server through a wired (Ethernet) network to avoid interfering with the wireless control systems of the robots. Or, if a wired connection is not convenient, a wireless connection can be used, but it should be configured so that it operates on a Wi-Fi channel that will not conflict with the wireless control systems of the robot.

### Setting up a Display

Before you can set up a Field or Audience Display, you will need:

- Verify that you have the IP address of the system server.
- Launch the Google Chrome browser on your display computer.
- Typing in the IP address to navigate to the system server.

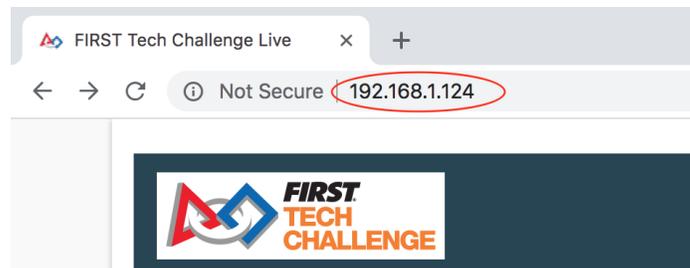


Figure 91 - Type in the IP address to navigate to your system server.

- In the Event home page for your selected event, select the “Scoring/Timing Displays” link.
- On first load, the “Display Settings” is the default page. The “Display Type” allows you to choose a Audience, Field, Overlay display, as well as binding the display to a field.

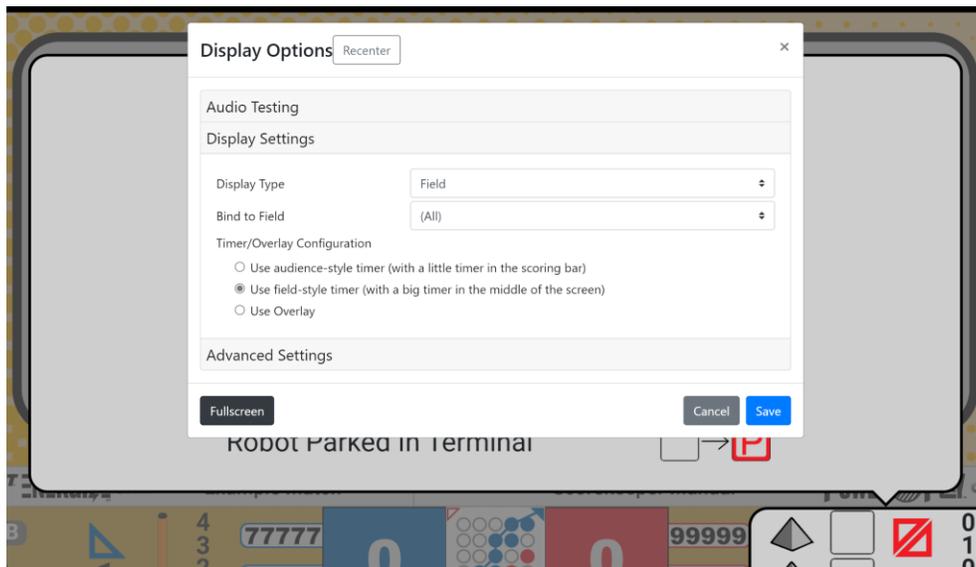


Figure 92 - Display Settings Dialog.

- Choose “Use Overlay” when a chroma is desired to allow overlaying live video with scoring data.
  - The software DOES NOT accept input from video sources or do any mixing itself. This setting is used to format the audience display to allow third-party software (such as OBS Studio, vMix, or other audio/video mixing tools) to mix audio/video signals for production broadcast or displays.

- When “Use Overlay” is selected, a new “Overlay Settings” menu becomes available to select overlay settings.

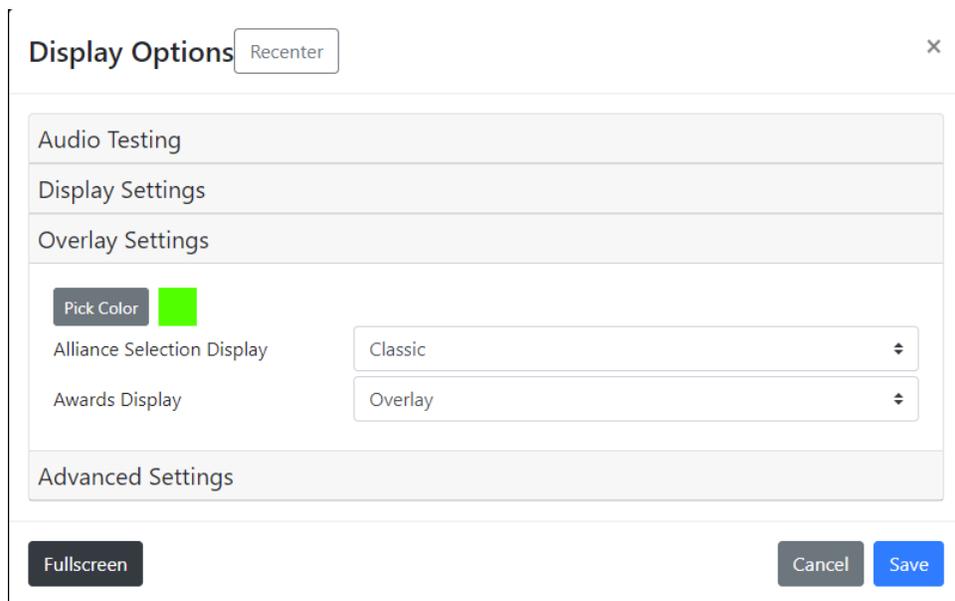


Figure 93 - Overlay Settings Dialog.

- Pick Color – This is used to select the chroma color. It is important to select a chroma color that is compatible with mixing tools and does not conflict with colors used in the scoring displays. For POWERPLAY, two chroma colors are recommended:
  - Lime Green (RBG color value #00ff00)
  - Fuchsia (RBG color value #ff00ff) - **staff favorite**
  - Other colors may be manually entered if required but be careful!
- Alliance Selection Display – Choose the type of display used for Alliance Selection. There are two options:
  - Classic – Alliance Displays will NOT contain chroma elements for mixing. Use this setting if your video mixing involves “chopping” the lower thirds of the display instead of applying an actual chroma.
  - Hybrid – Alliance Displays WILL contain chroma elements for mixing. Use this setting if your video mixing actually uses the chroma for mixing video and you WANT to use live video mixing during the Alliance Selection process. Note that the location and size of the chroma for Alliance Selection is different than during matches. Use the “Set Audience Display” button on the “Alliance Selection” tab of the Match Control Page to test setup for this mode.
- Awards Display – Choose the type of display used for Awards mode. There are two options:
  - Classic - Alliance Displays will NOT contain chroma elements for mixing. Use this setting if your video mixing involves “chopping” the lower thirds of the display instead of applying an actual chroma.
  - Hybrid – Alliance Displays WILL contain chroma elements for mixing. Use this setting if your video mixing actually uses the chroma for mixing video and you WANT to use live video mixing during the Awards ceremony.
- The “Audio Testing” buttons at the top can be used to play the game audio cues to test the PA system.
- Select which Display Mode for the computer you are configuring.
- If you bind the display to a field, then it will only show events for the specified field.

- “Advanced Settings”
  - If you are not using real-time score tracking, disable the “Show Live Scores” option.
  - The “Alliance Orientation” is also here. This can also be found under “Settings” on the Match Control Page.

Advanced Settings

Scoring Bar Location	Bottom
Alliance Orientation	Standard (Red on Right)
Rankings Font Size	Larger
<input checked="" type="checkbox"/> Show Live Scores	
<input type="checkbox"/> Mute	
<input type="checkbox"/> Mute Randomization & Results	

Fullscreen Cancel Save

Figure 94 - Disable Live Scores

- Displays must be shown in full screen.
  - Google Chrome is recommended.
- Note:** Test that Scoring/Timing Displays update automatically as the scorekeeper changes the state of the active event.

### Scoring Using Paper Scoresheets

The system supports scorekeeping using paper scoresheets and a very basic system configuration (shown in “Network Configs”). This configuration has a single laptop that functions as the FTC Live server, the Match Control laptop, *and* as the Audience Display. Referees use paper sheets to score the matches. These are found in the Resources folder or [Scoresheets](#). After a match is complete, the scorekeeper manually enters the values through the Match Control page.

### Live Score Tracking Using a Tablet

#### Connecting a Tablet to the Server

A tablet running Google Chrome can be used to manually track scores during a match. Before you can begin live score tracking, you will need to know the IP address of the computer that is running the system server. Usually, this will appear on the FTC Live banner along with the version number. You also will need a user id and password that has referee (i.e., score tracking) permission for the event generated as a default account.

**Note:** that if you implement live score tracking using a pair of wireless tablets, make sure the operating Wi-Fi channel for the score tracking tablets will not conflict with the wireless control system of the robots.

To connect to the server, use the following steps:

- Verify that the tablet is connected to the same network as the FTC Live server.
- Launch the Google Chrome browser on the tablet and type in the IP address into the Chrome address/navigation bar to navigate to the FTC Live server.



Figure 95 - Type in the IP address (which you can get from your IT admin) of the server in the browser's address bar.

- If you successfully connect to the FTC Live server, you will see the system home page. Select the upper right-hand, three bar menu icon to display the menu options for the home page. The “Resources” “Feedback” and “Login” links should appear towards the top of the screen.

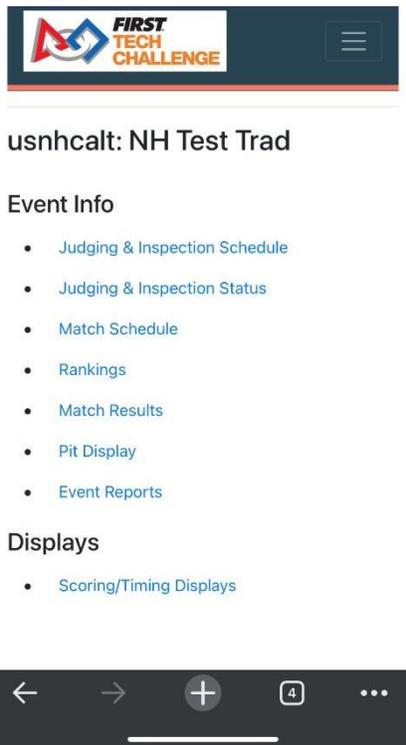
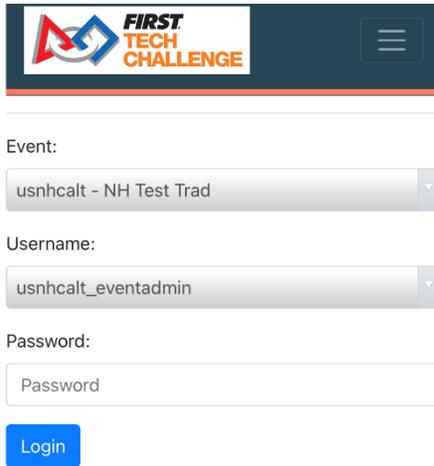


Figure 96 - Select upper right-hand menu icon to display the "Feedback" and "Login" menu options.

- Select the “Login” link and follow the onscreen instructions to login to the appropriate user account.



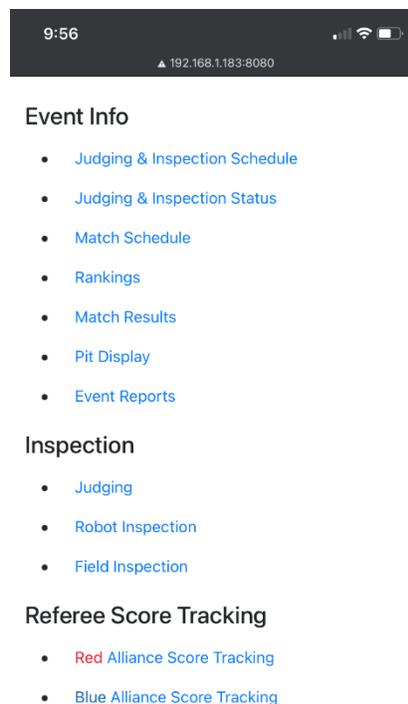
Event:  
usnhcalt - NH Test Trad

Username:  
usnhcalt\_eventadmin

Password:  
Password

Login

- If you have successfully logged in, you should see the home page with a listing of Event Info and Referee Score Tracking.



*Figure 97 - The specific event details will be shown.*

- On the Event Home page, select the appropriate Referee Score Tracking link (Red Alliance or Blue Alliance).
- If prompted, select a field if you want to bind the tablet to a specific field or select “All Matches” if you would like to use this tablet to score all matches for this event.

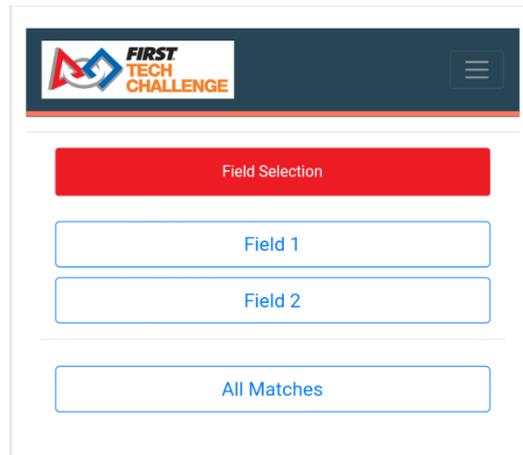


Figure 98 - Select a field if you want to bind tablet to a specific field, or select "All Matches" to score all matches with this tablet.

- If there are no active matches yet, the tablet will display the following message. You will have to wait for the scorekeeper to prepare a match to play before the screen will change.

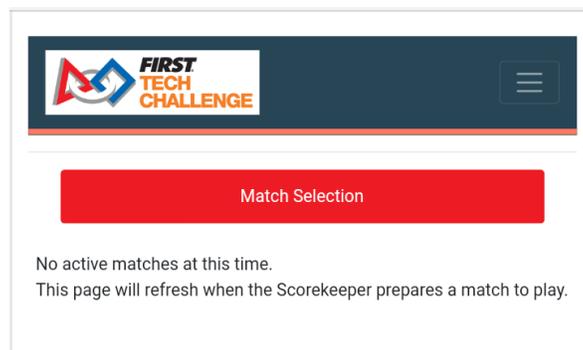


Figure 99 - If there are no active matches, then this message will appear.

### **Step-by-Step Example: Scoring an Event with Wireless Tablets**

In this section, we will go step-by-step through the process of scoring an event using wireless tablets for real-time score tracking. Scorekeeper is logged into the system with Event Admin privileges and has a browser window displaying the Match Control page for the selected event. The referees who are score tracking for the event have connected their respective tablets to the server and are logged in with score tracking access. We also assume that there is a Field Display computer and an Audience Display computer and these devices are properly configured and connected to the server.

1. Scorekeeper selects the match that they want to score and pushes the "Play" button that appears next to its listing on the Match Control Page (or the Scorekeeper pushes "Load Next Match" if the next match in the schedule is to be played). The match should be listed as the "Loaded Match" near the top of the Match Control screen.



Figure 100 - Press "Load Next Match" or "Play" button to load a match. It will be listed as the "Loaded Match" near the top..

- The scorekeeper tablets should display the match (or matches) that are available for scoring. Both referees (Red Alliance and Blue Alliance score referees) should select the match that they will be scoring.

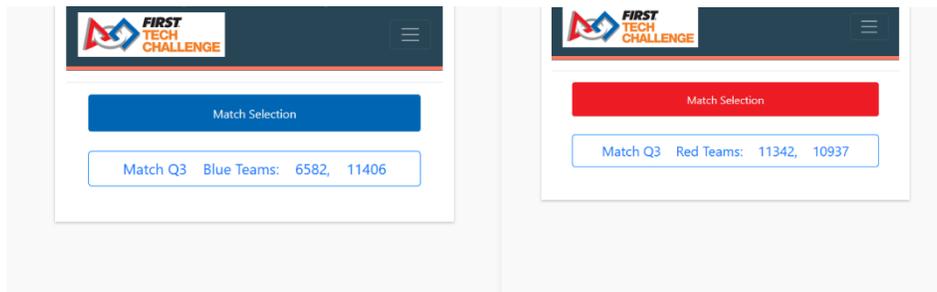


Figure 101– The red and blue alliance referees should select the match they will scoring..

- The scorekeeper presses the "Show Preview" button on the Match Control Page. This should force the Audience Displays to display information about the upcoming match.

**Note:** On the Match Control Page, the "Show Preview" button should change from green to yellow after the button has been pressed.

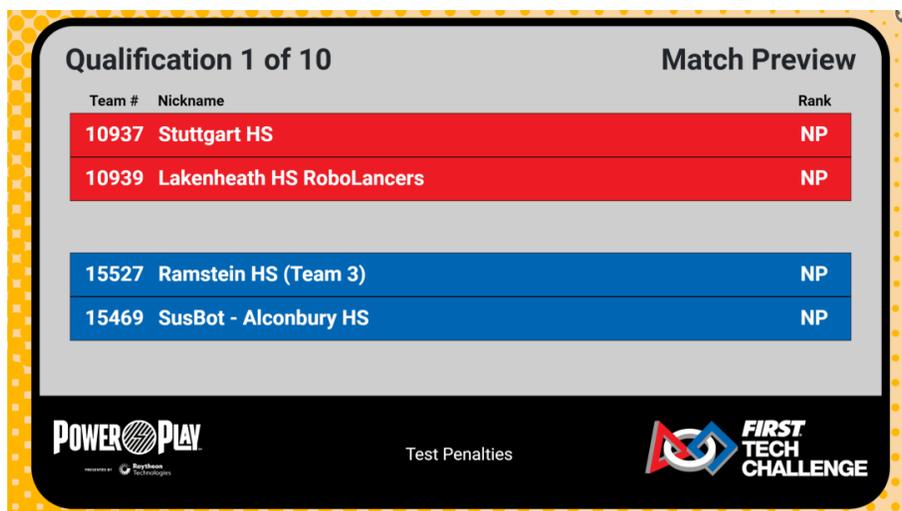


Figure 102 - The Audience Display should display match info after the "Show Preview" button has been pressed.

4. The score tracking referees should see a screen that displays the Pre-Match Setup state for their alliance. Each referee (red and blue) should use their tablet to update the Pre-Match Setup state to match the state on the field.
  - a. The system needs to know if each team is present.
  - b. The referees should press the respective “Alliance Ready” buttons at the bottom of their screen after they have entered in the current state of their Pre-Match field.
  - c. Enter whether each team has a standard sleeve or a team sleeve.

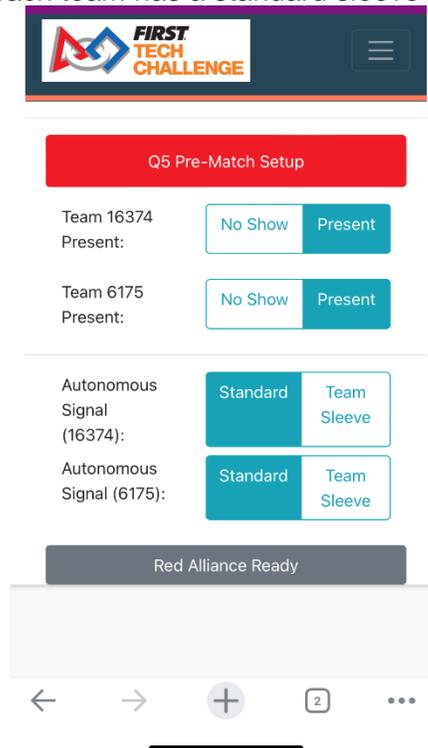


Figure 103 – Each referee should update the Pre-Match state information and then press the “Alliance Ready” button.

5. Once the Pre-Match information has been entered, the referee tablets will display a message that indicates that the system is waiting for the match to start.
6. The scorekeeper should press the “Randomize Field” button to “roll” the virtual die to determine how to configure the minerals for the Autonomous portion of the match.
  - a. After the field has been randomized, the score tracking tablets will display the randomization results
  - b. The Audience Display will not show the randomization results until “Show Random” is selected. Instead, the Match Preview information should still be visible.

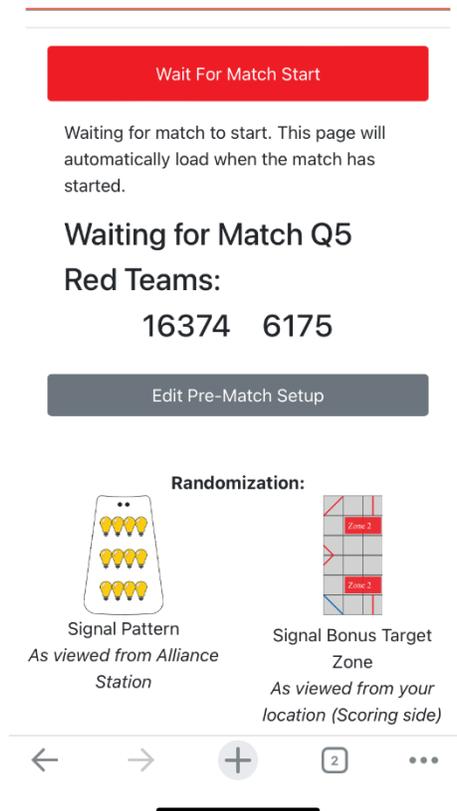


Figure 104 - Referee tablets will indicate that they are waiting for the match to start.

7. The scorekeeper should press the “Show Random” button to display the randomized information on the Audience Displays.

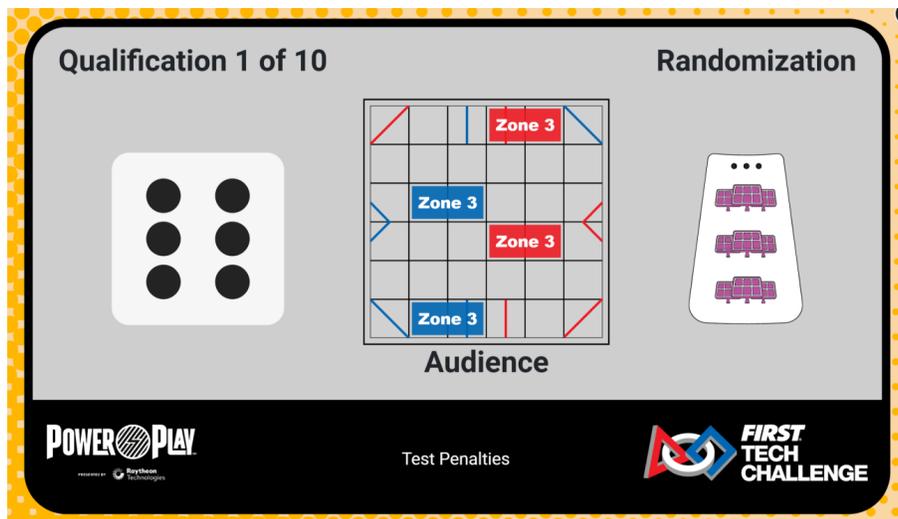


Figure 105 – After the “Show Random” button has been pressed, the Audience Display will show randomization info.

8. The scorekeeper should press the “Show Match” button to show the match information on the Audience Displays and the Field Displays.

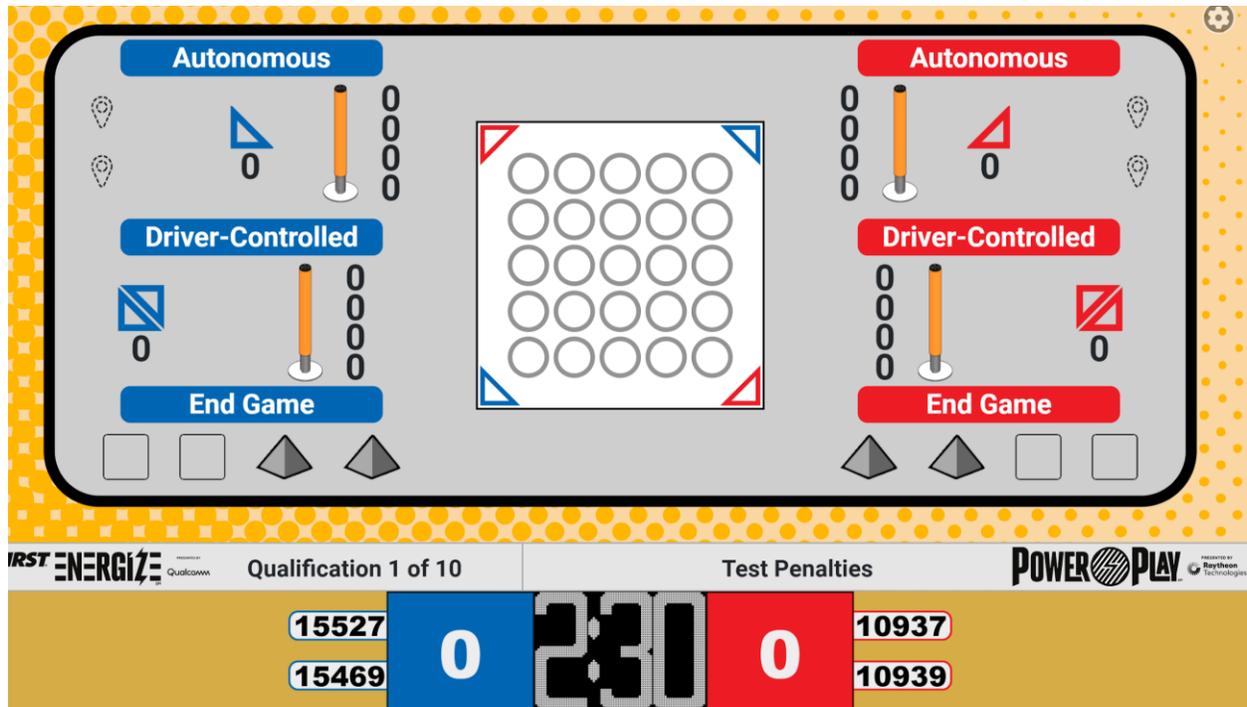


Figure 106 - The Audience and Field Displays should display the match information (Audience Display shown).

9. When everyone is ready to begin, the scorekeeper pushes the “Start Match” button to start the match.

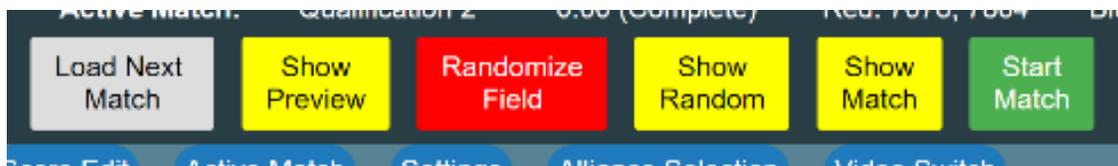


Figure 107 - Scorekeeper presses “Start Match” button to start the match.

10. During the autonomous phase, the referees should enter the score tracking data using their respective tablets.
- While the scores are being entered, the score values on the Audience and Field displays should be updated with the current score tracking values.
  - The scorekeeper can press the “Active Match” tab on the Match Control Page to monitor the score tracking data.
  - The match information (including the time remaining on the countdown timer and the state of the match) are listed for the “Active Match” at the top of the Match Control Page.

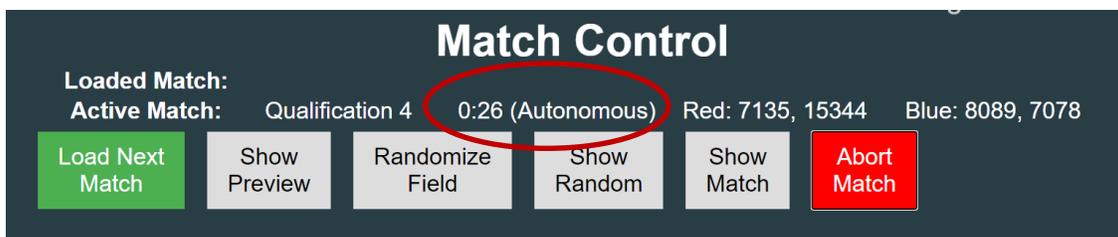


Figure 108 - The scorekeeper can press the “Active Match” tab to display the active match information.

11. Once the Autonomous phase is complete, the referees should verify their autonomous scores and push the “Submit Autonomous” button to submit the autonomous scores to the system.

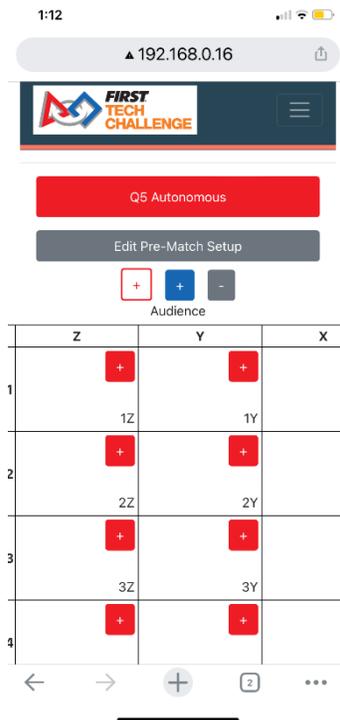


Figure 109 – Referees should push the “Submit Autonomous” button to submit their autonomous scores.

12. During the Driver-Controlled period, referees should enter the scoring data using their tablets.
13. Once the Driver-Controlled period is complete, referees should quickly enter the state of any scoring done at the end of the match and then push the “Submit Driver-Controlled” button to enter the review phase. Note that the scores will continue to update on the displays until the referee enters review. Once in review, changes do not reflect on the displays.

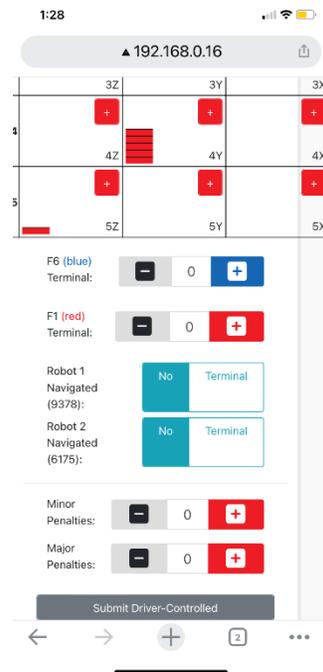


Figure 110 - Referees should push "Submit Driver-Controlled" to submit their Driver-Controlled scores.

14. After the referees submit the Driver-Controlled data, they have an opportunity to review and edit all the scoring data for the match that was just played.
  - a. The referees can adjust their scores if needed.
  - b. The referees should each press the "Submit Final Scores" when they are ready to submit their final scores for a match.

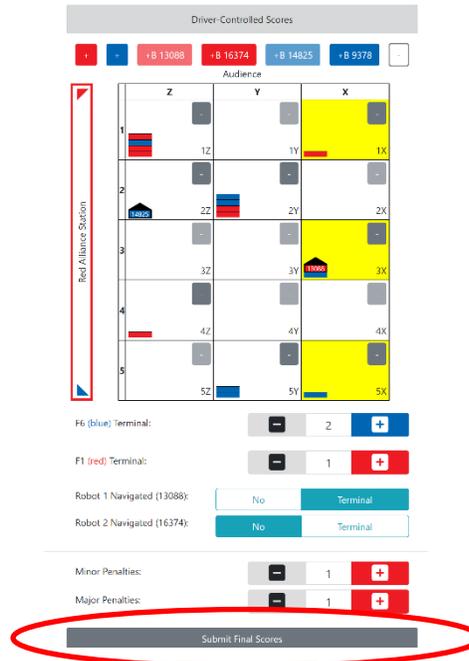


Figure 111 - Referees can review the scores and then push the "Submit Final Scores" button.

15. After the referees have submitted their final scores, under Schedule, the scorekeeper has the option to edit the scores even further. To commit the scores push the “Commit & Post Last Match” or the “Commit” button listed next to the match.

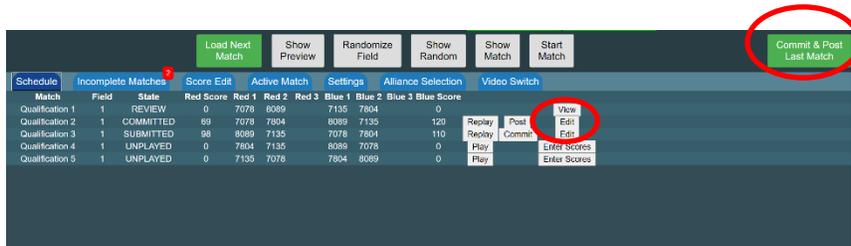
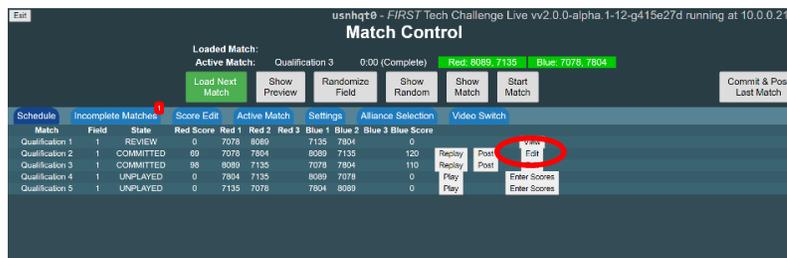


Figure 112 - Scorekeeper can press the "Commit" button to commit the finalized scores.

16. Once the scores have been committed, the Scorekeeper can push the “Post” button to post the results to the Audience Displays.
  - a. The scorekeeper also has the option to “Replay” the match if the referees determine that a replay is warranted.
  - b. The scorekeeper also has the option to “Edit” the scores for the match.



**Note:** If the match is complete and the referees have *not yet submitted* their final scores, the scorekeeper has the option to force an edit of the match score data.

- c. If this is done before the referees submit their final scores, the referees will not be able to submit final scores for the match (the scorekeeper is overriding their scores).
- d. This option allows a scorekeeper to enter score data from a paper scoresheet, if, for example, live scoring is not available during a match.
- e. In general, however, scores should be submitted by the referees using their score tracking tablets.

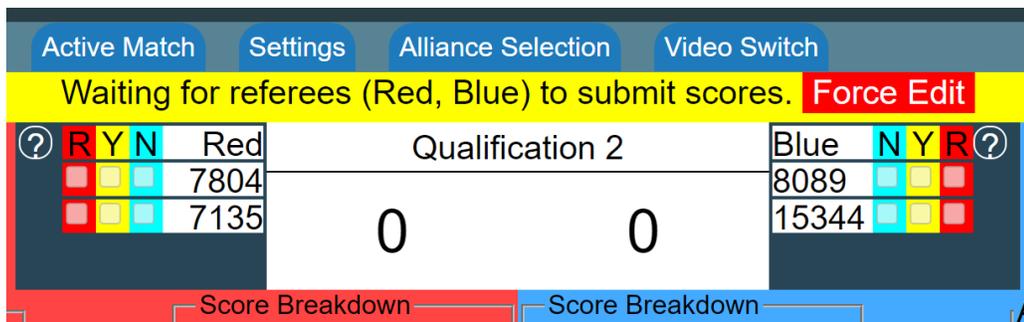


Figure 113– Scorekeepers can edit/override the score data by selecting the Force Edit button.

**Note:** The scorekeeper can abort the match by pushing the “Abort Match” button during the match.

- f. The system will prompt the scorekeeper to verify that they really want to abort the match.

- g. If a match is aborted, referees will need to manually refresh their tablet browsers to display the current state information for the match.
  - h. After a match has been aborted, it can be replayed. Note the field might need to be re-randomized before replaying a match.
17. Once this process has been completed, the scorekeeper can press the “Load Next Match” button to start the process again for the next match in the schedule.

## Managing Elimination Matches

1. Once the qualifying matches have been completed and committed, the scorekeeper can press the “Alliance Selection” tab on the Match Control Page to begin the Alliance Selection process.

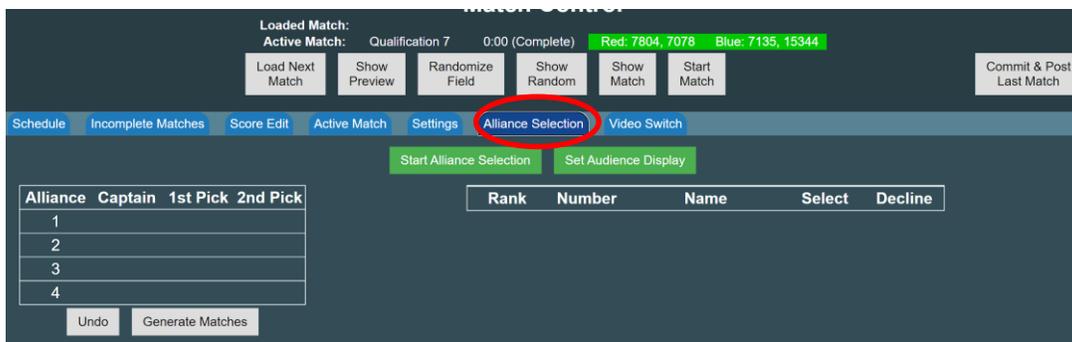


Figure 114 - Press the Alliance Selection tab to begin the selection process.

2. Pressing the “Start Alliance Selection” button will display a ranked list of teams on the Match Control screen.

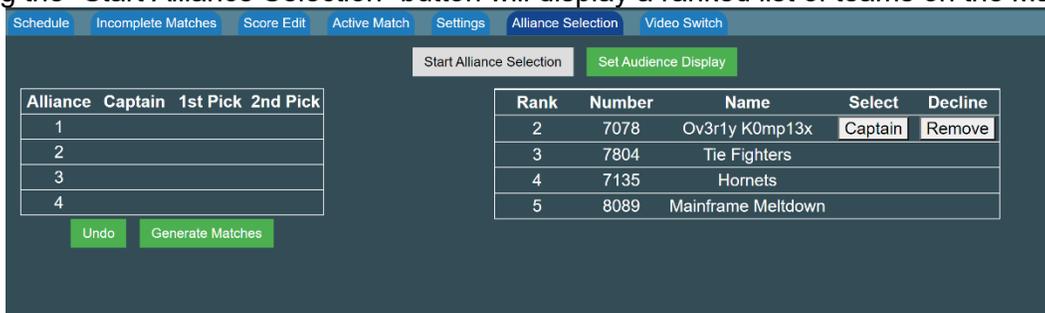


Figure 115 - Rank and Team Info

3. The scorekeeper should push the “Set Audience Display” to toggle the Audience Displays to Alliance Selection mode.

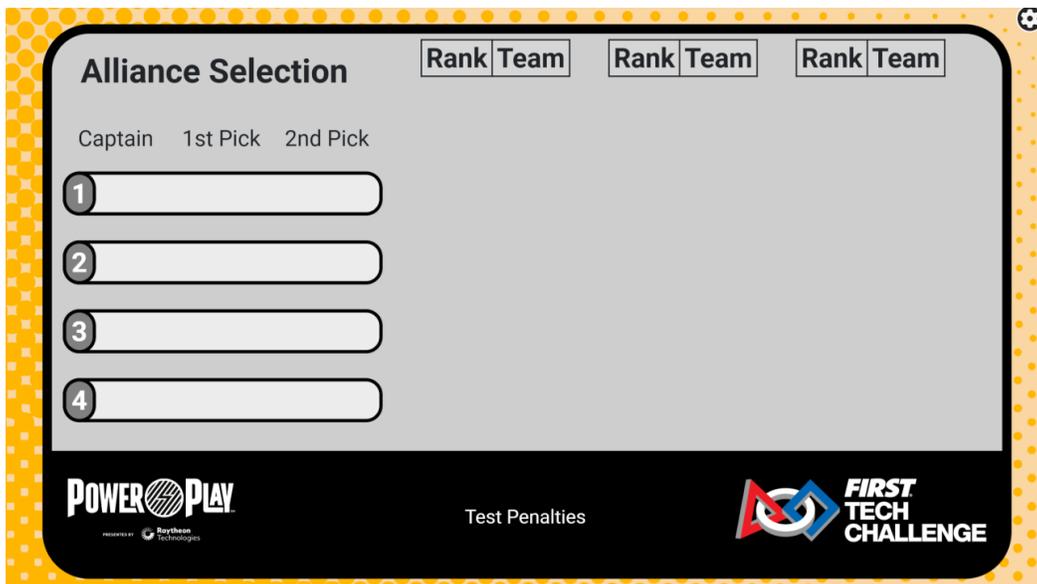


Figure 116 – Pressing the “Set Audience Display” button puts the Audience Displays into Alliance Selection Mode.

- Press the “Captain” button next to a team to designate the team as an Alliance captain. If an eligible team is unable to be an alliance captain (for example, if the team must leave the event early) press the “Remove” button in their listing to remove them from the selection process. Once an alliance captain is selected, their team number should appear as the Alliance Captain, and the list of available teams will be updated.



Figure 117 - Press “Captain” to designate a team as an alliance captain or press “Remove” if they are unable to be a captain.

- As the Captain makes their Alliance’s first invitation, the scorekeeper can press the “Accept” or “Decline” button for the invited team to indicate whether the team accepted or declined the Captain’s invitation. The Alliance Selection Displays will update as the buttons are pressed.

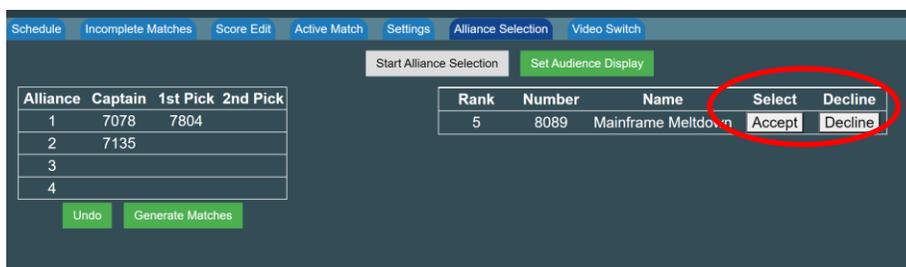


Figure 118 – The scorekeeper should press the “Accept” or “Decline” button listed next to a team to accept or decline an invitation.

6. Once the first alliance captain has made their initial selection, the process begins again for the team that is eligible to captain the second alliance.

**Note:** The software will adhere to the Alliance Selection rules that are prescribed in the official Game Manual when determining and displaying selection eligibility for the remaining teams.

The selection process is repeated until all alliances are finalized. If the scorekeeper needs to undo the most recent alliance selection, then they can push the “Undo” button on the Match Control screen.

Alliance	Captain	1st Pick	2nd Pick
1	7078	7804	
2	7135	8089	
3			
4			

Figure 119 - Once the alliances are established, push the “Generate Matches” button to generate the elimination match schedule.

7. When the alliances are finalized, the scorekeeper should press the “Generate Matches” button to generate the elimination match list. Once the elimination matches have been generated, the scorekeeper can select the “Schedule” tab to view the elimination schedule.

Match	Field	State	Red Score	Red 1	Red 2	Red 3	Blue 1	Blue 2	Blue 3	Blue Score
Semifinal 1 Match 1	1	RANDOMIZED	0	7078	7135	0	0	0	0	0
Semifinal 2 Match 1	1	UNPLAYED	0	7804	8089	0	0	0	0	0
Semifinal 1 Match 2	1	UNPLAYED	0	7078	7135	0	0	0	0	0
Semifinal 2 Match 2	1	UNPLAYED	0	7804	8089	0	0	0	0	0

Figure 120 - Press the “Schedule” tab after the matches have been generated to view the elimination schedule.

8. Once the elimination schedule is available, the scorekeeper and referees can run the matches in a manner similar to how the qualification matches are run. However, if there are more than 20 teams participating at your event, the elimination matches will list three teams per alliance. For an event with 3 teams per alliance, during the Pre-Match Setup of an Elimination match, the referees will need to designate which two of the teams are competing in each match.

**Pre-Match Setup**

Team 11780 Present:

Team 11780 Latched:

Team 8089 Present:

Team 8089 Latched:

Team 13507 Present:

Team 13507 Latched:

**Red Alliance Ready**

Figure 121 - Referees will need to designate which two teams are participating (i.e., are present) for an Elimination Match.

- In figure above the referee has indicated that Teams 11780 and 8089 will be playing in the match while team 13507 is sitting out the match for the Red Alliance.

After the first elimination match of a semifinal round has been played, when the referees view the Pre-Match Setup screen for the next match in that semifinal round, a message should appear at the top of the screen indicating which of the three teams did not play in the previous match. This warning appears so that the referee can verify that all three teams for each alliance participated in the elimination matches per the official Game Manual, part 1 (if an alliance has three teams, then “the team that sits out the first match must play in the second match, with no exceptions”).

The system lets the scorekeeper run the matches until each semifinal round has a winning alliance. The scorekeeper can edit, commit, and then post the results for each elimination match. If the alliances in a semifinal round are tied, the system will generate an additional tie breaker match and automatically add it to the elimination schedule.

		Load Next Match	Show Preview	Randomize Field	Show Random	Show Match	Start Match	Commit & Post Last Match				
Schedule	Incomplete Matches	Score Edit	Active Match	Settings	Alliance Selection	Video Switch						
Match	State	Red Score	Red 1	Red 2	Red 3	Blue 1	Blue 2	Blue 3	Blue Score	Replay	Post	Edit
Semifinal 1 Match 1	COMMITTED	80	11342	10937		10936	10944		80			
Semifinal 2 Match 1	COMMITTED	85	10938	11406		11407	10942		51			
Semifinal 1 Match 2	COMMITTED	82	11342	10937		10936	10944		64			
Semifinal 2 Match 2	COMMITTED	49	10938	11406		11407	10942		83			
Semifinal 1 Match 3	UNPLAYED		11342	10937		10936	10944			Play		Enter Scores
Semifinal 2 Match 3	UNPLAYED		10938	11406		11407	10942			Play		Enter Scores

Figure 122 - The system will automatically add a match to the schedule if the alliances are tied.

When the semifinal matches are complete, the system will automatically generate final elimination matches for the two winning alliances. The final elimination matches are scored in a manner similar to the semifinal matches. The scorekeeper can edit, commit and post each final-round match. If the alliances tie, the system will automatically add a new match to the schedule.

Schedule	Incomplete Matches <sup>0</sup>	Score Edit	Active Match	Settings	Alliance Selection	Video Switch						
Match	State	Red Score	Red 1	Red 2	Red 3	Blue 1	Blue 2	Blue 3	Blue Score			
Semifinal 1 Match 1	COMMITTED	135	11780	8089	13507	11282	11482	11103	160	Replay	Post	Edit
Semifinal 2 Match 1	COMMITTED	210	12815	11115	12669	7804	12536	10660	160	Replay	Post	Edit
Semifinal 1 Match 2	COMMITTED	150	11780	8089	13507	11282	11482	11103	200	Replay	Post	Edit
Semifinal 2 Match 2	COMMITTED	110	12815	11115	12669	7804	12536	10660	210	Replay	Post	Edit
Semifinal 2 Match 3	COMMITTED	260	12815	11115	12669	7804	12536	10660	150	Replay	Post	Edit
Finals Match 1	UNPLAYED		11282	11482	11103	12815	11115	12669		Play		Enter Scores
Finals Match 2	UNPLAYED		11282	11482	11103	12815	11115	12669		Play		Enter Scores

Figure 123 - The system will automatically generate the final matches after the semifinal matches are complete.

Once the final matches are complete, the scorekeeper can post the final match results to the Audience Displays and display the winning alliance.

### Finals Match 2

Alliance **2**

**10938**

**11406**

59

**0**

AUTONOMOUS 32

DRIVER-CONTROL 14

END GAME 13

RED PENALTY 0

Alliance **1**

**11342**

**10937**

**105**

WIN

**2**

20 AUTONOMOUS

40 DRIVER-CONTROL

45 END GAME

0 BLUE PENALTY

Figure 124 - Once final matches are complete, the scorekeeper can post the final match results and display the winning alliance.

## Managing League Events (Regions with Leagues)

Important Note: League setup MUST be done in the cloud-based FIRST Tech Challenge Scoring (FTC) by a PDP/admin including adding teams, parent/child leagues.

- Leagues can no longer be created in the downloadable FTC Live software.
- There are three league structure options for FIRST Tech Challenge.
- League data has been centralized in the FTC Scoring system so terminology has been standardized.

## Overview of Leagues

**League** - A group/association of teams in a specific geographic location. This group of teams competes in meets, and then a league tournament. Each league tournament is associated with exactly one league. All teams that compete at a league tournament must be members of one league.

**Child League** - An optional subset of a league (the “parent” league) that compete together before joining the rest of the parent league’s teams at the league tournament. All teams in a child league are also members of the parent league. This structure exists for regions that run large league tournaments and wish to divide teams up to help organize meets.

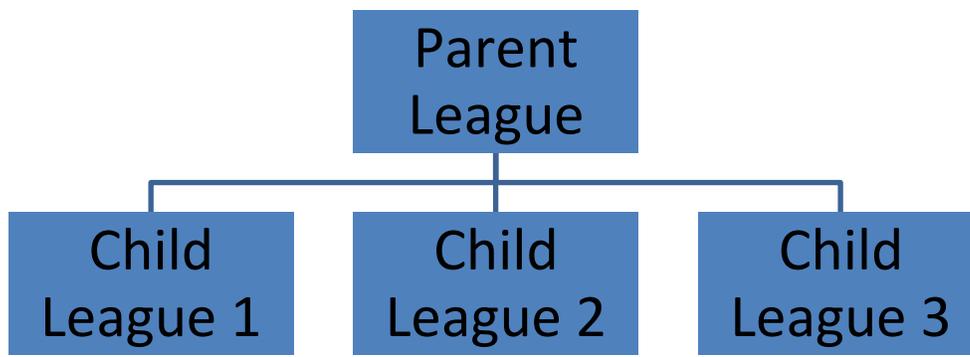


Figure 125 - Diagram of parent/child league

**League Meet** - Meet is a one-field competition that uses the same field and game elements as other FIRST Tech Challenge tournaments. However, for a league meet, the event is abbreviated, and only includes qualification matches (but no judging sessions, awards or elimination matches). Results carry forward to future meets and the league tournament.

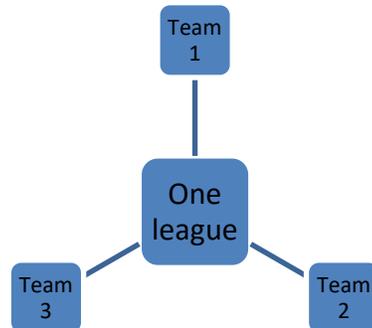
**League Tournament** - The final event in league play. Each league tournament is associated with exactly one league. Team rankings incorporate performance in matches from league meets. League tournaments include judging and awards. Teams advance from a league tournament to a super qualifier or regional championship.

## League Configurations

In previous seasons, leagues have been managed in different regions using different terminologies. Data has been centralized into FTC Scoring system so the terminology has been standardized. Below are examples of how to transition from prior systems into the FTC Scoring system league set up. In all cases, the outcome is functionally equivalent to the prior season experience.

### **Standalone League Model**

Regions that run single-league events and league tournaments with no inter-league play. Follow the steps in the section: [Creating Leagues for Your Region](#).



*Figure 126 - Standalone league diagram*

### **Inter-League Model**

Regions that ran leagues where multiple leagues may have been present at a single event, for example, inter-league tournaments (ILTs) or other inter-league play.

This model follows the standalone league model until the league tournament, where multiple leagues play in the same league tournament. In this model, the leagues are usually isolated until the ILT, but some variants may exist where teams play in meets with teams from other leagues.

To enter this format into the system, first create a league (parent) that includes all teams that will play at a single ILT. Then, you can create a child-league to split the teams into the same groupings as you would have previously.

#### ***Example Scenario:***

In a previous season, league A and league B each had 20 teams. The two leagues played separate meets, but played together at a 40 team ILT.

Scoring System: Create one league with all 40 teams. Then, create a Child League A and a Child League B. Add the appropriate teams to each child league. All of the child league meets can be associated with their respective child league, but the ILT must be associated with the parent league.

## League Structure – Inter-League Model

*How to Create an Inter-League: Add all teams to a parent league, then add teams to child leagues.*



Figure 127 - Inter league diagram

## League Structure – Inter-League Model

*Inter-League Tournament Structure*

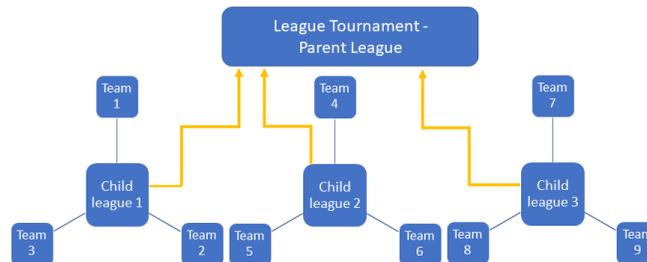


Figure 128 – Interleague league tournament diagram

### Metro League Model

In this model, league inter-play is very common. Teams may play in any meet, and data is aggregated from the various meets at the League Tournament. Teams or events may be grouped into multiple leagues but can play in any meets.

To enter this format, create one league and add all teams participating. Create a meet for group of teams playing at a specific meet (Meet 1). For example, Meet 1 and Meet 2 (shown below) may take place on the same day and should be considered separate events for the purpose of team rankings within the parent league. You may create Child-Leagues if desired. Ensure that no team plays in a meet associated with a different league. It is OK if they play with a different Child League, but not a different Parent League.

## League Structure – Metro League Model

How to Create an Metro League: Add all teams to a parent league. Teams play at different meets within the parent league.

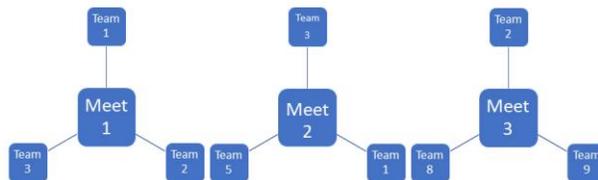


Figure 129 - Metro league model

## League Structure – Metro League Model

### Metro League Tournament Structure



Figure 130 – Metro league tournament diagram

### Creating Leagues for Your Region

League creation and setup MUST be done in the cloud-based FTC Scoring system by a person with Region Administration Rights. It CANNOT be done in FTC Live. Similarly, the association of an event to a league MUST be done in the FTC Scoring system.

1. Log in to the FTC Scoring system with your FIRST dashboard login.
2. Select your region. This takes you to the main Region page with a list of options: Events, Teams, Leagues, Sponsors and Users. To set up a league go to Leagues, then Create League.

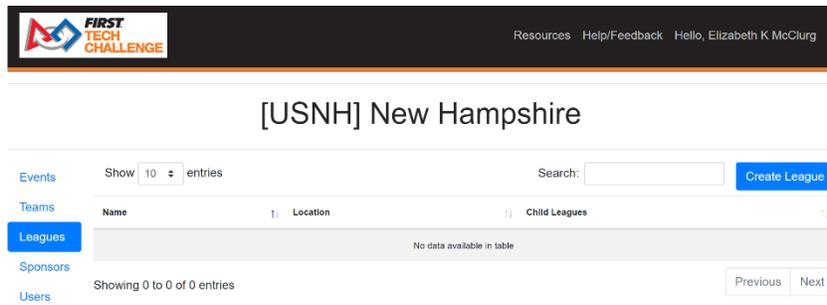


Figure 131 - Create a Dummy event to create your leagues.

3. Specify a unique League Code, following the same rules as event codes (all lowercase letters and numbers and underscores, no whitespace, preferably one word).
4. Specify the League Name and the Location.
5. Select "Create League."

Figure 132 – Specify League Code, Name and Location and press “Create League”.

6. For your newly created parent League, you will add all the teams for the league (and child leagues). Select “Teams” from the parent league dashboard.

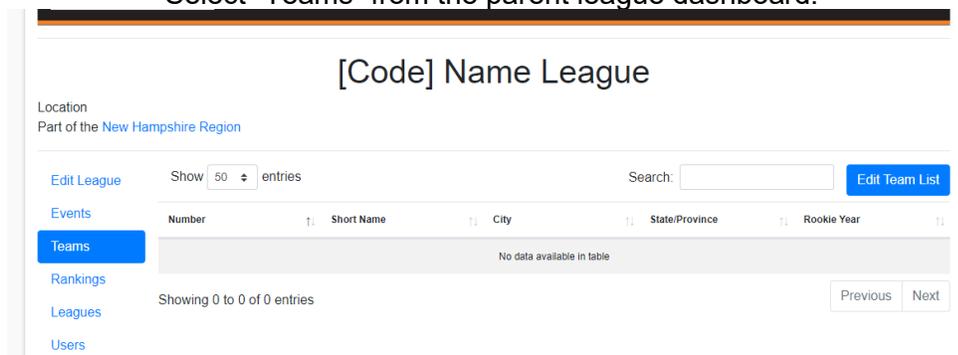
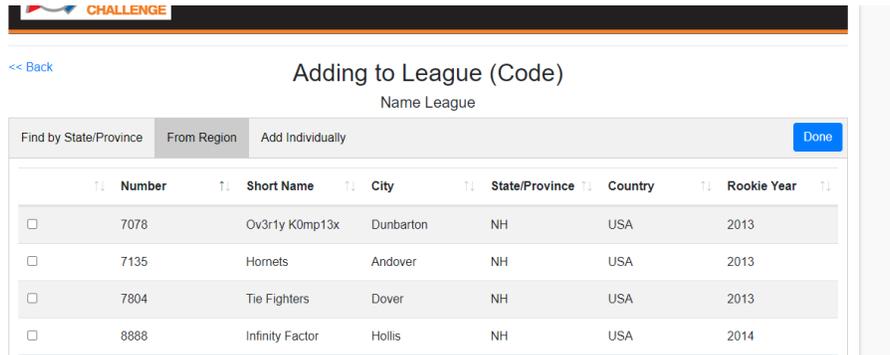


Figure 133 – Add all teams to the parent.

7. Add the teams to the parent league by selecting them from the region list:



The screenshot shows a web interface titled "Adding to League (Code)" with a sub-header "Name League". There are three tabs: "Find by State/Province", "From Region", and "Add Individually". A "Done" button is in the top right. Below the tabs is a table with the following data:

	Number	Short Name	City	State/Province	Country	Rookie Year
<input type="checkbox"/>	7078	Ov3r1y K0mp13x	Dunbarton	NH	USA	2013
<input type="checkbox"/>	7135	Hornets	Andover	NH	USA	2013
<input type="checkbox"/>	7804	Tie Fighters	Dover	NH	USA	2013
<input type="checkbox"/>	8888	Infinity Factor	Hollis	NH	USA	2014

Figure 134 – Add teams by region to Parent league

Important Note: Verify that teams have been added to the league prior to the event.

Note: Yes, you can add teams *to events* in FTC Live. If the event has been configured the team data will sync with FTC Scoring and appear on ftc-events.

Alternatively you can click on add individually and use a text file with a list of the team numbers to add all the teams in the league.



The screenshot shows the "Add Individually" tab selected. It features a "Team Number to Add:" input field, an "Add" button, a "Choose File" button, a "No file chosen" status, and an "Upload Team List" button. Below this is a table with the following headers:

Number	Short Name	City	State/Province	Country	Rookie Year
--------	------------	------	----------------	---------	-------------

Figure 135 – Add teams with a txt file.

## Manage Teams for League Events

- In FTC Scoring, League Admins or the Event Admins should add teams to a league event. Go to the league's home page, then select "Events". Go to the "Manage Event" option.

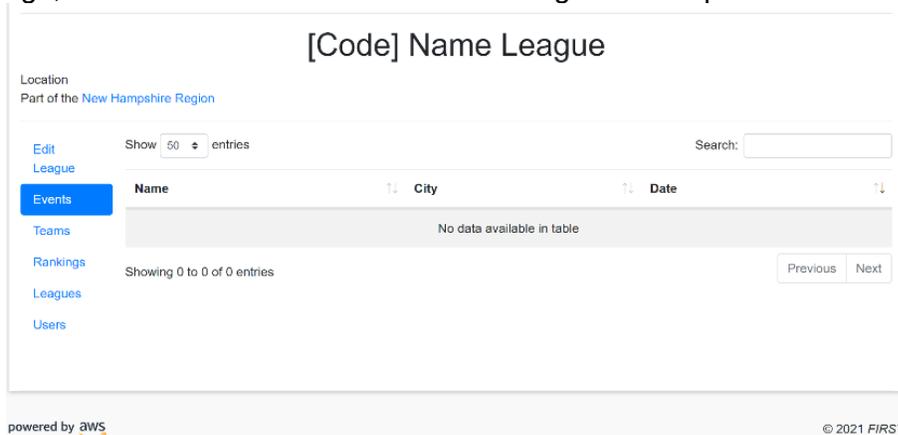


Figure 136 – Add teams to a league

- Select the "Add/Remove Teams" button.

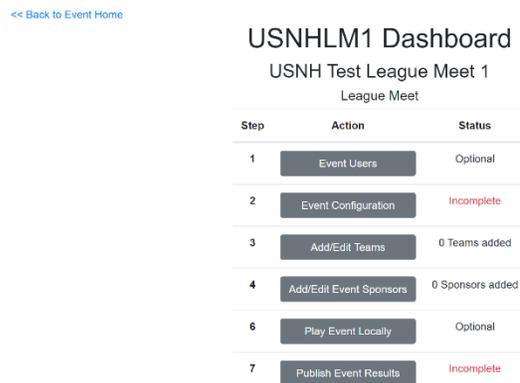


Figure 137 – Add/Edit Teams on Dashboard

- You can add/edit teams with four different options: Find by State/Province, From Region, League Members, Add Individually.

<< Back

### Adding to event 'USNHLM1'

USNH Test League Meet 1

Find by State/Province	From Region	League Members	Add Individually	Done	
Number	Short Name	City	State/Province	Country	Rookie Year
<input type="checkbox"/>	11780	B.L.U.E Box	Windham NH	USA	2016
<input type="checkbox"/>	14590	Prometheus	Hopkinton NH	USA	2018
<input type="checkbox"/>	15772	Brady Goats	Concord NH	USA	2018
<input type="checkbox"/>	16169	Banana Box	Windham NH	USA	2018

Showing 1 to 4 of 4 entries

Figure 138 - Choose from four options to add teams.

3. Selected teams will appear in purple, when finished, click "Done".
  - b. Select "Back" in the top-left corner to return to the selected league event dashboard.
  - c. Repeat steps for each additional league and events for your region.

## Create a Child League

1. To create child leagues, you will first need to create the parent league. Then select the "Leagues" tab and the "Create Child League" appears.

[test] Test League

TestNH  
Part of the [New Hampshire Region](#)

Edit League Search:  [Create Child League](#)

Events

Name	Location
No data available in table	

Teams

Rankings

**Leagues** Showing 0 to 0 of 0 entries

Users

Figure 139 –and press "League".

2. Enter the "League Code", "League Name" and the "Location" and save the edits.

<< Back

League Code:

League Name:

Location:

[Create League](#)

Figure 140 – Specify League Code, Name and Location and press "Create League".

### Add Teams to the Child League

- Go to “Teams”, select “Edit Team List” to choose teams for the child league.

[child\_] Child1 League

ChildNH  
Part of the New Hampshire Region  
Child of the Test Parent League

Edit League Show 50 entries Search:  Edit Team List

Events

**Teams**

Rankings

Users

Number	Short Name	City	State/Province	Country	Rookie Year
No data available in table					

Showing 0 to 0 of 0 entries

Previous Next

- Just like parent league set up, choose from 4 options to add/edit teams then select “Done”.

<< Back

Adding to league 'child\_'

Child1 League

Find by State/Province From Region Parent League Members Add Individually Done

Number	Short Name	City	State/Province	Country	Rookie Year
No data available in table					

Showing 0 to 0 of 0 entries

- Once you’re done creating child leagues, go back to the parent league, then select “Leagues” to view the child league(s).

[test] Test League

TestNH  
Part of the New Hampshire Region

Edit League Search:  Create Child League

Events

Teams

Rankings

**Leagues**

Users

Name	Location
Child	ChildNH
Child1	ChildNH

Showing 1 to 2 of 2 entries

### Rankings for Parent/Child Leagues

League Rankings will appear on the “Rankings” tab.

[test] Test League

TestNH  
Part of the New Hampshire Region

Edit League Show 100 entries Search:

Events

Teams

**Rankings**

Leagues

Users

Rank	Number	Name	RP	TBP1	TBP2	HS	Played	Counted
1	51250	Test Team 51250	--	--	--	--	--	--

Showing 1 to 1 of 1 entries

Previous 1 Next

Note: As an administrator, you will see the league rankings from unpublished events, so they may differ from other sources until an event’s results are published. A child league’s home page will also show league Rankings, however those rankings are for fun. They have no competitive meaning at the League Tournament, and may not accurately reflect the full rankings, which are shown in the parent league’s ranking.

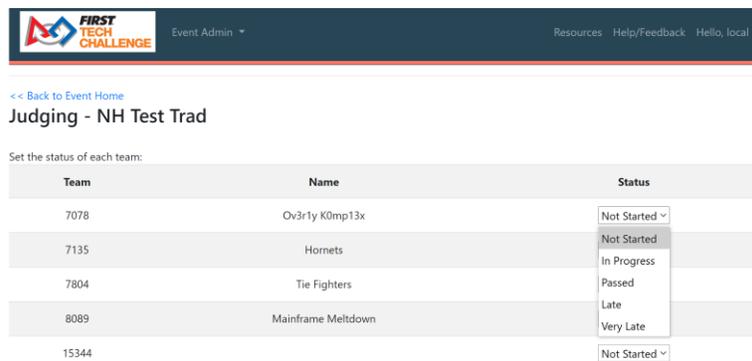
**Important Note:** Scorekeepers at meets should not edit the league team list unless instructed to do so. If they believe the list is wrong, they should leave it and notify the League Manager after the event. An incorrect league team list will not affect match data, as long as the event's team list is correct.

## Managing Awards

This section describes the judging features available in FTC Live. For remote judging used in remote and hybrid events please make sure to review the [Event Administrator Guides](#) on the website and consider certifying as an Event Admin.

### Judging

Teams can be marked for status for their judging sessions.



The screenshot shows the 'Judging - NH Test Trad' interface. At the top, there is a navigation bar with the FIRST Tech Challenge logo, 'Event Admin', and links for 'Resources', 'Help/Feedback', and 'Hello, local'. Below the navigation bar, there is a link '<< Back to Event Home' and the title 'Judging - NH Test Trad'. The main content area is titled 'Set the status of each team:' and contains a table with three columns: 'Team', 'Name', and 'Status'. The table lists five teams with their respective names and status dropdown menus. The status dropdown for the second team, 'Hornets', is open, showing options: 'Not Started', 'In Progress', 'Passed', 'Late', and 'Very Late'.

Team	Name	Status
7078	Ov3r1y K0mp13x	Not Started
7135	Hornets	Not Started In Progress Passed Late Very Late
7804	Tie Fighters	Passed Late Very Late
8089	Mainframe Meltdown	Very Late
15344		Not Started

Figure 141 – Team status

If you are running an event that is not a League Meet, then your Event Dashboard should include a step that allows you to manage awards for your event. Press the “Manage Awards” button to begin the awards management process. This can also be found in Judging, by selecting the FIRST Tech Challenge logo.



Manage Awards

Figure 142 - Press the "Manage Awards" process to start the awards management process.

When you first launch the Awards Manager, the system will default to the “Give Awards” screen (see figure below).

# Awards Manager

[usnhnas] Random Test

Save & Exit

Manage Awards

Import/Export

Give Awards

View / Print Script

Present Awards

## Give Awards



Already given



Must be given



Optional

Award
Judges' Choice Award Winner: NOT GIVEN
Compass Award Winner: NOT GIVEN
Promote Award Winner: NOT GIVEN
Design Award Winner: NOT GIVEN
Motivate Award Winner: NOT GIVEN
Control Award sponsored by Arm, Inc. Winner: NOT GIVEN
Innovate Award sponsored by Raytheon Technologies Winner: NOT GIVEN

### Award Description

#### Judges' Choice Award

The Judges' Choice Award is given at the discretion of the Judges to a team they have encountered whose unique efforts, performance or dynamics merit recognition, yet the team does not fit into any of the existing award categories.

**Status** Optional

Winner

Add Row

Remove Row

Judge's Comments

Figure 143 – “Give Awards” screen of Awards Manager.

The “Give Awards” screen lists all of the awards that are defined for the current event in the order that they are to be given. Awards that are highlighted in red must be given per [Judging Manual](#) rule on equitable distribution of awards. Awards that are highlighted in green have already been “given” (i.e., winners have been assigned).

### Giving an Award

When you are ready to give an award to a team, select it on the “Give Awards” screen. After you have selected the desired award, enter the required information for each team or individual. You can also enter text to describe why the winner was selected in the “Judge’s Comments” section. This text will appear in the awards ceremony script.

## Awards Manager

[usnhnas] Random Test

Save & Exit Manage Awards Import/Export Give Awards View / Print Script Present Awards

**Give Awards** 
■ Already given   
 ■ Must be given   
 ■ Optional

Award	Award Description
Judges' Choice Award Winner: NOT GIVEN	<h3>Judges' Choice Award</h3> <p>The Judges' Choice Award is given at the discretion of the Judges to a team they have encountered whose unique efforts, performance or dynamics merit recognition, yet the team does not fit into any of the existing award categories.</p> <p><b>Status</b> Optional</p> <p>Winner</p> <div style="border: 1px solid #ccc; padding: 2px; width: 100%; margin-bottom: 5px;"> <input type="text"/> </div> <div style="display: flex; justify-content: space-between; margin-bottom: 5px;"> <span>Add Row</span> <span>Remove Row</span> </div> <p>Judge's Comments</p> <div style="border: 1px solid #ccc; height: 40px; width: 100%;"></div>
Compass Award Winner: NOT GIVEN	
Promote Award Winner: NOT GIVEN	
Design Award Winner: NOT GIVEN	
Motivate Award Winner: NOT GIVEN	
Control Award sponsored by Arm, Inc. Winner: NOT GIVEN	
Innovate Award sponsored by Raytheon Technologies Winner: NOT GIVEN	

Figure 144 - Select the "Edit" button to edit the selected award.

Press "Save" to save your changes.

Save & Exit Manage Awards Give Awards View / Print Script Present Awards

**Give Awards** 
■ Already given   
 ■ Must be given   
 ■ Optional

Award	Award Description
Judges' Award Winner: 6582 Kaiserslautern HS - Raider Robotics	<h3>Judges' Award</h3> <p>The Judges Award is given at the discretion of the Judges to a Team they have encountered whose unique efforts, performance or dynamics merit recognition, yet the Team does not fit into any of the existing Award categories.</p> <p><b>Status</b> Optional</p> <p>Winner <span style="float: right;">Second Place</span></p> <div style="display: flex; justify-content: space-between; margin-bottom: 5px;"> <div style="border: 1px solid #ccc; padding: 2px; width: 45%;"> <input type="text" value="6582 - Kaiserslautern HS - Rai"/> </div> <div style="border: 1px solid #ccc; padding: 2px; width: 45%;"> <input type="text" value="4130 - Expected Error!!"/> </div> </div> <p>Third Place</p> <div style="border: 1px solid #ccc; padding: 2px; width: 100%; margin-bottom: 5px;"> <input type="text" value="10937 - Stuttgart HS"/> </div> <div style="display: flex; justify-content: space-between; margin-bottom: 5px;"> <span>Add Row</span> <span>Remove Row</span> </div> <p>Judge's Comments</p> <div style="border: 1px solid #ccc; padding: 5px; height: 20px;">                     This team had exceptional teamwork and gracious professionalism during competition.                 </div>
Compass Award Winner: NOT GIVEN	
Promote Award Winner: NOT GIVEN	
Arm, Inc. Control Award Winner: NOT GIVEN	
Motivate Award Winner: NOT GIVEN	
Design Award Winner: NOT GIVEN	
Collins Aerospace Innovate Award Winner: NOT GIVEN	
Connect Award Winner: NOT GIVEN	

Figure 145 - After assigning winners and providing justification text, press "Save" to save the award information.

## Managing the List of Awards

You can select the “Manage Awards” button to modify an optional award. You can also modify the order of the awards by selecting an award listing, and then using the mouse to drag it to its new location in the presentation order.

**Note:** The mandatory awards are supposed to be presented in the original order as listed by the system. Also note that the system will not let you edit or delete a mandatory award, you can only edit optional awards.

The screenshot displays the 'Awards Manager' interface for '[usnhcalt] NH Test Trad'. At the top, there is a navigation bar with buttons for 'Save & Exit', 'Manage Awards', 'Import/Export', 'Give Awards', 'View / Print Script', and 'Present Awards'. Below this, the 'Manage Awards' section is active. It features a form with an 'Enter award name...' input field, a dropdown menu currently showing 'Team Award', and an '+ Add Award' button. Below the name field is a larger 'Enter award description...' text area. Underneath the form, a note states 'Presented in order listed. Drag to reorder.' Below this note is a list of awards, with one entry 'Award' visible. This entry has a 'Team Award' label and 'Edit' and 'Delete' buttons next to it.

Figure 146 - You can edit optional awards. You can also reorder the awards by selecting and dragging the award name.

Once you have finished managing your awards, you can return to the “Give Awards” screen to continue giving the awards (i.e., assigning winners for the awards).

## Viewing / Printing the Awards Script

Once you have given out all the awards (i.e., once you have assigned winners to each award) the list on the “Give Awards” screen should be green.

### Give Awards

Award
Judges' Award Winner: 6582 Kaiserslautern HS - Raider Robotics
Compass Award Winner: 10942 Vilseck HS (RoboRaptors)
Promote Award Winner: 10941 SHAPE HS
Arm, Inc. Control Award Winner: 10938 Baumholder MHS
Motivate Award Winner: 11405 Hohenfels MHS Tigers
Design Award Winner: 11407 Vilseck HS (Falcons)
Collins Aerospace Innovate Award Winner: 13152 Netzaberg MS (FTC)
Connect Award Winner: 11406 Stuttgart HS Panthers
Think Award Winner: 10940 Ramstein HS - #1 - METAL GEAR
Dean's List Semi-Finalists Winner:

Figure 147 - Once you have assigned winners for each award, the list should turn all green.

Press the “View/Print Script” button to view the award script. Press the “Print” button to print the script.

## Awards Manager

### View Remote Event Script

Welcome to the [insert event name] Awards and Closing Ceremony! As many of you know, *FIRST* is a non-profit and a global movement transforming lives and inspiring future innovators, and problem solvers. *FIRST* engages young people, from pre-k through 12th grade in our STEM programs including *FIRST* LEGO League, *FIRST* Robotics Competition, and of course, *FIRST* Tech Challenge. Our STEM programs are a fantastic opportunity to have the hardest fun you'll ever have!

Speaking of the hardest fun you'll ever have, what an outstanding day we've had! Before we hand out our awards, let's thank the awesome people who made this event happen. Today could not have been possible without our volunteers! Please give a big round of applause for all the volunteers who have given their time, effort, dedication, and so much more to make this program a success. Also, a big round of applause for our generous sponsors, especially our Season Presenting Sponsor, Raytheon Technologies, and our Program Sponsor Qualcomm! Thank you! Before we hand out the awards, I would like to introduce our special guest.

Figure 148 – Press the “View/Print Script” button to view the awards script.

## Presenting the Awards

Press the “Present Awards” button to begin the presentation process.



Figure 149 – Press “Present Awards” button to begin presenting the awards.

To reveal an award, simply select the Award name and the Audience Display should display the Award name (but not the users). Selecting the 3<sup>rd</sup> place winner, will reveal the third-place winner on the Audience Display. Selecting the 2<sup>nd</sup> Place winner will reveal the second-place winner on the Audience Display. Selecting the 1<sup>st</sup> Place winner will reveal the first-place winner on the Audience Display. If you’d like to reveal all of the winners at once, simply select the 1<sup>st</sup> Place winner.

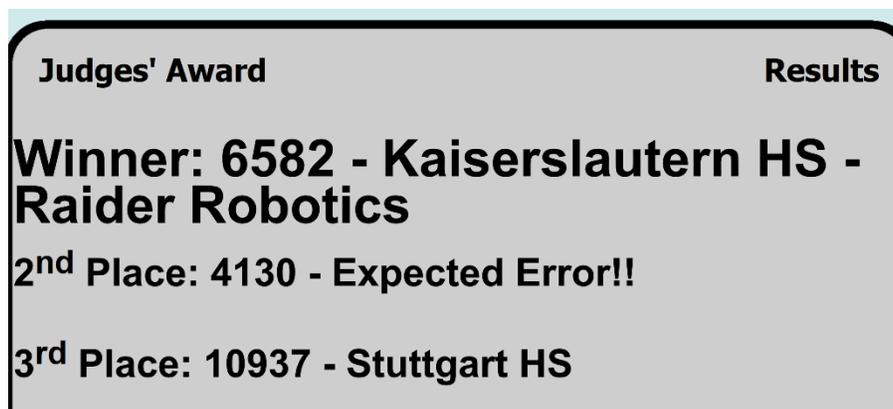


Figure 150 - As each winner is revealed, their team number and name are displayed on the Audience Display.

## Reviewing Match Results

If you navigate to the event home page, you can select the “Match Results” link under the “Event Info” category to view the Match Results for the currently selected event.

- Event Info
- [Judging & Inspection Schedule](#)
  - [Judging & Inspection Status](#)
  - [Match Schedule](#)
  - [Rankings](#)
  - [Match Results](#)
  - [Pit Display](#)
  - [Event Reports](#)

Figure 151 - Select “Match Results” link to view match results for the currently selected event.

The Match Results page displays the available match results for the currently selected event. You can press the “Print” button to print these results.

<< Back to Event Home

Condensed  Keep Background on Print

### NH Test Trad Match Results



Match	Result	Red	Blue	Score breakdown	History
Q1	66-93 B	8089 7804	7078 7135	<a href="#">Scoresheet</a> Red Blue	<a href="#">View Match History</a>
Q2	118-153 B	7804 7135	8089 15344	<a href="#">Scoresheet</a> Red Blue	<a href="#">View Match History</a>
Q3	65-166 B	7078 8089	15344 7804	<a href="#">Scoresheet</a> Red Blue	<a href="#">View Match History</a>
Q4	104-46 R	7135* 15344*	8089 7078*	<a href="#">Scoresheet</a> Red Blue	<a href="#">View Match History</a>
Q5	142-94 R	15344 7135	7804 7078	<a href="#">Scoresheet</a> Red Blue	<a href="#">View Match History</a>
Q6	197-108 R	15344 7078	7135 8089	<a href="#">Scoresheet</a> Red Blue	<a href="#">View Match History</a>
Q7	187-151 R	7804	7135	<a href="#">Scoresheet</a>	<a href="#">View Match History</a>

Figure 152 - You can view and print the match results.

You can also review the virtual scoresheets for a match by selecting the corresponding “Scoresheet”, “Red” or “Blue” link for the match under the “Score breakdown” column. “Scoresheet” shows the combined scoresheet (Red and Blue), while the “Red” and “Blue” links show the individual scoresheets.

**Red Alliance Side**

Match: \_\_\_\_\_ Field: \_\_\_\_\_

**Pre-Match**

Default Signal \_\_\_\_\_ Team Signal Sleeve \_\_\_\_\_

Robot 1

Robot 2

**Driver-Controlled Period**

RED Terminal (audience side) \_\_\_\_\_

BLUE Terminal (scoring side) \_\_\_\_\_

**Autonomous Period**

RED Terminal (audience side) \_\_\_\_\_

**End Game Period**

None  Parked

Robot 1

Robot 2

**Penalties**

# Minor \_\_\_\_\_ # Major \_\_\_\_\_

**Summary Table:**

Team #	No Show	Yellow Card	Red Card
_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Blue Alliance Side**

Match: \_\_\_\_\_ Field: \_\_\_\_\_

**Pre-Match**

Default Signal \_\_\_\_\_ Team Signal Sleeve \_\_\_\_\_

Robot 1

Robot 2

**Driver-Controlled Period**

BLUE Terminal (audience side) \_\_\_\_\_

RED Terminal (scoring side) \_\_\_\_\_

**Autonomous Period**

BLUE Terminal (audience side) \_\_\_\_\_

**End Game Period**

None  Parked

Robot 1

Robot 2

**Penalties**

# Minor \_\_\_\_\_ # Major \_\_\_\_\_

**Summary Table:**

Team #	No Show	Yellow Card	Red Card
_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Junction grid shown from scoring side perspective (behind field). Each cell is for recording the stack of Cones Secured on the corresponding Junction. Junction stack order matters! Write each Secured Cone in order starting with the bottom-most cone in the top-left corner of the cell. Use 'r' for a Red Cone, 'b' for a Blue Cone, 'Cr#' for a Red Beacon, and 'Cb#' for a Blue Beacon, where '#' is 1 for the Beacon scored by Robot 1 and 2 for the Beacon scored by Robot 2. Use lower-case 'r' and 'b' to reduce ambiguity from handwriting. A Junction with a Red Cone at the bottom, then a Blue Cone, a Red Cone, and Capped with a Red Beacon by Robot 2 would be recorded as: "rbrCr2". Make sure you confirm with the other alliance Scoring Referee that your X columns match!

Figure 153 - You can review the combined or individual scoresheets for a match.

You can also select the “View Match History” link to view how many times the scores for a match were modified and re-committed

Figure 154 - You can view how many times a match's scores were revised and re-committed.

[<< Back to Match Results](#)

unshcalt  
History for Q1

Most Recent First

Record #	Type	Time	Winner	Red Score	Blue Score	Scoresheet
6	Commit	2021-10-15 10:55:38 AM	Blue	66	93	<a href="#">Scoresheet</a>
5	Scorekeeper Edit	2021-10-15 10:55:38 AM	Blue	66	93	<a href="#">Scoresheet</a>
4	Red Submit	2021-10-15 09:26:52 AM	Tie	0	0	<a href="#">Scoresheet</a>
3	Blue Submit	2021-10-15 09:26:49 AM	Tie	0	0	<a href="#">Scoresheet</a>
2	Blue Review	2021-10-15 09:26:46 AM	Tie	0	0	<a href="#">Scoresheet</a>
1	Red Review	2021-10-15 09:26:41 AM	Tie	0	0	<a href="#">Scoresheet</a>

## Uploading Event Data to FIRST

Once your event has concluded, all event data has been finalized and you have an Internet connection you can send your results. Results for league meets are particularly important because teams' rankings are based on their previous event results.

- Scorekeepers and event admins will be receiving a reminder email for unpublished events five days after the event.
- If the event is not published within the week, a notice will go to the PDP for any unpublished events in the region.

On the Event Dashboard, select the Send Results to *FIRST* button:

0	Configure HQ Sync	Done
1	Edit Event	Done
2	Create Default Accounts	Done
3	View League Data	0 leagues
4	Add/Edit Teams	5 teams added
5	Add/Edit Sponsors	1 sponsors added
6	Configure Inspection Tracking (Optional)	(Optional)
7	Configure Inspection Schedule (Optional)	Not Started
8	Create Match Schedule	Done
9	Manage Awards	
10	Advancement Report	
11	Send Results to <i>FIRST</i>	
12	Download Archive File	

Figure 155 - Dashboard with Send Results to *FIRST* button.

Opens the Send Results to *FIRST* page, select Submit Results.

Figure 156 - Press the Submit Results button.

Successful submit will give a Submission ID. If you need to report any issues or bugs to Github, please include this number.

**Note:** Once you submit, an event cannot be resubmitted. So make sure the event is complete and all data is saved and correct.

Figure 157 - Successful submission will give a Submission ID

If you skipped the Setup Event step, it will prompt you for a key now. It is required for this step.

Figure 158 - Copy/Paste the region key.

## Troubleshooting the System

### Accessing the System Logs

It can be helpful to access the system logs and review messages from the *FIRST Tech Challenge Live* scorekeeping server. If you need support, please access and email log and db files to [ftctech@firstinspires.org](mailto:ftctech@firstinspires.org). The output from the scorekeeping server is redirected to a text file in the top-level directory within the software directory.

Name	Date modified	Type	Size
bin	05-Sep-22 12:30 AM	File folder	
db	28-Sep-22 1:16 PM	File folder	
lib	05-Sep-22 12:22 AM	File folder	
logs	28-Sep-22 9:09 AM	File folder	
tmp	28-Sep-22 2:28 PM	File folder	
uploads	05-Sep-22 12:30 AM	File folder	
FIRST-Tech-Challenge-Live-UNIX	05-Sep-22 12:22 AM	File	1 KB
FIRST-Tech-Challenge-Live-Windows.bat	05-Sep-22 12:22 AM	Windows Batch File	1 KB

Figure 159 - Open the bin subdirectory.

If you have run the software at least one time, then you should see at least one log file in the “logs” subdirectory. Double-click a log file to view its contents.

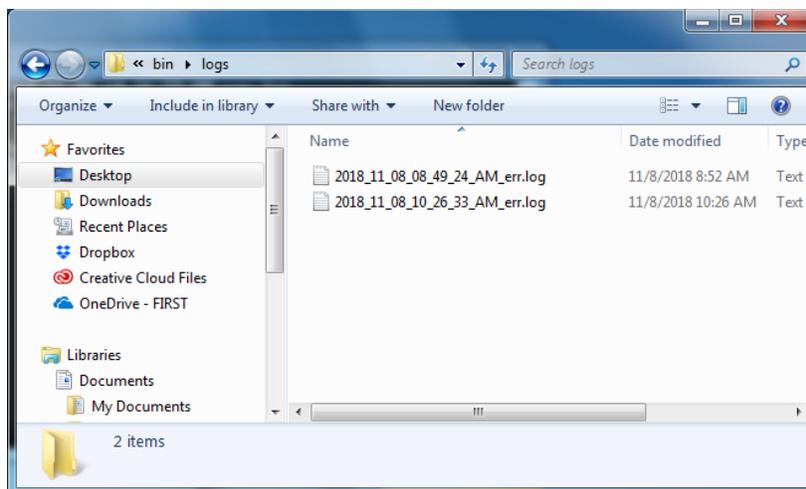
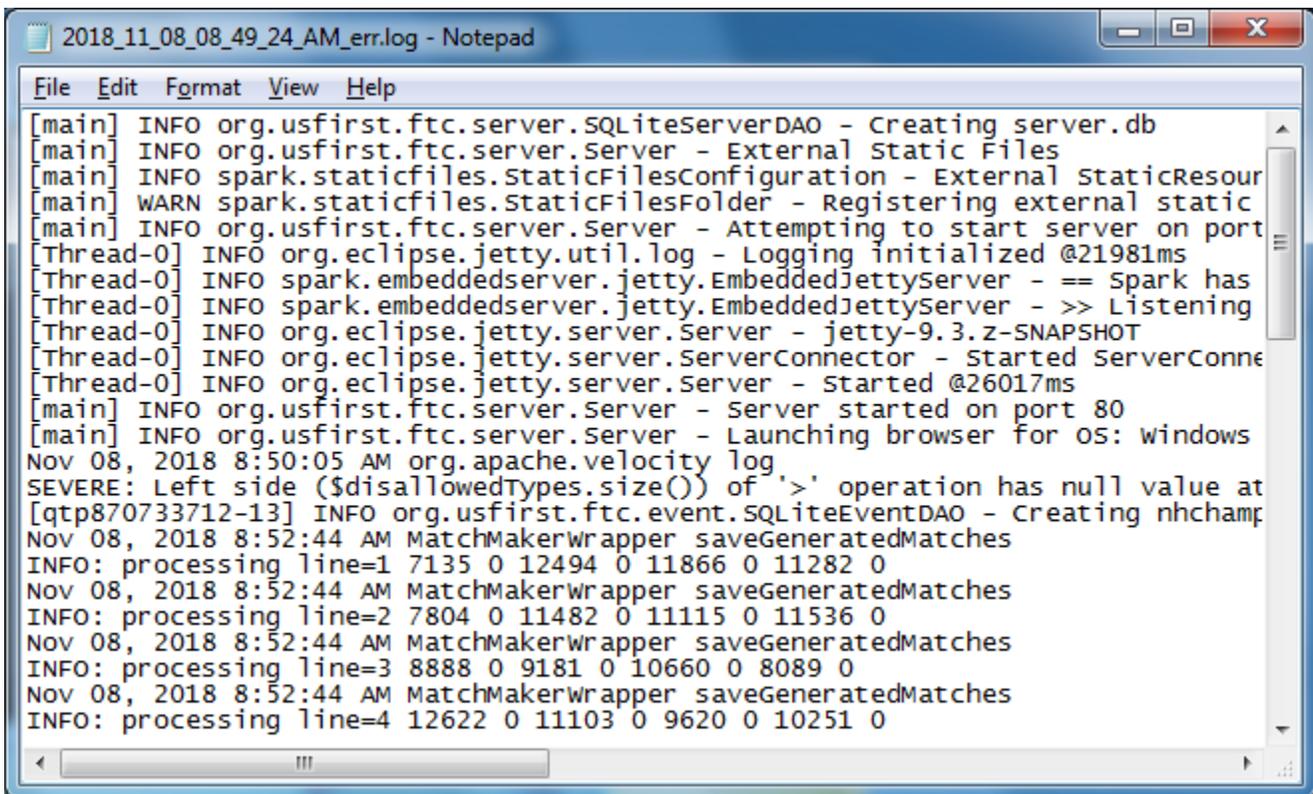


Figure 160 - You should see a listing of log files within the “logs” directory.



```
2018_11_08_08_49_24_AM_err.log - Notepad
File Edit Format View Help
[main] INFO org.usfirst.ftc.server.SQLiteServerDAO - Creating server.db
[main] INFO org.usfirst.ftc.server.Server - External Static Files
[main] INFO spark.staticfiles.StaticFilesConfiguration - External StaticResour
[main] WARN spark.staticfiles.StaticFilesFolder - Registering external static
[main] INFO org.usfirst.ftc.server.Server - Attempting to start server on port
[Thread-0] INFO org.eclipse.jetty.util.log - Logging initialized @21981ms
[Thread-0] INFO spark.embeddedserver.jetty.EmbeddedJettyServer - == Spark has
[Thread-0] INFO spark.embeddedserver.jetty.EmbeddedJettyServer - >> Listening
[Thread-0] INFO org.eclipse.jetty.server.Server - jetty-9.3.z-SNAPSHOT
[Thread-0] INFO org.eclipse.jetty.server.ServerConnector - Started ServerConne
[Thread-0] INFO org.eclipse.jetty.server.Server - Started @26017ms
[main] INFO org.usfirst.ftc.server.Server - Server started on port 80
[main] INFO org.usfirst.ftc.server.Server - Launching browser for OS: windows
Nov 08, 2018 8:50:05 AM org.apache.velocity log
SEVERE: Left side ($disallowedtypes.size()) of '>' operation has null value at
[qtp870733712-13] INFO org.usfirst.ftc.event.SQLiteEventDAO - Creating nhchamp
Nov 08, 2018 8:52:44 AM MatchMakerWrapper saveGeneratedMatches
INFO: processing line=1 7135 0 12494 0 11866 0 11282 0
Nov 08, 2018 8:52:44 AM MatchMakerWrapper saveGeneratedMatches
INFO: processing line=2 7804 0 11482 0 11115 0 11536 0
Nov 08, 2018 8:52:44 AM MatchMakerWrapper saveGeneratedMatches
INFO: processing line=3 8888 0 9181 0 10660 0 8089 0
Nov 08, 2018 8:52:44 AM MatchMakerWrapper saveGeneratedMatches
INFO: processing line=4 12622 0 11103 0 9620 0 10251 0
```

Figure 161 - Log files contain useful information for troubleshooting.

## Appendix A – Resources

---

### Game Forum Q&A

<https://ftc-qa.firstinspires.org/>

Anyone may view questions and answers within the FIRST® Tech Challenge game Q&A forum without a password. To submit a new question, you must have a unique Q&A system user name and password for your team.

### Volunteer Forum

Volunteers can request access to role specific volunteer forums by emailing [FTCTrainingSupport@firstinspires.org](mailto:FTCTrainingSupport@firstinspires.org). You will receive access to the forum thread specific to your role.

### FIRST Tech Challenge Game Manuals

Part 1 and 2 - <https://www.firstinspires.org/resource-library/ftc/game-and-season-info>

### FIRST Headquarters Pre-Event Support

Phone: 603-666-3906

Mon – Fri

8:30am – 5:00pm

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

Scoring system and tech support: [ftctech@firstinspires.org](mailto:ftctech@firstinspires.org)

### FIRST Tech Challenge Event On-Call Support

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

Event On-Call Support: 603-206-2412

System and Tech Support: (603) 206-2450

### FIRST Websites

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

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

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

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

### FIRST Tech Challenge Social Media

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

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

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

[FIRST Tech Challenge Blog](#) – Weekly articles for the FIRST Tech Challenge community, including outstanding volunteer recognition!

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

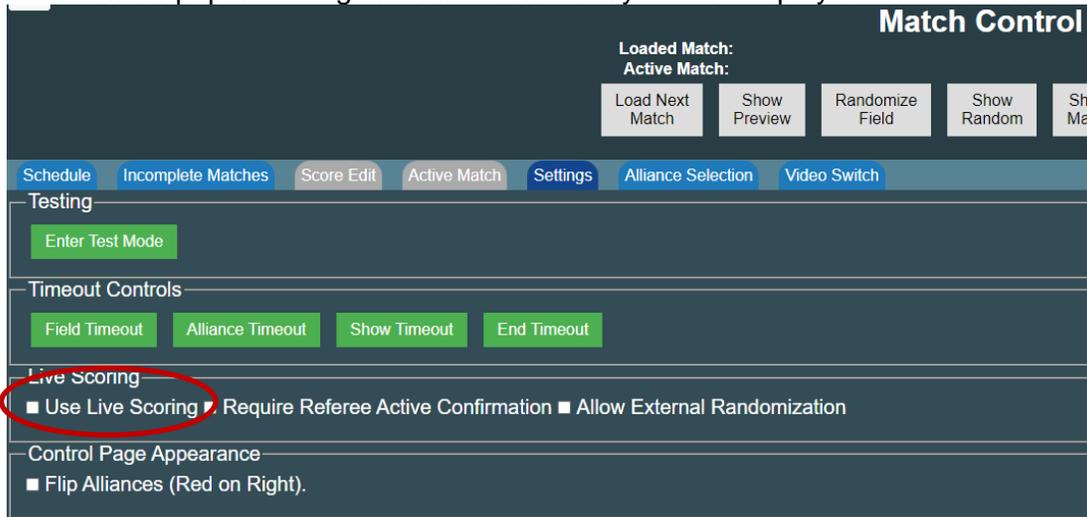
### Feedback

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

## Appendix B Paper Scoring

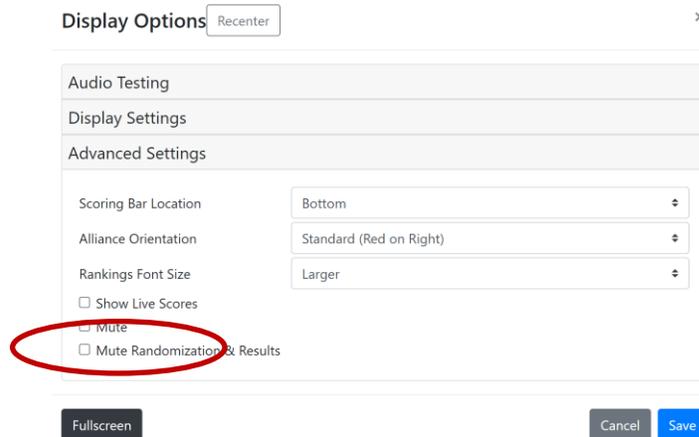
### Configuring the Event for Paper Scoring

On the Match Control Page, under the “Settings” tab, deselect the “Use Live Scoring” checkbox. This will simplify the match flow for paper scoring and will automatically set the displays to not show live scores.



### Configuring the Audience Display

On the laptop, the scorekeeper should have two browser windows opened. One window should display the Match Control screen. The other window should be configured as an Audience Display with the “Show Live Scores” option disabled (see image below). Both browser windows should be logged in as the “local” user.



If the “Show Live Scores” option is disabled, then the Audience Display will only display match and timing information. No real-time scores will be displayed.

**Note:** The Audience Display browser window should be maximized in the externally connected HDMI monitor so that the teams and audience can see the timing and match information clearly.

### Step-by-Step Example: Scoring with Paper sheets

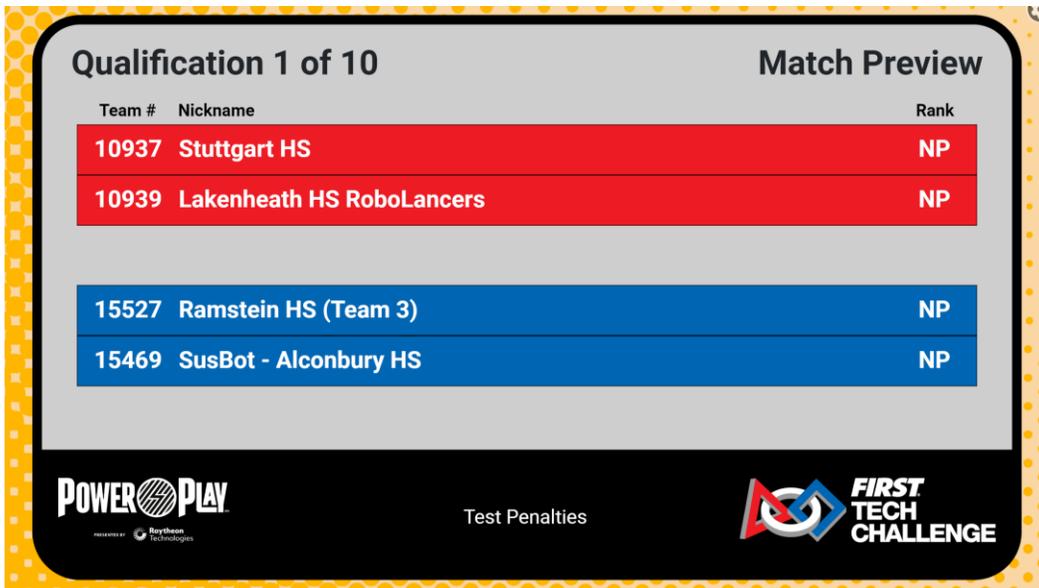
1. Scorekeeper selects the match that they want to score and push the “Play” button that appears next to its listing on the Match Control Page (or the Scorekeeper pushes “Load Next Match” if the next match in the schedule is to be played). The match should be listed as the “Loaded Match” near the top of the Match Control screen.

*Gracious Professionalism®* - “Doing your best work while treating others with respect and kindness - It’s what makes FIRST, first.”

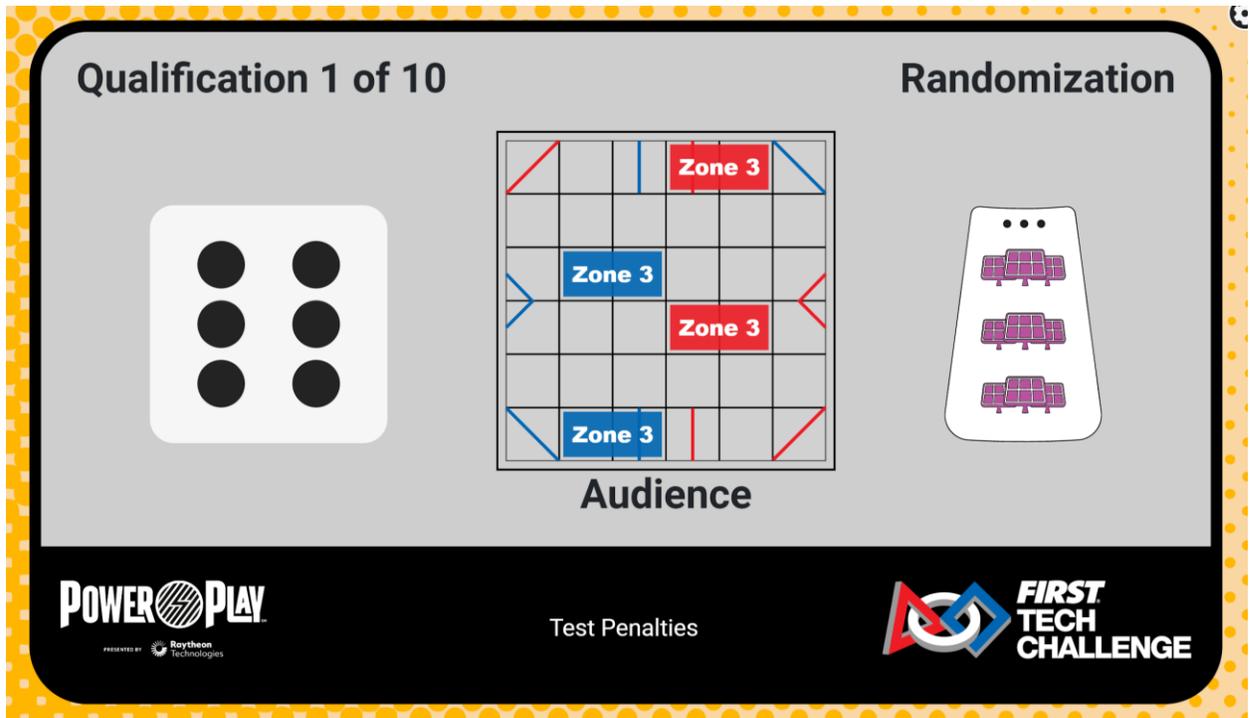


2. The scorekeeper presses the “Show Preview” button on the Match Control Page. This should force the Audience Displays to display information about the upcoming match.

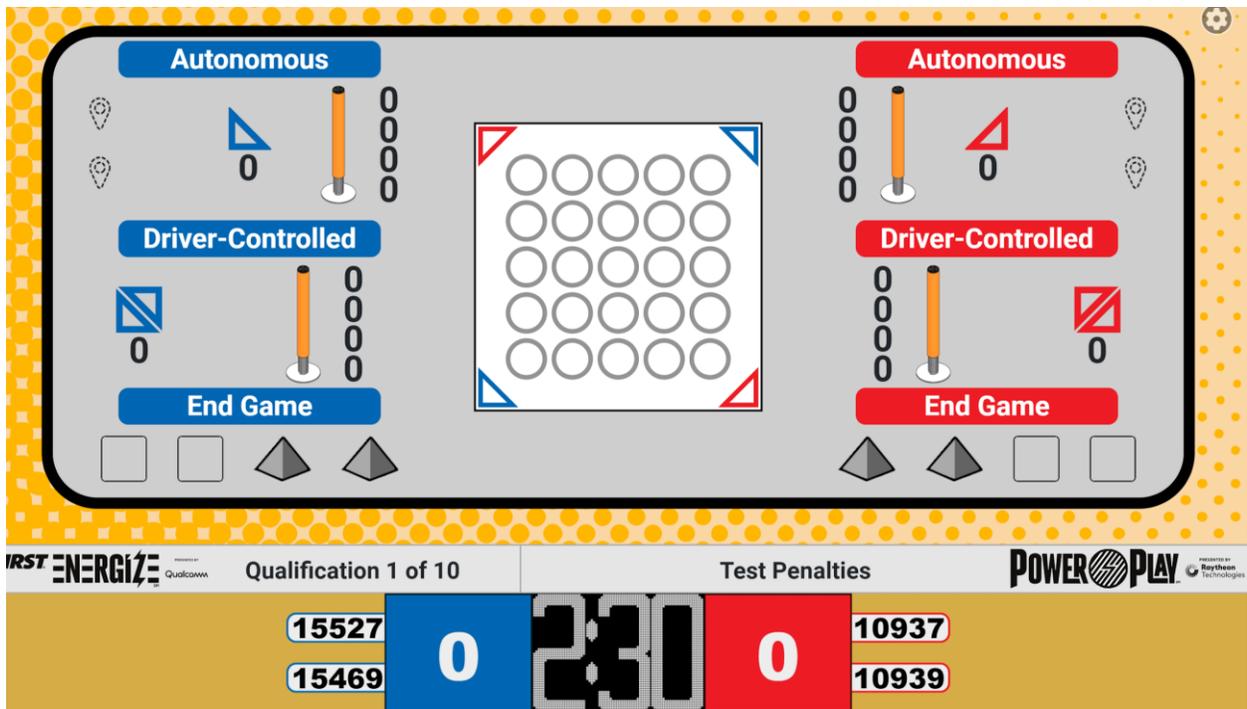
**Note:** On the Match Control Page the “Show Preview” button should change from green to yellow after the button has been pressed.



3. Select the Randomize Field button on the Match Control page or the referees can roll a physical die and use the result to determine how to place the game elements for the autonomous phase.



- The scorekeeper can push the “Show Match” button to show the match information, which for this scenario will include the alliance team numbers and the match clock.



- The scorekeeper pushes the “Start Match” to run the match.

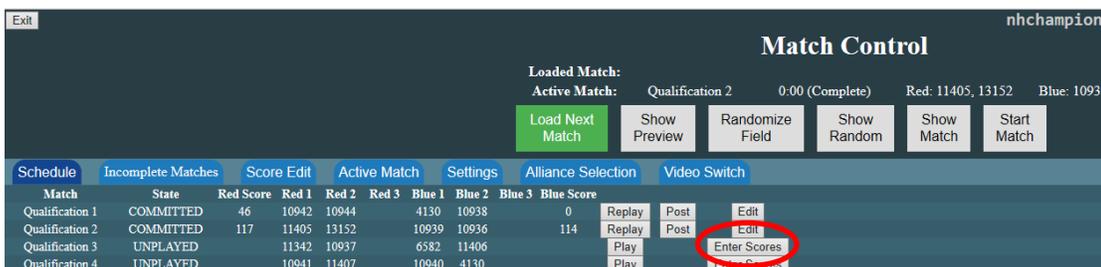
**Note:** The “Start Match” button might be colored red if the live scoring setting has not been disabled. Please disregard, because it is “waiting” for pre-match information from a score tracking tablet for live scoring.



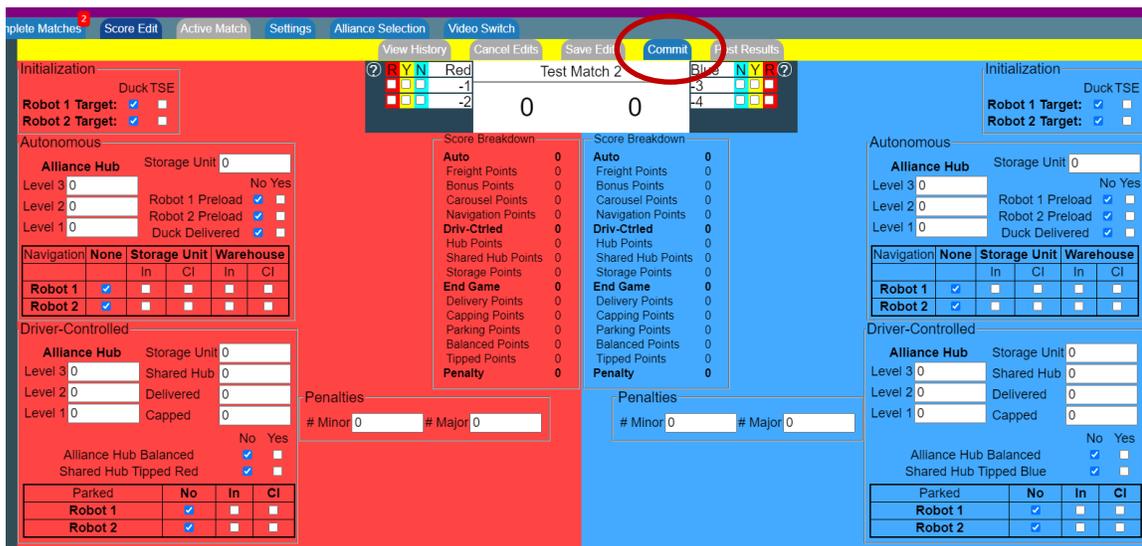
6. After the match begins, the Audience Display should play the audio cue indicating that the match has begun and the countdown timer on the display should be active.

**Note:** that the scorekeeper has the option to abort the match by pushing the “Abort Match” button while the match is active.

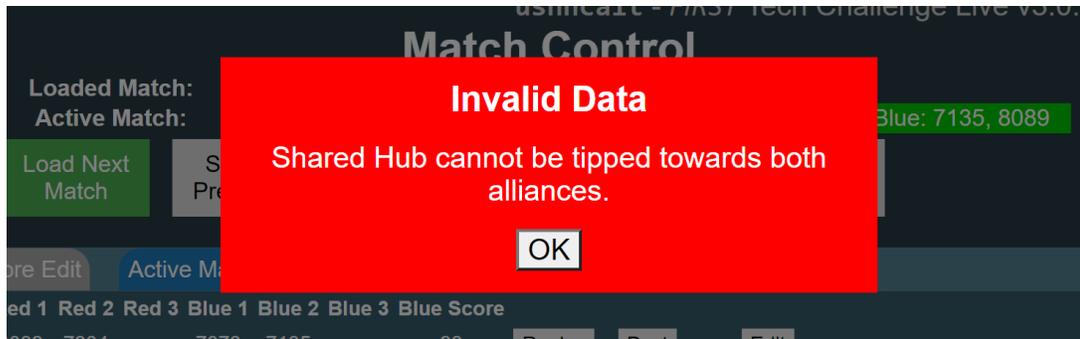
7. After the match is complete, the scorekeeper collects the paper scoresheets from the referees and then, and then selects the “Enter Scores” button next to the match to pull up the electronic version of the scoresheets on the Match Control screen



8. The scorekeeper should manually enter in the score values through the Match Control Page. The scorekeeper should then press “Save Edits.” When ready to show the scores, click “Commit” and then “Post Results”.

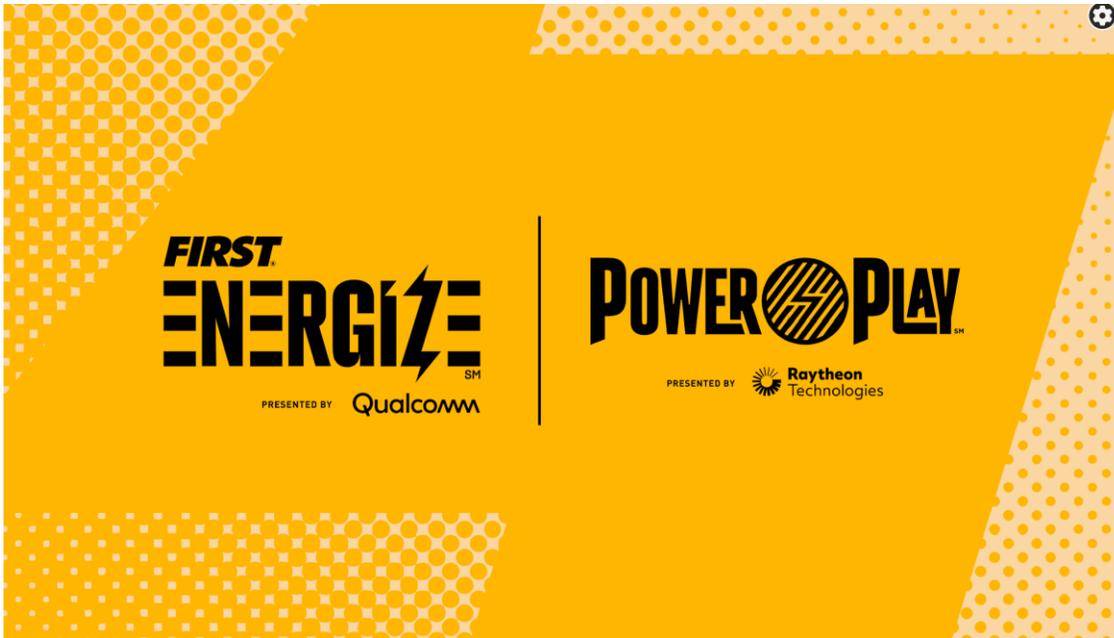


9. The scorekeeper can repeat the process for subsequent matches.
10. There are prompts for inaccurate scoring within the system in case mistakes are made on the paper scoresheets, for example:



## Appendix C – Display Screens

### Default Display



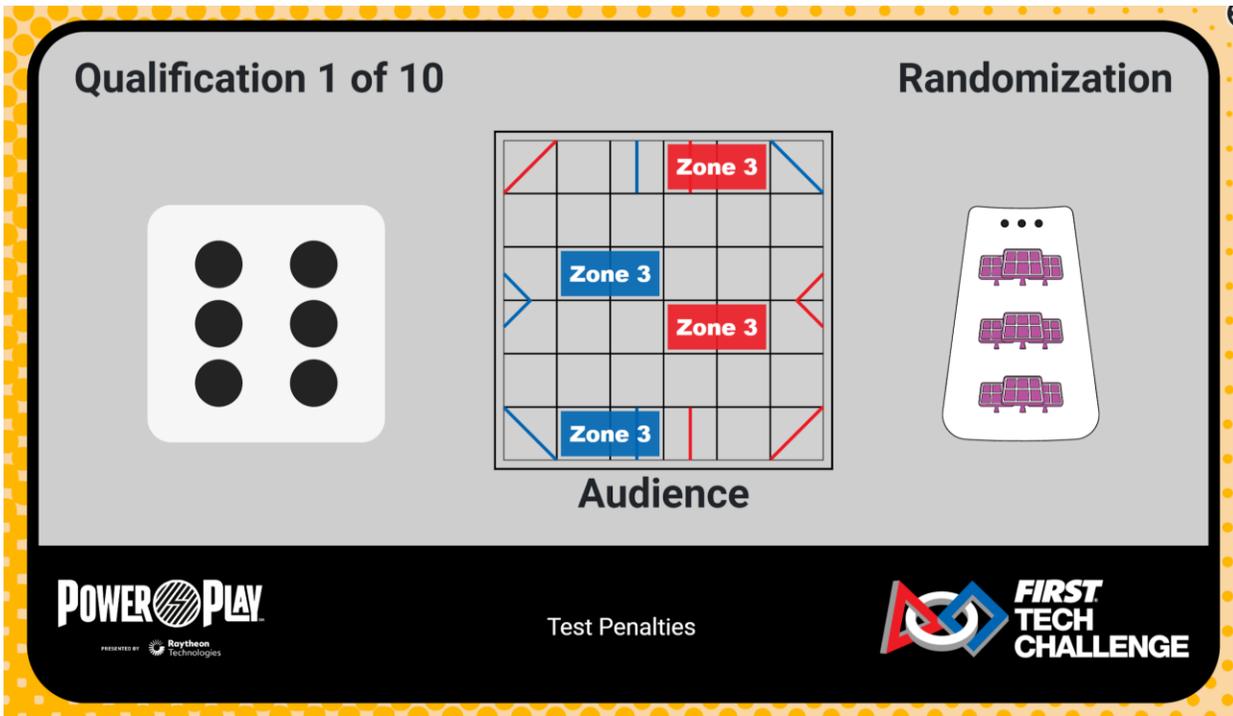
### Audience Display during “Show Match”

The audience display during a "Show Match" features a grey background with a yellow border. It is divided into two main sections: "Qualification 1 of 10" on the left and "Match Preview" on the right. The "Match Preview" section contains a table with the following data:

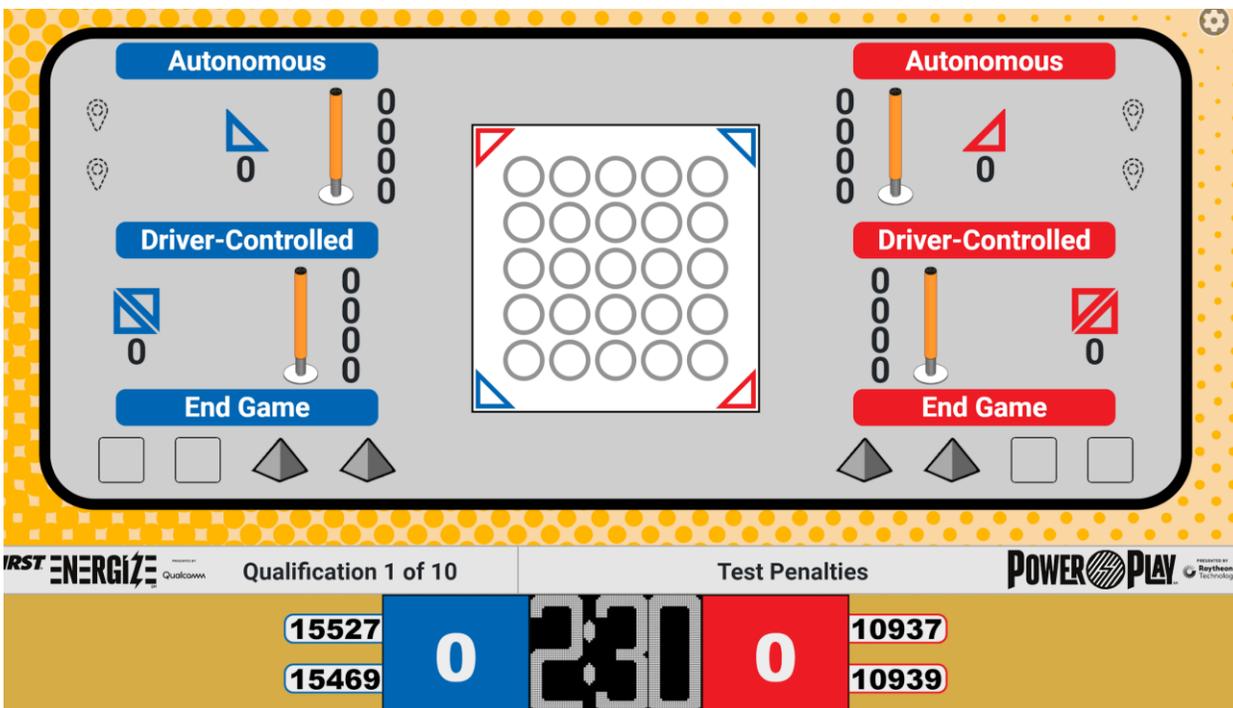
Team #	Nickname	Rank
10937	Stuttgart HS	NP
10939	Lakenheath HS RoboLancers	NP
15527	Ramstein HS (Team 3)	NP
15469	SusBot - Alconbury HS	NP

At the bottom of the screen, there are logos for **POWER PLAY** (presented by Raytheon Technologies), **Test Penalties**, and the **FIRST TECH CHALLENGE** logo.

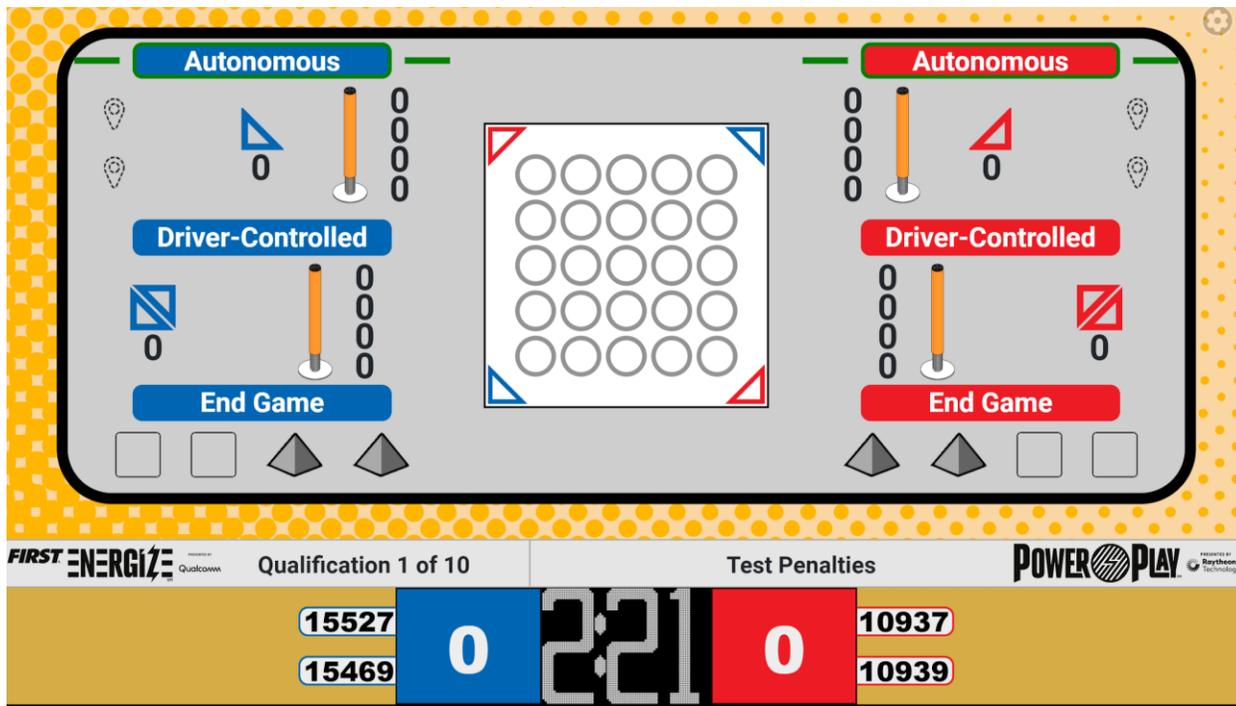
Audience Display during “Show Randomization”



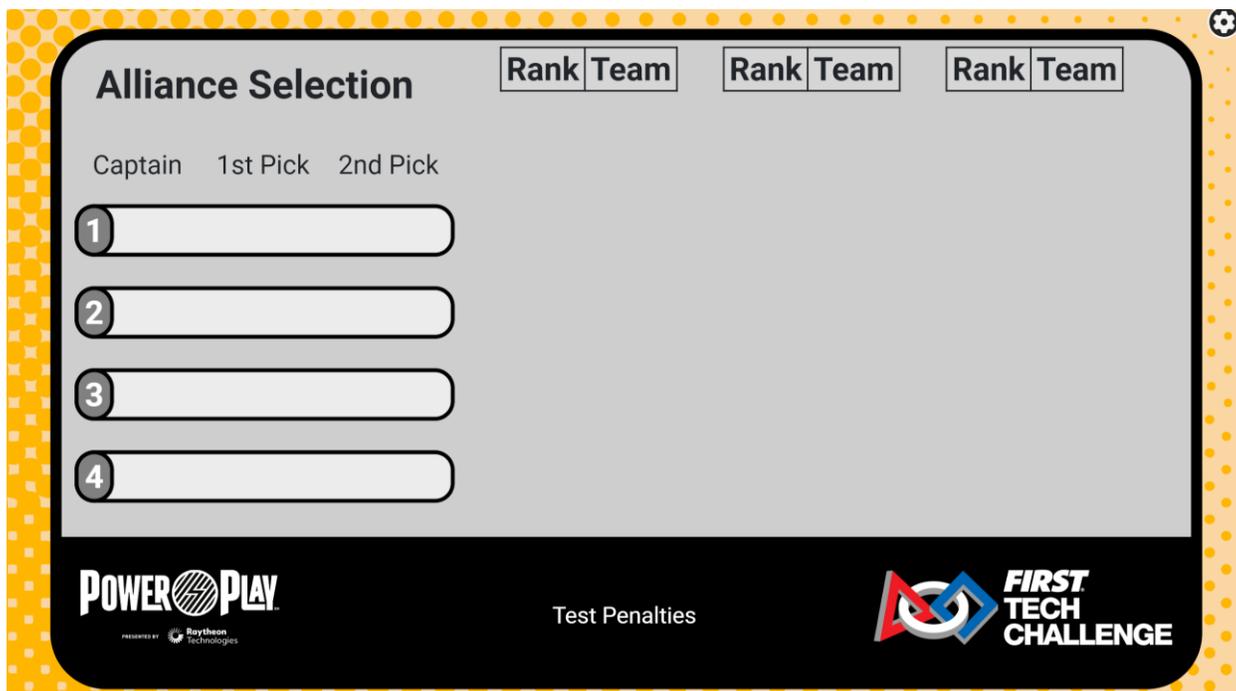
Audience Display during “Show Matches”



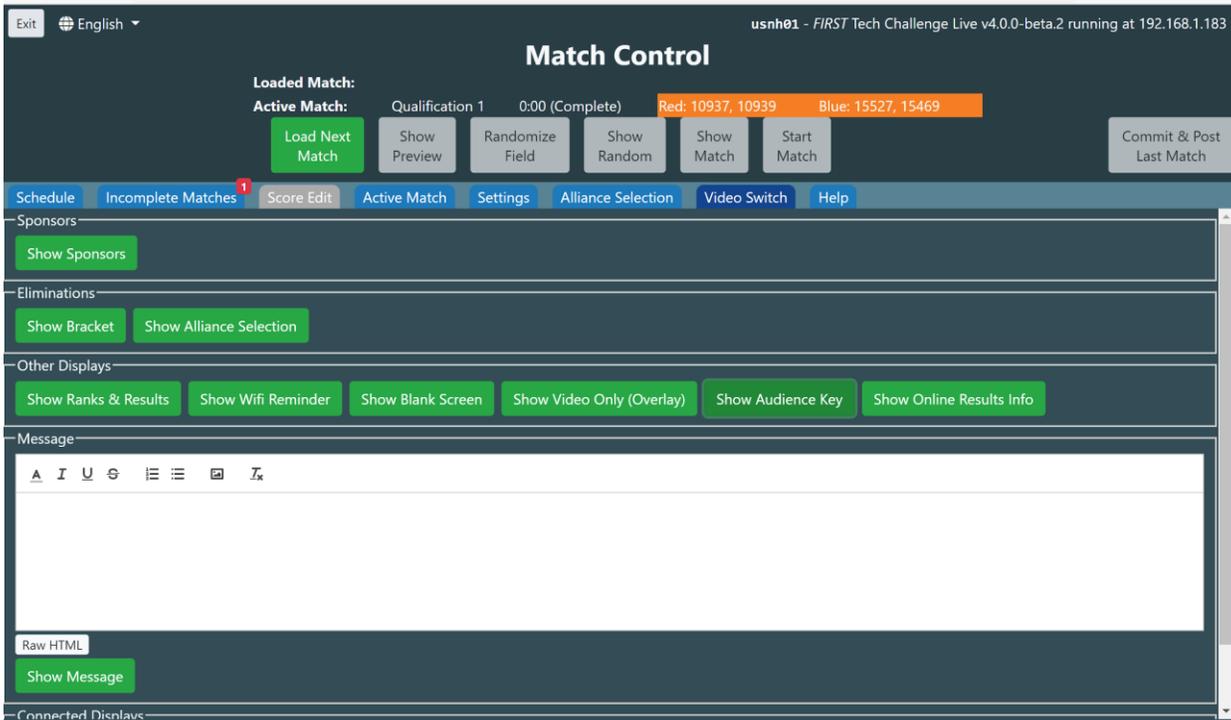
Audience Display during “Play Match”



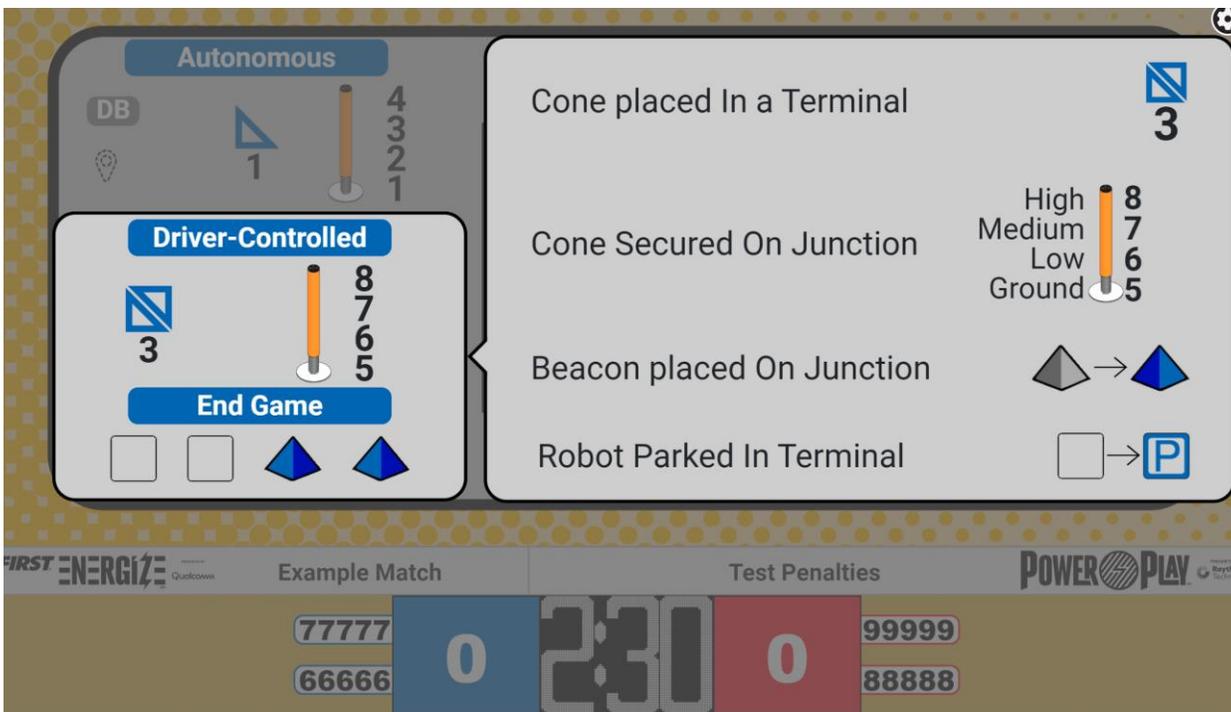
Audience Display during Alliance Selection “Set Audience Display”



The “Video Switch” option on the Match Control page provides multiple display options including a “WiFi Reminder”, custom message and an “Audience Legend”



### Audience Legend



### WiFi Reminder

**Please **TURN OFF Wi-Fi** on Phones, Tablets, and Hot Spots**

*Leave the Wi-Fi to the Robots!*

**Apple iPhone**

**Android Nougat**

Test Penalties

### Overlay

<b>FIRST ENERGIZE</b> <small>POWERED BY QUALCOMM</small>	Qualification 1 of 9	overlay test	<b>POWERPLAY</b> <small>PRESENTED BY ROYTHOON TECHNOLOGIES</small>
17558 Vilseck 2020a	NP	10938 Baumholder (DSO)	NP
16959 Ansbach FTC2	NP	10934 Vicenza HS	NP

## Appendix D: Field Inspection Automation

Starting with version 8.0.0 of the FTC SDK, the Driver Station's Robot Controller Inspection Report will display a QR at the bottom of the page that can be scanned by Field Inspectors using the Scoring System. This QR contains information that allows the scoring system to automatically check 18 of the checkboxes on the Field Inspection form. On the Field Inspection page, there is a "Scan QR" button. Tapping it will open the native camera app. Take a picture of the DS with the QR in focus and the scoring system will read the QR data and apply the checks it can validate.

Note: this does not "scan" the QR - it will not automatically detect the QR and take the picture; please ensure that the QR is in focus so that it can be read once the picture is taken.

[<< Back to Team Select](#)

## Appendix C - Field Inspection Checklist

Team Number: 6582

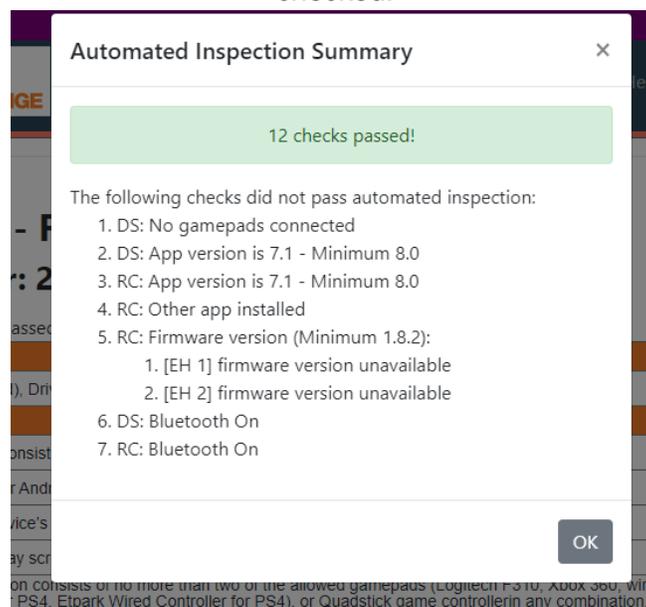
Scan QR

QR Help

Highlight Missing

✓	Drive TeamMembersPresent	Rule #
	Coach (required), Driver 1 (required); Driver 2 (optional)	<C06>
✓	Driver Station and Robot Controller Hardware Rules	Rule #
	Driver Station consists of only of one Android Device (Select): <input type="text" value="Not Selected"/>	<RE07> <DS01>
	Robot Controller Android Device is one of the following models (Select): <input type="text" value="Not Selected"/>	<RE07>
	The Android device's USB interface only connects to a REV Expansion Hub or a USB hub.	<RE07>

After scan, it will provide a summary of how many items were checked, and what items were not able to be checked:



Prior to scanning, ensure the robot is on & connected, and the gamepads are plugged in to the Driver Station. If scans fail, try backing the camera away from the QR, or increase the DS brightness, or set the DS to portrait mode.

There is an alternate page for QR scanning outside the scope of an inspection form. It is made to be more phone-friendly and allows scanning of any team. The alternate workflow is accessed from the Field (Tabletop) Inspection Team Select. Events can consider using this workflow when:

1. An event is scanning the QRs at a different location from Tabletop Inspection (either as a stop on the way to Field Inspection or a mobile inspector in the pits)
2. The event's (or inspector's) devices do not have cameras. In this scenario, a phone is used to scan the QR, then the form is opened on the tablet to do the rest of inspection, either by the same or a different inspector/location.

When scanned from the alternate workflow, the checkboxes are still checked, but the team's inspection status is not affected (not set to IN\_PROGRESS). It can also be used as a report of teams that have scanned:

Team	Scan Result	Scan
731	No Scan	 Scan QR
1533	No Scan	 Scan QR
2901	13 ✓	 Scan QR
16837	No Scan	 Scan QR
18185	No Scan	 Scan QR

## Appendix E: FTA Notes

ussm: Scorekeeper Manual

### Event Info

- Judging & Inspection Schedule
- Judging & Inspection Status
- Match Schedule
- Rankings
- Match Results
- Pit Display
- Event Reports

### Inspection

- Robot Inspection
- Field Inspection

### Referee Score Tracking

- Red Alliance Score Tracking
- Blue Alliance Score Tracking

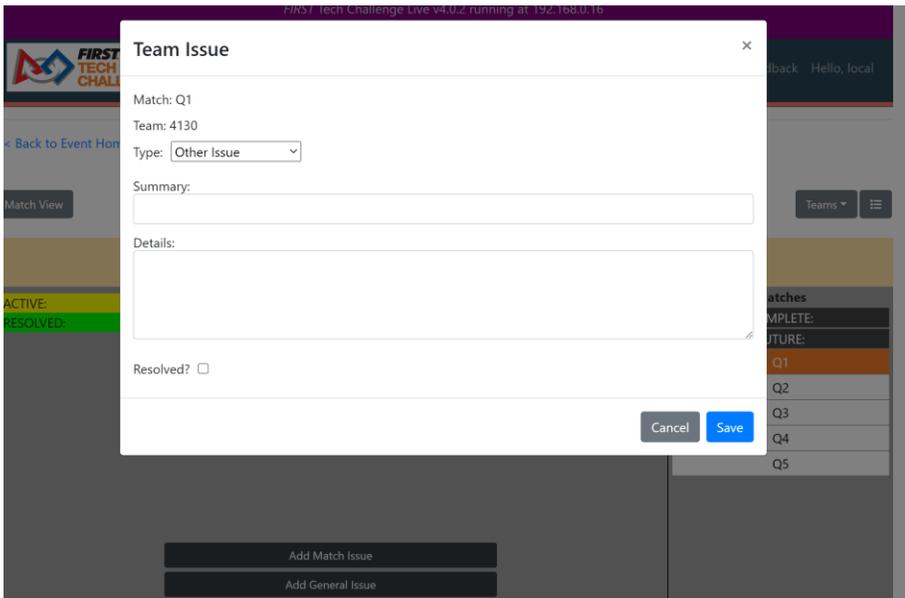
### FTA / CSA Tools

- FTA Notepad

Select a team to open the Team notes screen or choose a team from the drop-down.

The screenshot shows the 'FTA Notepad' interface. At the top, there is a navigation bar with the 'FIRST TECH CHALLENGE' logo, 'Event Admin', and links for 'English', 'Resources', 'Help/Feedback', and 'Hello, local'. Below the navigation bar is a link '<< Back to Event Home'. The main title is 'FTA Notepad'. On the left, there is a 'Match View' button. The central area displays 'Team #4130' with the status 'Expected Error!'. Below this, there are sections for 'ACTIVE:' (yellow background) and 'RESOLVED:' (green background). At the bottom, there are two buttons: 'Add Match Issue' and 'Add General Issue'. On the right side, a 'Teams' dropdown menu is open, showing a list of team numbers: 4130, 6582, 10934, and 10936. Below the team list, there are sections for 'MATCH' (with sub-sections 'COMPL' and 'FUTURE:') and 'Q1' through 'Q5'.

Add notes for each team, as needed, for the event.



## Options for “Issue Type”

### Team Issue

Match: Q1

Team: 4130

Type: Other Issue

Summary: DS Issue (Phone)  
DS Issue (Hub)  
RC Issue (Phone)  
RC Issue (Hub)

Details: No Robot  
Configuration Issue  
Robot Power Issue  
Connection Issue  
Electrical Issue  
Other Robot Issue  
Other Issue

Resolved?