FTC-Live Setup Guide

Revision History	
Revision	**Description**
25-26.1	Initial 2025-26 Season Release
25-26.2	Updated Appendix G – Dual Division, Appendix I – Audience display

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Introduction to *FIRST*® Tech Challenge Event Management Systems

FIRST® Tech Challenge bundles event management into a cloud-based system that includes an administrative system to manage and create events, FTC Scoring system; local software for the day of the event, FTC-Live; and a website to display the details to the community, FTC-Events. This guide navigates through the system requirements, and a step-by-step of how to use the system for an event. The system is robust. Most optional features have been added as Appendices with full details.

FTC-Scoring (ftc-scoring.firstinspires.org)

- FTC Scoring is used by several different users with assigned permissions and responsibilities.
- Private cloud interface for season and event management for PDPs and Administrators. Create leagues, create events, manage events, manage advancement, season/team reports.
- Private cloud interface for hybrid event management for teams. Upload Portfolios (Hybrid only), Judging (Hybrid only); Upload Avatars.

FTC-Live (ftc-scoring.firstinspires.org/local)

- Local event software for the day of the event. Manage event logistics, match schedule generation, match play, alliance selection, and displays. Upload event data to the cloud to display on ftc-event.firstinspires.org. This software is the focus of this guide.

FTC-Events (ftc-events.firstinspires.org)

- Public web interface for viewing region and event information, match results, awards, team information and history, league rankings.

What is the Scoring Server Computer?

The "scoring server" is the primary event laptop running FTC-Live. This laptop MUST be the laptop running the FTC-Live software match control page at the event. The scoring server is the primary device that connects to all other secondary devices using FTC-Live's event management features (HR tablets, displays, etc.). The Lead Scorekeeper runs and administrates the scoring server laptop.

When Does FTC-Live Becomes the Source of Truth?

Once the event data in FTC Scoring is finalized, an authorized user will `Transfer Event Data` to FTC-Live. See the `Transfer Event Data` section for details about when and how to transfer the data.

Once transferred to FTC-Live, the scoring server becomes the "source of truth." This "source of truth" is the single, definitive origin of data and information within the scoring system network – this is the one and only place where all data is considered accurate and up to date. Additional updates in the FTC Scoring Cloud System will be ignored.

It is important to understand that once the scoring server has event data transferred to it, no additional changes made to the event within the FTC Scoring cloud system will be reflected within the scoring server (judging results can be imported in a separate process). This includes modifying the teams at an event, updating a team's home region, and so on. Make sure all FTC Scoring cloud changes have been made before transferring the event to the FTC-Live system.

> Any changes needed after data has been transferred to FTC-Live will need to be made locally by the scorekeeper or another authorized user.

Who Uses FTC Scoring and FTC-Live

The users for each system are different. FTC Scoring is used for different levels of event system administration prior to event day, and by event volunteers on event day.

FTC Scoring User Roles

- FTC Scoring is used for different level of event system administration prior to event day.
- There are several user roles with different levels of access in FTC Scoring.
- A Roles and Responsibilities chart can be found in FTC Scoring Region Management Guide

FTC-Live User Roles

Lead Scorekeeper/Scorekeeper are the keepers of the scoring server (computer) and entire system at an event. It is **recommended** that the Scorekeeper use this guide to navigate through features in a sequential order.

The other roles for FTC-Live depend on the size of the event and the event plan for user tablets/features. Reach out to the Event Director, FTA, and/or Technical Director to determine what users will require access to the FTC-Live user tablets. How-to add user roles are found in the `Generate Random Accounts` section.

Seasonal Topics for Emphasis

There are significant changes to the software this season.

Practice Matches

The most notable is the addition of optional `Practice Matches` which has a schedule builder.

Awards

The `Awards Manager` has a new UI and the Present Awards button on match control shows which awards need to be given at what awards break. There are

Appendix J: Award Submission Warnings to be sure the correct amount of awards are given and there are not duplicate winners.

The event scripts have also been added and are editable.

Hardware Requirements

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

Displays

A 27” display monitor is the recommended minimum for audience and field displays. Pit displays may require a larger screen to accommodate the busier pit area.

Most events have the following laptop connected to a monitor, one per display:

1. Audience displays to view matches for each field. This display will show the Match Control Page During Matches
2. Field display for large timer that field staff/teams can view in the arena.
3. Large pit display for event participants to view rankings and Optional Inspection Schedule and Tracking in the team pit area.

The hardware configuration is described in more detail in System Layout

Tablets for use with FTC-Live

Tablets are used at *FIRST* Tech Challenge events for a variety of purposes, a few of which are:

- Referees to input match details (one per alliance)
- Inspectors to perform electronic inspection.
- FTAs to use the FTA Notepad
- Game Announcers and Emcees to view awards scripts and match info.

Android and iOS tablets are both compatible with the FTC-Live software. The tablet software layouts are designed for a seven-inch (7”) or larger tablet.

> Make sure that all the tablets are fully charged before the start of the event.

Network Requirements

The selection and configuration of the network hardware can be more critical than the selection of the server hardware for 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. This typically involves a consumer-grade wireless router.
- To avoid latency issues, the scoring server should be local to your event (and not run through a remote Internet/Cloud connection).
- The scoring network should be on its own secure network (i.e., not open to the public). This should minimize the risk of malicious activity occurring towards FTC-Live.
- Use a wired connection (Ethernet) whenever possible. Note: The real-time Scoring Referee tablets are wireless devices.

- Verify with the FTA, or WTA if one is available, to ensure the Wi-Fi Event Planning Guide has been followed and have reviewed the Venue Networking Requirements Guide with venue IT.

System Requirements and Architecture

The FTC-Live software is available for 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, schedules, printable reports, inspection tracking, Head Ref and FTA notes, and awards.

Scoring Server Minimum Requirements (Windows/Mac/Linux)

Hardware Requirements

- 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 is not available.)
- 802.11 Wi-Fi adapter

Note: If you are running a large event, such as a dual division event, a higher performing computer may be required.

Windows

- Windows 7, 10, 11
- 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.
- Google Chrome 80 and higher
- Support for Wi-Fi if connecting to a wireless network.
- Ethernet adapter if connecting to a wired network.

Tablet Requirements (Android/iOS)

Android Tablet Minimums

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

iOS Tablet Minimums

- iOS 15 or greater
- Google Chrome
- Support for Wi-FiSystem Layout

The FTC-Live software is flexible and can be used in a variety of configurations. This section provides an example of the average *FIRST* Tech Challenge system configuration and a basic one. 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.

Most Used Configuration with Real-Time Scoring

This system configuration supports real-time score tracking using a pair of wireless tablets used by Referees to track scores, one per alliance.

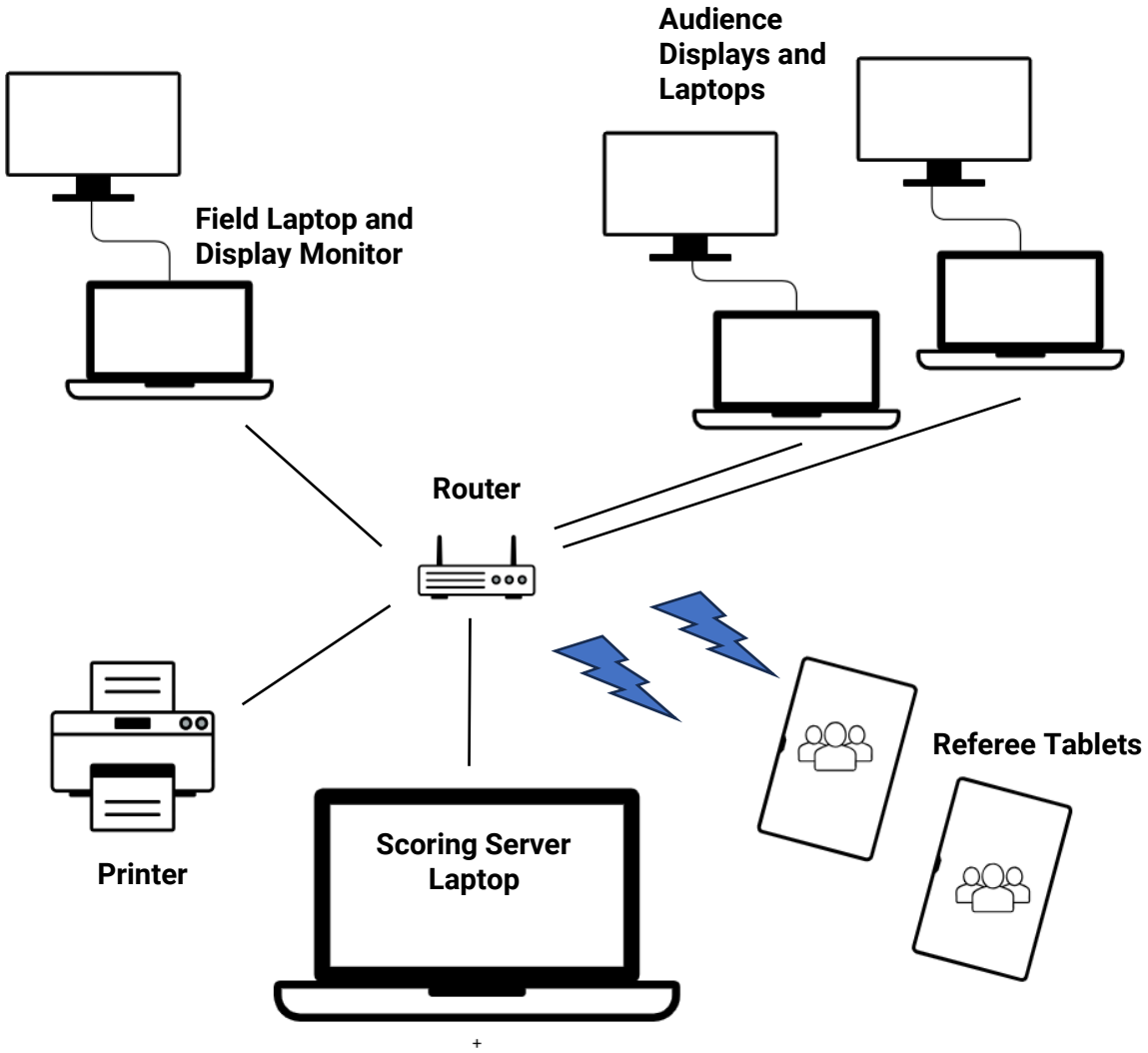


Figure 1 - Configuration for real-time score tracking using tablets and display monitors.

This configuration includes the following components:

- Scorekeeper's Scoring Server Laptop – A laptop that has the FTC-Live scoring 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.

> Follow the instructions that come with the router to set up the network. If running a DHCP server on the router, check to ensure the router's IP subnet does not overlap with the subnet being used for internet access.

- 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.
    - Connect to a large screen Field 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.
    - Connect each display laptop to a large screen monitor – at least one per field.
- Scoring Referee Tablets (at least x2 per field – one per alliance) – The tablets use a wireless connection and a web browser to access the scoring server using the same IP address. 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.
- Additional tablets can be used for real-time inspections, Head Referee notes and FTA notes, etc.

Important Tips for System Layout

- 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 display computer, wants to access the system, the user must provide the IP address of the Scorekeeper laptop to the web browser 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 the *FIRST* Technical Advisor and/or the venue's IT administrator on what the IP address is for your server.
- Wireless activity for FTC-Live should operate on a Wi-Fi channel (5Ghz) 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. A single computer should be used as the source of PA audio (to avoid synchronization issues).

System Best Practices

- Use a dedicated, standalone router.
- Disable all firewalls on the computer that will be running the server.
- All displays and tablets should be on the router's local LAN.

- If supported use a 5Ghz Wi-Fi channel.
- Optional scorekeeping internet access should be bridged via a second ethernet adapter (USB Wi-Fi dongle).
- If doing so, ensure that the scorekeeping server is picking up the right adapter's IP address.

Configurations NOT Supported by FTC Tech Support

These are configurations that our tech support team will not troubleshoot because there are too many variables or a local venue point of contact (PoC) that need to troubleshoot the network.

School Network

- May not always work.
- School networks often have aggressive internal firewalls.
- School networks often block traffic entirely from unknown devices.
- Organizers must collaborate with school IT staff to set up and test the network prior to the day of the event.

> *FIRST* cannot provide day of event network or setup support for setups that use a school network.

- Day of event set up in an unfamiliar school very often results in failure.

Cellular Hotspots

When a constant internet connection is not available, cellular hotspots are frequently used to push scoring data to ftc-events periodically throughout an event. Service providers manage cellular hotspots, and not all service providers allow all protocols and communications between devices and networks even on the same network. *FIRST* does not have recommendations for cellular hotspots nor enough data to provide reasonable recommendations. As such, it is imperative that configurations utilizing a cellular hotspot be thoroughly tested prior to the event.

Download the FTC-Live Software

The FTC-Live software lives in the FTC Scoring Resources tab as "Scoring System Download" FTC Scoring. The full download step-by-step is in `Appendix A: Download the Software` Package. If FTC-Live has already been downloaded, make sure to close all FTC-Live windows and restart FTC-Live app for the latest updates.

> Make sure to read the Release Notes.

Important Tips for Running the System Software

Here are some tips before you get started:

- Ensure that Google Chrome is installed and is the default browser.

- **Important:** Firefox browser is not supported!
- Disable any firewall/virus protection on the computer 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.
- Clear the browser cache.

> You cannot run two versions of FTC-Live on the same laptop. Make sure to close and re-open for auto-updates.

Getting the 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 FTC-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 FTC-Live splash screen. It is important to know that the IP address shown is the best guess, if there are multiple network adapters on your computer the IP address listed might not be the correct one for use on tablets for scoring server communications.

Log in to FTC-Live

When the software opens it should launch a web browser window, and the login page will be navigated to by default. If it does not, click the “Open in Browser” button on the FTC-Live splash screen to perform this action. It is also possible to open your browser and type “localhost” in the navigation bar; this will almost always navigate to the internal running FTC-Live process (if FTC-Live is running). The default “Login” username for FTC-Live is “local,” with no password. This login gives FTC-Live “Event Admin” user access to the software which includes all features of FTC-Live. The “Event Admin” role is the primary administrative user role. This role is given to the volunteer running FTC-Live on the scoring server laptop.

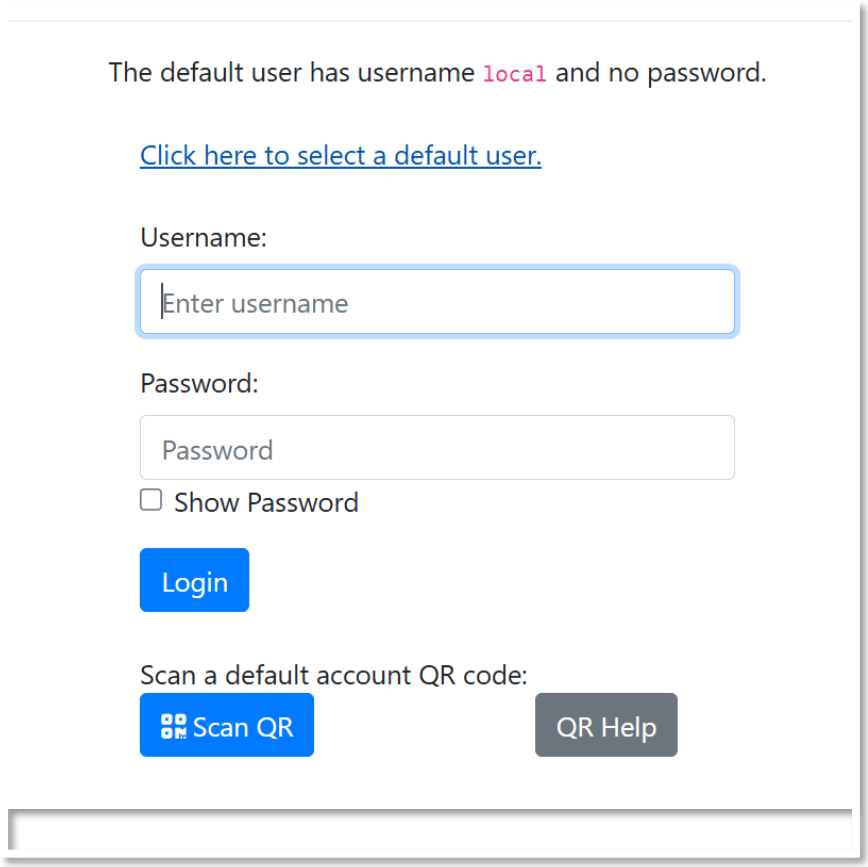


Figure 2 - Log in as "local" no password on the scoring server.

Options Available in the FTC-Live "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 FTC Scoring system, or to enter an unlisted event.
- **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.

Transfer Event Data

The event data is configured in FTC Scoring, then the database file is moved to FTC-Live. Once moved to FTC-Live, that becomes the official event data and Source of Truth (SoT) for the event results. That means any changes after the transfer MUST occur in FTC-Live. Make sure the FTC-Live software is running on the event laptop when performing the event data transfer.

Only `Automatic` and the `Manual/Event Key` options can be used for official events – contact HQ support for help if you need offline setup.

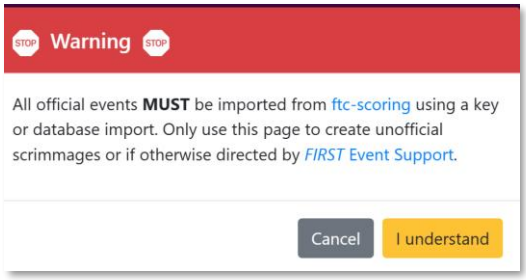


Figure 3 - Warning that only automatic and event key imports are used for official events.

When Does the Event Data Need to be Transferred?

The best practice is to make the transfer ***no more than 2 days*** before the event start date, preferably the day/evening prior to the event. FTC-Live locks in many variables at the time of data transfer and transferring Event Data too soon will have negative consequences as even software updates may not be applied to those locked-in variables. This can be a huge problem that might not be easily recovered!

If the Event Data is transferred to FTC-Live ***more than 2 days*** before the start of the event, please contact FIRST HQ for help in determining the best course of action to avoid invalidating your event!

Who Can Transfer?

Certain users have access to FTC Scoring to transfer the event through the "Play Locally" button. The roles must be granted through VMS/LMS training or added to the event in FTC Scoring. These users are:

- FTC Scoring Region Administrator (FTC Scoring Region Management) is also responsible for entering data into FTC Scoring prior to the event and the data transfer.
- FTC Scoring Region Manager
- *FIRST* Technical Advisor
- Lead Scorekeeper –will work with Event Director on changes to data in FTC-Live after the transfer at the event.
- FTC Scoring League Administrator

How to Transfer Event Data from FTC Scoring to FTC-Live

The following "Set Up an Event" options are dependent on the availability of internet access. Users with access need to transfer official events with either the `Manual/Event Key` or the `Automatic` option.

Make sure to do the following prior to transferring the event data in FTC Scoring:

1. Navigate to the correct event/event code dashboard.

2. Confirm the teams, event configuration/advancement (if applicable), and other data points are correct, etc.
3. Scroll down to the “Play Locally” button. Navigate to this URL ftc-scoring.firstinspires.org/event/eventcode/dashboard/local/with the correct event code to go directly to the “Play Locally” transfer data page.
4. The Transfer page opens with three options.

Internet access at setup time?	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)

For official events go to FTC Scoring to log in and do the transfer via one of three ways:

Automatic

This is the ideal configuration. This requires being connected to the internet, download FTC-Live software, and have access to FTC Scoring to transfer the event data.

1. Launch FTC-Live software using the FTC-Live app.
2. Log into FTC Scoring with your *FIRST* dashboard email.
3. In FTC Scoring, go to the Event Dashboard.
4. Select the “Play Locally” button.
5. If “Found FTC Scoring System Version…” appears, push the “Import This Event” button. This opens the event in FTC-Live in a new browser.

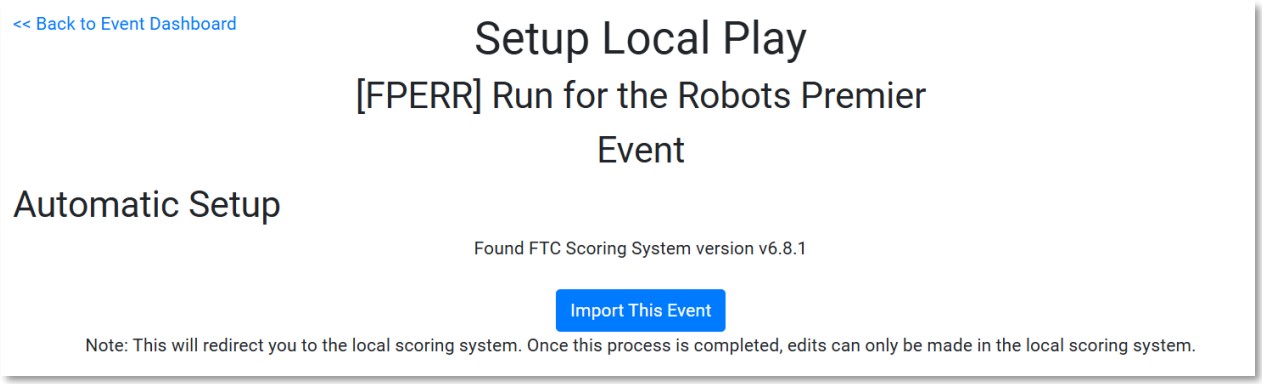


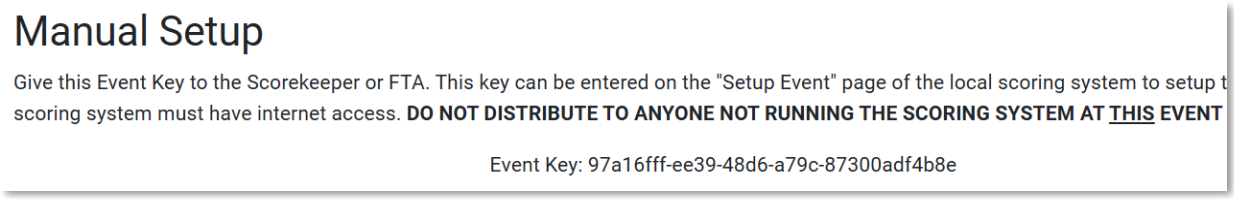
Figure 4 - An Automatic Setup will show the software version number running and Import This Event will redirect you to FTC-Live.

Manual/Event Key

The event key method requires obtaining an event key. The event laptop must have internet access to transfer the event data to FTC-Live.

1. Log into FTC Scoring to Copy the event key. This can be emailed to the Event Director for record keeping and used at the event, though the Lead Scorekeeper can log in and perform this step.

2. Log into FTC-Live using username “local” with no password.
3. Go to “Event Admin” link in top left corner.
4. Choose “Event Setup”
5. Choose “Manual Setup”
6. Enter the Event Key



Offline

Download the event database file. The file can be uploaded to FTC-Live event.

1. Log into FTC-Live using username “local” with no password.
2. Go to “Event Admin” link in top left corner.
3. Choose “Event Setup”
4. Choose “Offline Setup” to upload the file.
5. Review the Event Page info (name, date, location) and Confirm.

Data Transfer for Leagues

FTC Scoring calculates league ranking using available published match results from a previous event and includes this information in the transfer of the event.

Make sure that prior events for the league have been published prior to transferring the event data.

Edge Case - Transferring Data for Same Day or Same Weekend Back-to-Back Events

Back-to-back events can be done with special consideration. Please contact customerservice@firstinspires.org if you are planning back-to-back events and need assistance with uploading the first event prior to downloading the data for the second event or there is an advancement issue with a team attending both events, etc. It is important to request this assistance in advance, so that on-call staff are prepared to help you. The events may have data transfer and advancement issues.

Examples:

- One or more teams may participate in two events where the full results of the first event are not completely uploaded before the second event's database is downloaded from the cloud to FTC-Live.
- One or more events have advancement dependencies on events that might not have completely uploaded their full event results before dependent events downloaded from cloud to FTC-Live.
- One or more dependent events occur offline, with no consideration of the results of the earlier events in the results of the latter events.

- *This can occur especially in closely scheduled League Meets (otherwise generally rare).*

FTC-Live – Event Preparation

The event's home page is the one stop shop for event management, including event printables. From this page you can navigate to the Event Dashboard, Match Control page, displays and much more. This section navigates through the steps to be taken at the event to ensure schedules have been verified, team data is accurate, users passwords are generated, and inspection is scheduled/tracked, as needed.

Download Event Videos

New for 2025-26: For events running a very simple A/V set-up but who still would like to play the recommended videos this can be managed within FTC-Live.

Videos are not automatically downloaded or installed as part of the FTC-Live install process and will need to be downloaded on the scoring system computer from FTC-Live while connected to the internet. For events without internet, this step needs to be completed before the event using the same computer which will be used at the event (Figure 5).

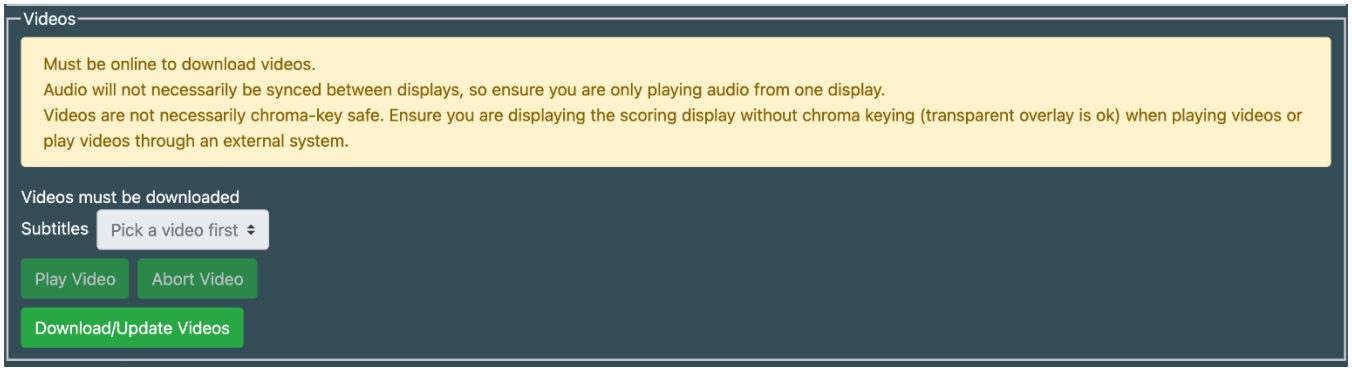


Figure 5: Download videos in FTC-Live

Once videos are downloaded they can be played directly from within FTC-Live (Figure 6). Videos will play after a short delay on all connected audience displays. Note that videos will not be perfectly synchronized so ensure audio is only playing from one source for the best audience experience. All videos will play with subtitles enabled.

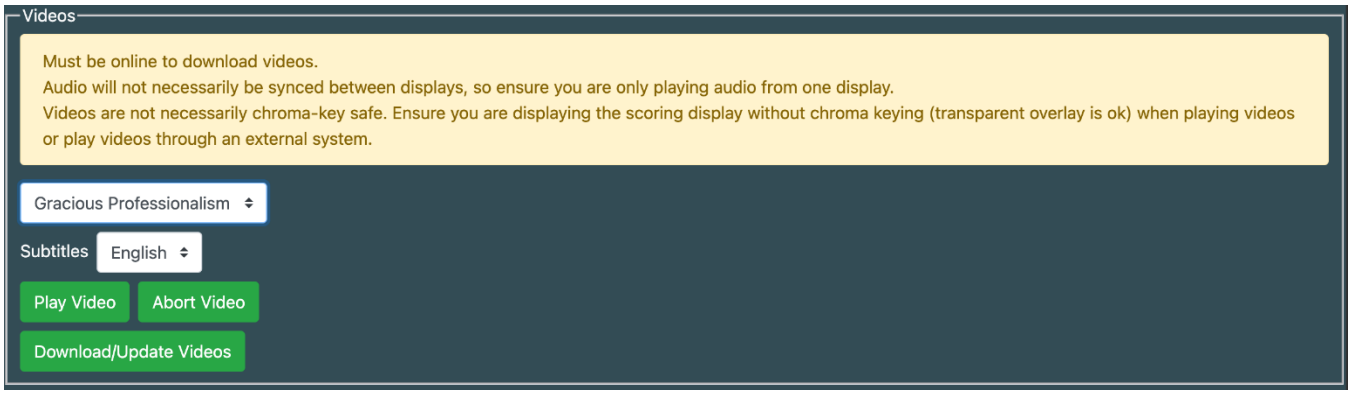


Figure 6: Play videos in FTC-Live

Schedules

The first step in ensuring the overall event runs smoothly is to confirm the public event schedule with the Event Director and *FIRST* Technical Advisor (FTA).

- Verify that all the times on the schedule are correct, especially match play, breaks, judging/awards, and lunch break. You need this information to create the match schedule.
- Important - Make sure the correct quantity of teams and team #'s are listed.

Types of FTC-Live Schedules

These are the three schedules that can be created in FTC-Live for different matches. The Playoff schedule is dependent on the completion of the Qualification Schedule and Alliance Selection.

- Practice Match Schedule - `Create the Practice Match Schedule`
- Qualification Schedule - `Qualification`
- Playoff Schedule - `Playoffs`

Team Participation - Important Verifications

In the software, the teams that had been added prior to the data transfer will be listed in the "Add/Edit Teams" button on the FTC-Live "Event Dashboard."

This is a good checklist of team status. Verify that the teams checked in are playing in matches and/or judging.

- A link to do a "Data Download" appears on this page. Click if the event is online.
- Check that the correct teams for match play are listed.
- Remove teams who are not participating.
- Change team status in team profile for "Judging Only."
- Add teams who are not yet on the team list (this will synchronize back up to the cloud).
- The match schedule can be generated after all teams have checked in to the event or the check-in deadline has passed. Confirm with the Event Director for the status of teams who run late before removing them from the event.

The Appendix D: Team Profiles and Icons gives more detailed information of team profiles and downloading data to FTC-Live.

Team Profiles – Important Verifications

The responsibility of the override process is assigned to the Event Director/Program Delivery Partner (PDP). Details on how to override a team's Advancement or Inspire 1 eligibility live in the FTC Scoring Region Management Guide. Making changes requires their approval. Please be aware that *FIRST* Headquarters monitors all overrides.

- Change a team's profile based on the Eligibility report.
- Override a team's Eligibility for "Advancement" or "Inspire 1" if they are "Ineligible."

How to Modify Team Profiles

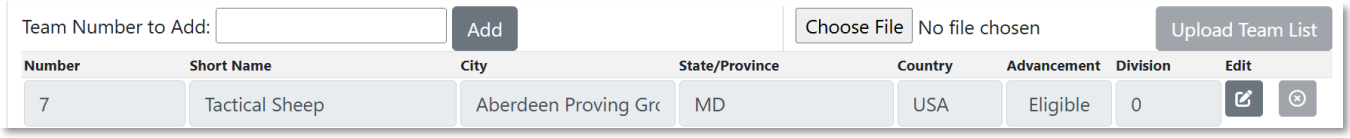
From the event home page, navigate to the "Event Dashboard" and select the "Add/Edit Teams" button. This takes you to the Team List page. Each team profile can be modified when the list is in the default "Add Individually" tab. Double-click on the team's "Edit" button to open the "Team Profile" page.

Add a Team

At the top of the "Add/Edit Teams" page, there are tabs to enter or select teams from a list: By State/Region (easiest), By League, Add Individually, or enter "Team Number to Add." You can also add a list of teams by selecting the "Choose File" then "Upload Team List."

Remove a Team

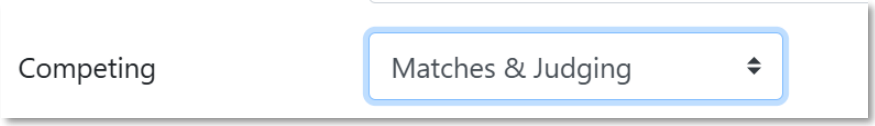
All teams listed for the event appear on the default "Add Individually" page. Scroll down to the team and select the "X" on the far right-hand side to remove the team.



Change a Team's "Competing" Status

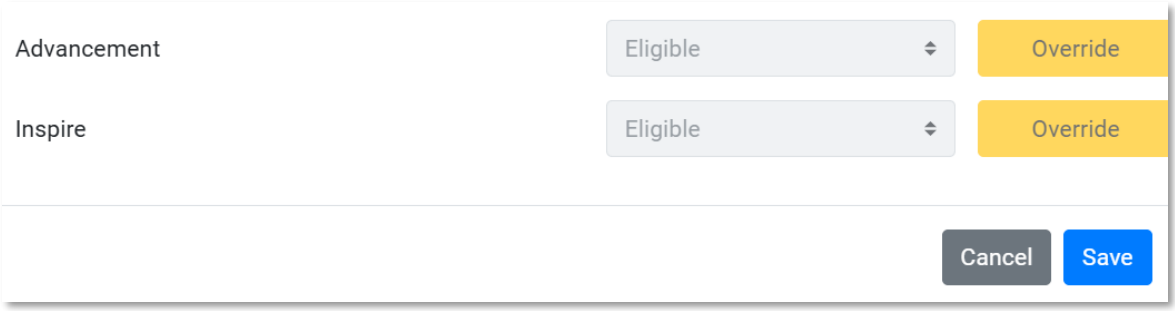
This is a required step for any team NOT participating in matches to prevent the team from being added to the match schedule. This is a very important step.

1. Double-click on the team's "Edit" button on the right-hand side.
2. Scroll down to "Competing" which defaults to "Matches and Judging" to select "Judging Only" or "Not Competing" status.



Change a Team's Eligibility

Overrides for "Advancement" and "Inspire,1" can be done in FTC-Live, if necessary. Select "Override" and change the selection to/from "Ineligible/Eligible." Eligibility overrides should be discussed with FIRST Technical Support if there are any concerns.



Printables

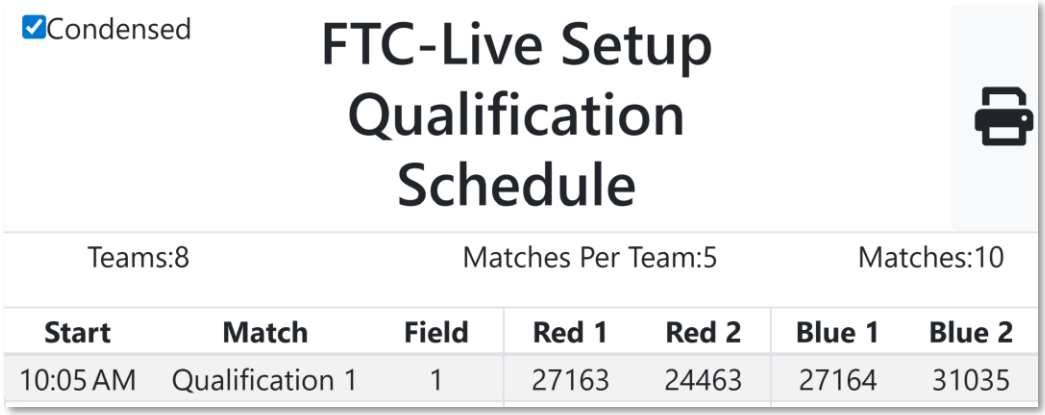
One of the most important tasks of the Scorekeeper or Field Supervisor is to understand the list of what volunteers need printed. For example, the Lead Queuer needs the list of teams and the match schedule to ensure the correct teams are ready for their matches.

- `Print the Match Schedule` and `Print the List of Teams` as soon as team verifications and add/edits are completed.
- "Event Reports" provides other optional printables.
- The "GA/Emcee" header includes "Announcer Report" and the "Alliance Selection" printables.

Print the Match Schedule

Prior to the event starting, On the event homepage, under "Event Info" print the "Schedule" and "Rankings" under "Qualifications," once `Qualification` is ready. Once the Playoffs are scheduled, print the "Schedule" and "Rankings" under "Playoffs."

Make sure the "Condensed" button is checked.



☑Condensed

FTC-Live Setup Qualification Schedule

Teams:8 Matches Per Team:5 Matches:10

Start	Match	Field	Red 1	Red 2	Blue 1	Blue 2
10:05 AM	Qualification 1	1	27163	24463	27164	31035

Print the List of Teams

Your event will require a few copies of the team list. Give this to the Event Director to distribute to the volunteers that need the list.

The “Competing Teams” report is found under “Event Info”> ”Event Reports.” Check off boxes that are required for the event, including “Condensed,” “Show Affiliation,” “Show City,” “Show State,” “Show Country,” and “Show Rookie."

☐Condensed

Delaware State Championship Teams

☐Show Affiliation ☐Show City ☐Show State ☐Show Country ☐Show Rookie

Number	Team Number	Name
1	7	Tactical Sheep
2	365	MOE (The Miracle Workerz)

There will be other materials that may need to be printed, though the number of items that are printed depends on several factors. Consult with the FTA and Event Director to determine the full range of printables desired for the event.

Generate Random Accounts

Accounts can be set up to have access to a specific tablet for use in their role. Generate random accounts will provide log in username and password for each user. “Print to PDF” for reference and email or give a copy to the Event Director.

Once the accounts have been generated, assign a user to a tablet. Pro tip: Add a user label to the tablet, i.e., red alliance scoring referee.

- Emcee/GA – Tablet opening ceremonies scripts.
- Head Referee – Tablet to keep track of referee data throughout the event.
- Scoring Referee – Tracks one alliance color per tablet.
- FTA— Tablet to keep track of notes for a team throughout the event.
- Inspector – Tablets are used by inspectors for electronic inspection status.

More information about creating accounts can be found in Appendix F: Creating Default User Accounts.

FTC-Live and Inspection

FTC-Live has a built-in inspection status and scheduling tool. This can be used to track the inspection process at an event if the event uses tablets. There are user id and passwords for Inspectors (see Generate Random Accounts).

The inspection displays show inspection status via the “Video Switch” tab in Match Control “Settings.” Make sure the team list is finalized, and inspection settings are properly set up under “Inspection Status and Schedule.” For more information on how to set-up inspection use the

Appendix H: Inspection Tools.

FTC-Live - Match Control Page and Settings

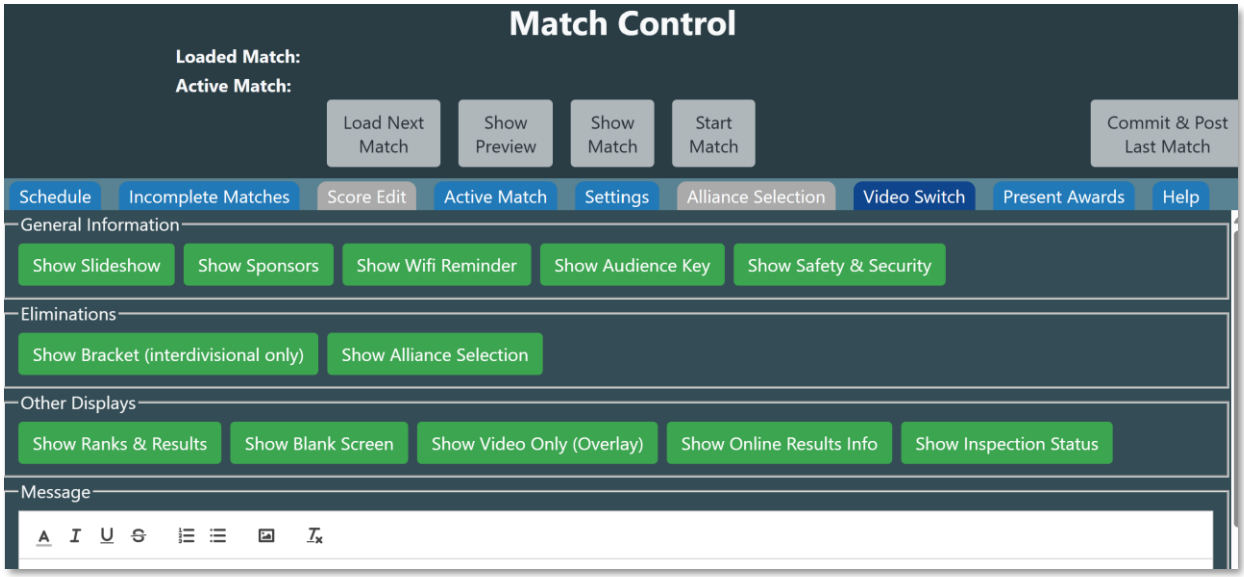
Introduction

The Match Control page opens the scoring and display options of the FTC-Live software. The Match Control page is where the Scorekeeper will spend most of their time during the event. It is where the match timer is controlled, and scores are edited. Navigate to the Match Control Page from the event home page. While going through this section, navigate to the Match Control page to follow along using Appendix B: Set Up an Unlisted Event.

Contents of the Match Control Page

- Match Schedule – shows list of test, qualification, or playoff matches. Use this page to keep track of matches, commits and posts.
- Incomplete matches – shows matches that have not been Committed or Posted. These need to be reconciled before proceeding to the next match.
- Score Edit – go here to edit a posted score.
- Active Match – shows the match that is currently being played.
    - Settings – provides most of the tools to use within the system. Data Download of teams and Test Matches are found here. The following need to be discussed with the Head Referee and FTA/Event Director then configured prior to starting the event:
    - Checkbox for "Use Live Scoring" is default.
    - Require Referee Init Submit Before Start?
    - Enable HR Match Control ?
    - Allow External Randomization?

- Alliance Selection– use this feature with a display after the Qualification Matches are complete, prior to enabling playoffs.
- Video Switch (shown) – provides all the options for displays. Go to this page to change what information a displays shows.
- Present Awards – Show the awards on displays after they have been entered in the Awards Manager
- Help - FTC-Live Tech Support Chat button, support phone numbers, and link to the Github Scorekeeper Repo to file bugs or improvements live on this page. This also lives on the "Resources" link in the upper right-hand corner of the homepage.



The Match Control page should be used in full screen mode, and the user does 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 the user has two separate browser windows launched on their computer.

Test Matches

Test matches are different from Practice Matches. Test matches are for volunteer training purposes. Test match workflow is for testing the FTC-Live system prior to running Practice or Qualification Matches at an event. Use this feature to train as a Scorekeeper (check the "training" button.) or to test new features with default "Test Teams." Details on test matches live in `Appendix C: Test` Matches.

Practice Matches

Practice matches occur on event day. These matches are dependent on the event schedule planned prior to event day. These matches are for teams to practice prior to qualifications. For more information on the rules of these matches go to the Competition Manual. Give an equal number of matches to each team, if possible.

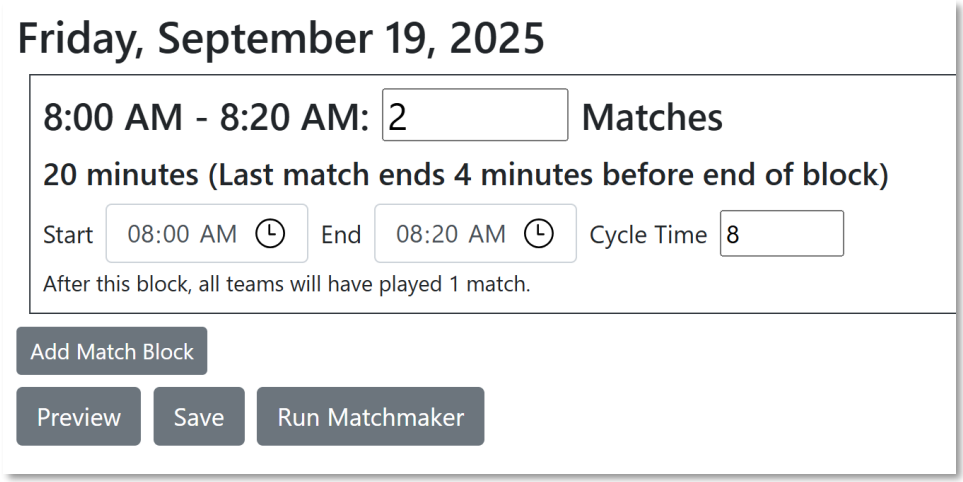
If your event has no planned practice matches, proceed to `Qualification Matches`.

Create the Practice Match Schedule

The practice matches have their own schedule which must be created on the FTC-Live Event Dashboard prior to them appearing on the Match Control page.

From the event home page, go to the Event Dashboard, select the “Practice Match” button. This takes you to the Practice Match Schedule.

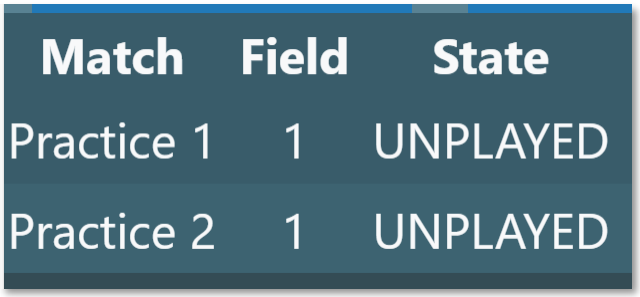
The schedule needs to be published prior to the start of the practice matches.



- Adjust “Start,” “End” and “Cycle Time” for the matches.
- Make sure all teams that want to participate are accounted for on the number of teams.
- ”Preview” and/or “Save” the matches before pressing “Run Matchmaker.”
- Once the matches are “Activated” go to the Match Control page to play them.

Navigate to Practice Matches

After the schedule is activated they will appear on the Match Control page in the “Schedule” as “Practice #.”



Match	Field	State
Practice 1	1	UNPLAYED
Practice 2	1	UNPLAYED

How to Exit Practice Matches

Go to the “Settings” tab in Match Control and press “Advance to Quals.” There is also a “Return to Practice” button to reactivate the practice matches on the Schedule.

Qualification Matches

All official event types have these matches. The Qualification Matches need to be scheduled after the team list is finalized (all teams have checked in). Access the "Create Match Schedule" on the Event Dashboard to create qualification matches ONLY.

Checklist to Verify Before Creating the Qualification Match Schedule

- Start time of matches and the overall event.
- End time of event and therefore matches.
- Cycle time planned for matches (how long each match will take to run through and set up.)
- Is there a lunch break time? "Add Blocks" of time to separate the day into match blocks.
- Take a last review of participating teams with the Event Director and FTA.
- Are there teams there that have not been marked as "Judging Only?"
- Are all the teams competing?
    - If not, `Change a Team's "Competing" Status`

Create the Qualification Match Schedule

The "Create Match Schedule" lives on the "Event Dashboard" and must be created to populate matches on the "Match Control" page.

- Adjust "Start," "End," and "Cycle Time" for the matches.
- "Preview" and/or "Save" the matches before pressing "Run Matchmaker."

> Once the match schedule is created, a "Warning" pops up to make sure that any new edits are captured and "Run Matchmaker" is done again with the edits to participating teams.

- Once the matches are "Activated" go to the Match Control page to play them.

Activation is Required (button)

The activation of the match schedule requires pressing the "Activate" button. Once activated, the match schedule may appear externally on FTC Event Web : Home if the event is online.

> DO NOT Activate the schedule until the times are confirmed and all teams are accounted for with the correct status.

Match Schedule

- Once activated, `Print the Match Schedule` (optional.)
    - There is also a Print icon on the Match Schedule page.
- This schedule may also be available on FTC Event Web : Home if the event is online.
- Be in contact with the Event Director on who needs the match schedule. Queuers may need a copy of match schedule.

> Verify start time of next match. If the schedule has changed, editing the match time will be necessary via the "Create Match Schedule" button.

Editing Match Times

Edit the first match time for match schedule by selecting the clock icon for Start or End time, changing the time and pressing “Save” to update the schedule shown. Make sure the match times change before printing.

Match Control Page During Matches

The Match Control page can be accessed from the Event Dashboard. This is where most of the Scorekeeper’s active event tools live. The activated match “Schedule” tab for real events is where the list of matches appears for the Scorekeeper to progress through the matches.

Pre-Qualification Match Checklist:

- Make sure you are not in `Test Matches` or Practice Matches.
- Know `How to Exit Practice Matches` by pressing the “Advance to Quals” button.

Score Edit

“Score Edit” is one of the Match Control tabs. Use this prior to “Commit & Post Last Match” in cooperation with the HR/FTA. Ensure that the referee tablets have finalized their input before using this tab as the data can conflict.

Replay

If the match results have been posted, the Head Ref will make the determination on whether a match must be replayed. Use “Replay” when the results are already posted.

Match Flow – Schedule Page

Talk to Head Referee (HR) and FTA/Field Supervisor about match flow and reset cues for qualifications. More on the HR/FTA handoff can be found in the Field Operations Guide.

FTC-Live “Schedule” tab match flow for the Scorekeeper is usually, as follows:

- “Load Match” with new teams.
- “Show Preview” of match on displays.
- “Randomize Field” of game elements.
- “Show Random” on displays.
- The Referees “Submit Pre-Match Info” on tablets.
- “Show Match” with teams on displays.
- “Start Match” activates match timer.
    - Referees track, then submit Autonomous.
    - Referees track, then submit Teleoperated.
    - Referees review, then finalize their scores.

- "Commit & Post Last Match" once verified with the Head Referee that the match entry is complete.
    - Activates display of results. If the event is online, the results will also appear.

Match Flow on Displays

The FTC-Live "Schedule" page has all the match flow options that will display on the Appendix I: Audience Displays.

There is also a Ranking display option on the Pit Display that will show the teams' rankings. The Pit Display is found on the event home page and "Scoring Displays" to show the audience the rankings.

Rank	Team	RS	POINTS	BASE	Plays
NP	16619	--	--	--	0
NP	18230	--	--	--	0
NP	21828	--	--	--	0
NP	24463	--	--	--	0
NP	24579	--	--	--	0
NP	27163	--	--	--	0
NP	27164	--	--	--	0
NP	31035	--	--	--	0

Match Statistics – Cycle Time Report

Cycle Time Report is good to slow down or speed up match flow. This report is found under "Event Dashboard>Reports." Show these to FTA/Field Supervisor. Note: The Head Referee and JA can also see this report for an event by logging into FTC Scoring.

Alliance Selection

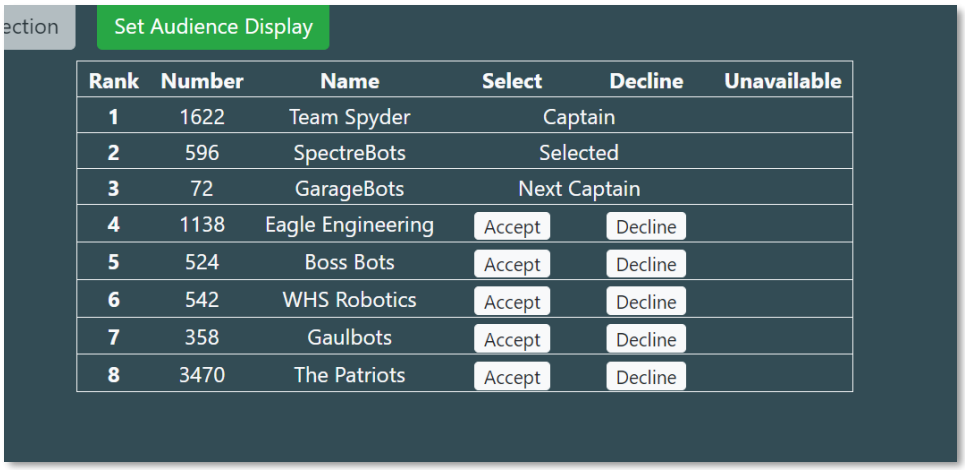
After qualification matches have completed, the alliance selection process begins. The details of alliances and selection rules can be found in Competition Manual, Section 13.7

- Verify that all teams are ready for alliance selection.

> The Scorekeeper must provide a view of the alliance selection process to the audience. The scorekeeper should push the "Set Audience Display" to toggle the Audience Displays to Alliance Selection mode. This can also be found in the "Video Switch" tab of the Match Control page.

Start Alliance Selection

1. The scorekeeper must press the “Alliance Selection” tab on the Match Control page to begin the Alliance Selection process. The number of alliances formed auto-adjusts to reflect the number of teams participating.
2. If a team is not competing in playoffs, you should select ”Remove”
    - This option appears once you click “Start Alliance Selection.”
    - Do this before selection starts.
    - Do not remove them from the event team list.
3. Press the “Captain” button next to a team to designate the team as an Alliance captain. Once an alliance captain is selected, their team number should appear as the Alliance Captain, and the list of available teams will be updated.
4. 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.
5. The Alliance Selection Displays will update as the buttons are pressed.
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.



The software will adhere to the Alliance Selection rules that are prescribed in the official Competition Manual when determining and displaying selection eligibility for the remaining teams. If a team is not present choose “Remove.”

The selection process is repeated until all alliances are finalized.

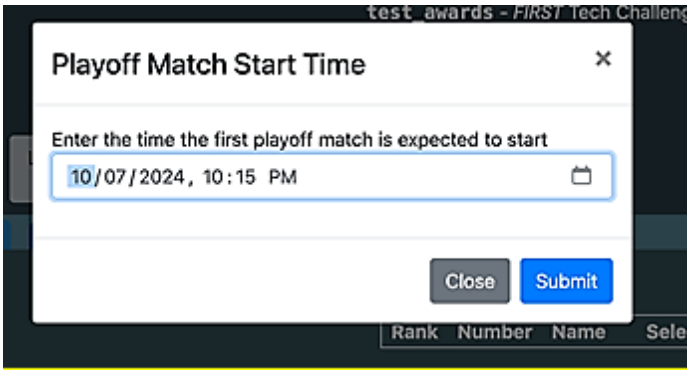
Playoffs

Playoffs begin after the alliance selection has concluded. The playoffs require a schedule to be created which is activated by “Generate Matches” button in the Alliance Selection page. The awards breaks between playoff matches are built into the software, as required. The playoff rules and explanation of playoff alliance wins and losses can be found in Competition Manual, Section 13.7. The size of the playoff bracket is decided by number of teams competing at the event.

Create the Playoff Schedule

When the alliances are finalized, the Scorekeeper should press the “Generate Matches” button on the Alliance Selection page to generate the playoff matches.

Enter the start time of playoff match 1 when prompted to initialize the playoff matches.



Once the “Playoff Match Start Time” has been entered, exit Alliance Selection and go back to the Match Control tab “Schedule” to view and “Play” the playoff matches.

The Scorekeeper and Referees can run the matches similarly to how the qualification matches are run.

Print the Playoff Bracket and Schedule

If desired by Field Staff, print the Playoff bracket once the start time for playoffs has been entered. At a minimum, give a copy to the Event Director, Game Announcer/MC, Field Supervisor/FTA and one for Pit Admin. It is also recommended to give one bracket printout to each Alliance Captain.

Playoff Match Timing

The timing of the playoff matches is based on the duration of the following:

- Playoffs cycle time – 6 minutes.

- Each match is 3 minutes.
- The required Competition Manual rule T206 break is 8 minutes.
- The awards break in between matches is 8 minutes and there are three awards breaks in the playoffs regardless of the event's size.

DO NOT press "Show Match" until ready. The match timer will disappear.

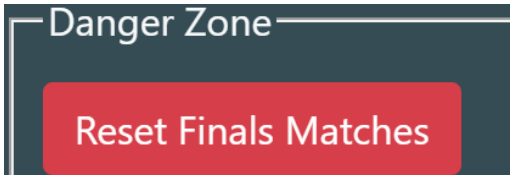
What Playoff Timing Lives on Displays

- Timer for matches lives on the audience and field display.
- Time out timer – Field display shows the timer in the center.

How to Reset Alliance Selection/Final Matches

At single-division events, or when managing a division at a dual-division event, there is a possibility that the alliances need to be reset, especially if they need to be corrected for some reason after a playoffs match schedule has been created. This can be done by pressing the button "Reset Alliance Selection" in the "Settings" tab on the Match Control page. This wipes out the Alliance Selection settings and allows/requires alliance selection to be re-entered.

When managing a parent event at a dual-division event, the alliances that play in the inter-division finals matches may need to be corrected after the matches have been generated. To clear out the selection of alliances to play in the dual-division finals, the "Reset Finals Matches" button can be used. In dual-division finals events, there is no "Reset Alliance Selection" button but instead it is replaced with "Reset Finals Matches."



Managing Awards

This section explains what the "Awards Manager" is, the hand-off of awards data from Judge Advisor and which setting to use in the Awards Manager.

Awards Manager

The "Awards Manager" is an integral tool to use as part of the official event results. The Awards Manager tool is accessible from FTC Scoring on the event homepage for the event and/or in FTC-Live for the Scorekeeper to work with the Judge Advisor. In FTC Scoring, this tool has several functions including allowing a Judge Advisor to enter the awards required for the event size (number of teams) plus optional awards, and to edit the awards script and the same can be done in FTC-Live.

Who Enters Awards?

In most cases the Judge Advisor needs to enter the awards or sit with the Scorekeeper to enter the awards. Once the Judges/Judge Advisor decides the awards, they need to be entered into the FTC-Live

“Award Manager” which provides a drop-down of teams participating in judging at the event for each required award. In both cases, the Judge Advisor needs to confirm that the correct teams are listed for each of the awards. The Scorekeeper will `Present Awards`.

> Keep in mind the event results are published with “Send Results to *FIRST*” and the awards will appear externally on FTC-Events

How to Enter Awards?

For this season, the Awards Manager details live in the FTC Scoring – Judge and Judge Advisor Guide in the “Manage Awards for Judge Advisors” section.

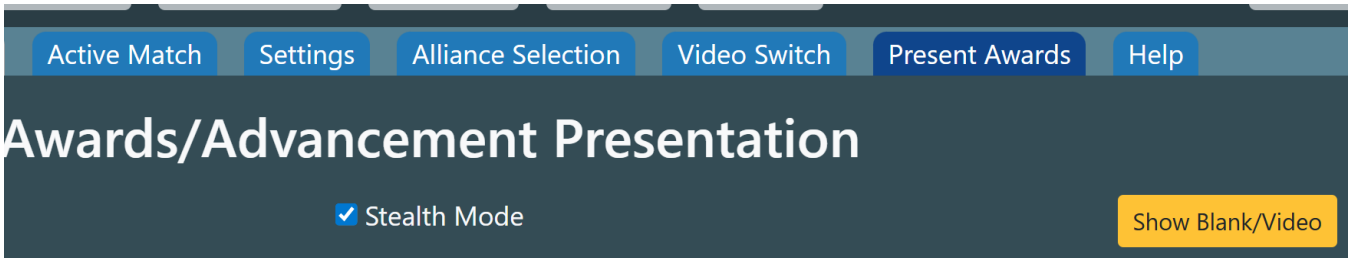
How to Balance Awards Breaks in Match Flow

The Scorekeeper will be responsible for the transition from matches to award presentation during the `Playoffs`. The best practice is to use the “Present Awards” tab on the Match Control page to manage awards. The required awards breaks during the Playoff Matches are explained in Competition Manual, Section 13.7.

Present Awards

On the Match Control page, the tab “Present Awards” opens the page with the awards grouped so that only the required awards for each break are presented.

> “Stealth Mode” is the default so uncheck the box when the awards group is presented.



Print the Advancement Report

Once the matches have all concluded and verified by the Head Referee and Event Director, go to the Event Dashboard to print the Advancement Report. The Judge Advisor needs to review that the awards were entered correctly and that teams are listed correctly on the Advancement Report. The correct number of advancing teams needs to be verified with the Event Director.

Send Results to *FIRST*®

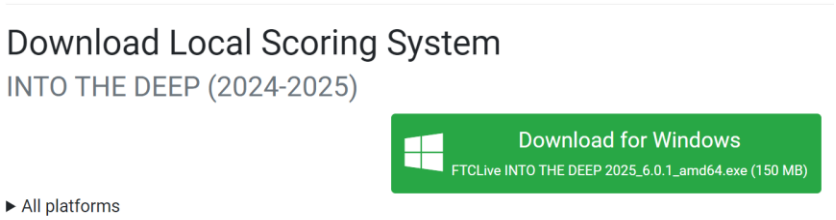
The final step for event day (or within 7 days when the laptop is online again) is to go to the Event Dashboard and press "Send Results to *FIRST*®" which activates the sync to the *FIRST* Tech Challenge official results page FTC Event Web : Home

Appendix A: Download the Software Package

The software is installed through an .exe installer package file downloaded from the ftc-scoring website. This only needs to be done once per season, and then again for the offseason software (the regular season and offseason software packages are separate); once installed, the software will auto update when launched.

The system can be downloaded from [FTC Scoring (firstinspires.org)]

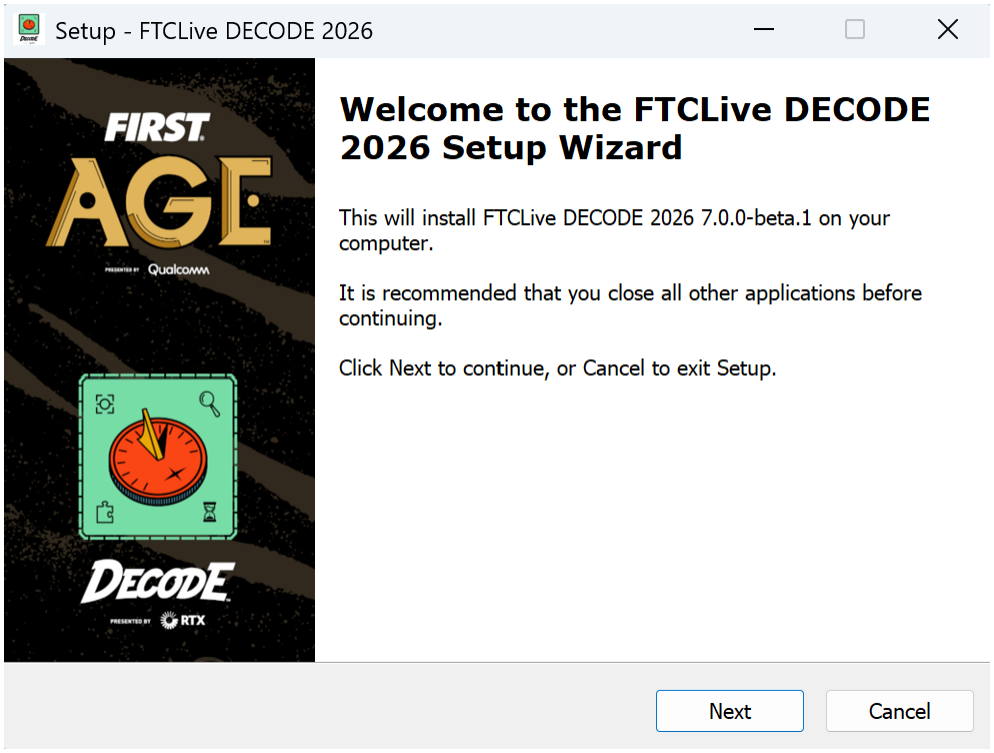
- Read the Release Notes.
- Previous season software can be found here:
  - 2019-2022 season software will remain available via GitHub releases.
  - 2023 and newer software is available via FTC Scoring.
- The scoring system is now an installer rather than a ZIP you unpack. The ZIP file is still available for architectures that is not otherwise supported by an installer.
  - Databases are now stored in Documents/FIRST Tech Challenge Live/<season>.
  - You only need to download and install the scoring system once per computer per season. When you launch the scoring system, it will automatically download any updates that are available if it is connected to the internet and has been shut down from a previous release.
- The website will detect the platform you are running on and offer a button to download for that platform.



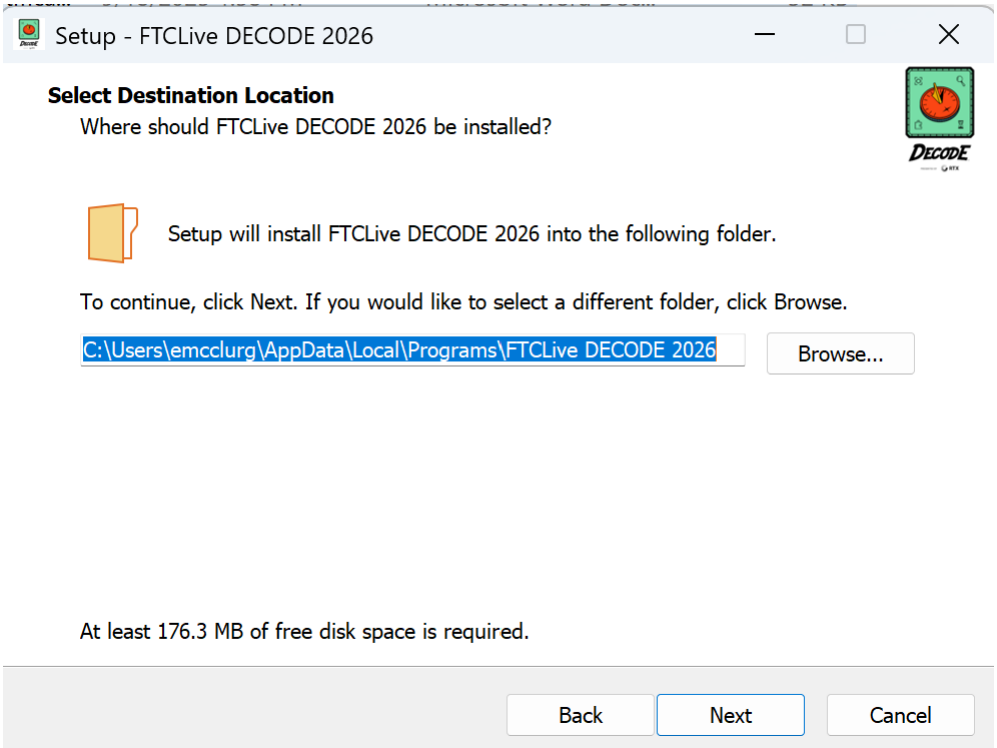
- If you need to download for one system from another (e.g., the scoring computer runs Windows, but you are downloading on a Mac to put on a flash drive), other systems can be found by clicking on "All platforms."

FTC-Live Windows Installer Setup

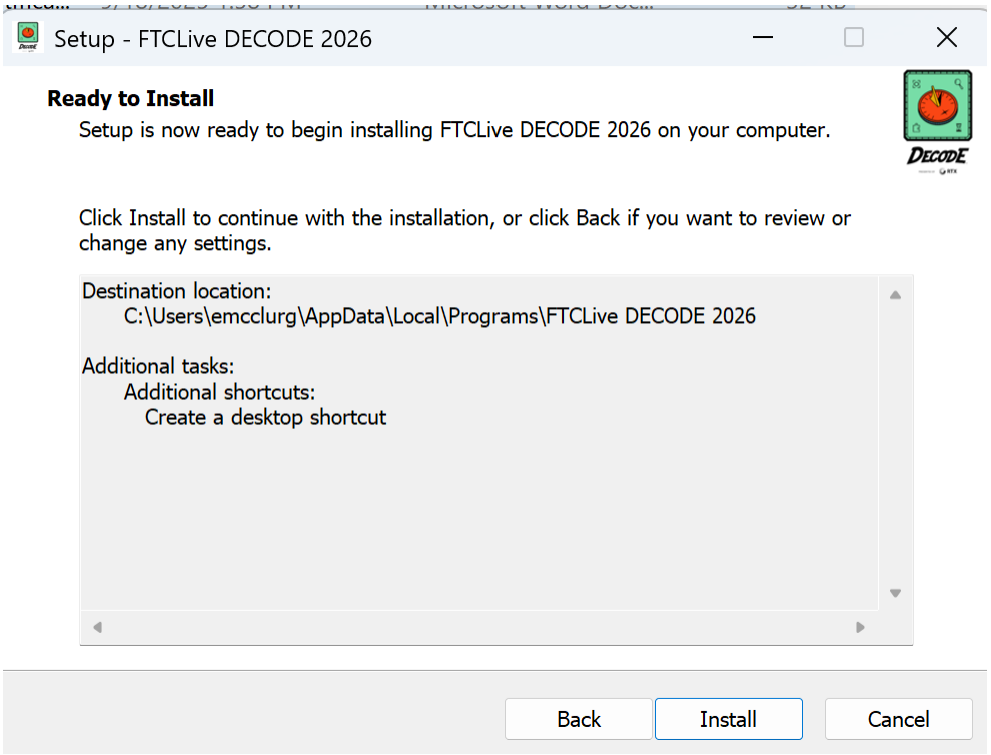
Once downloaded, launch the Windows installer (if your browser does not auto-launch)



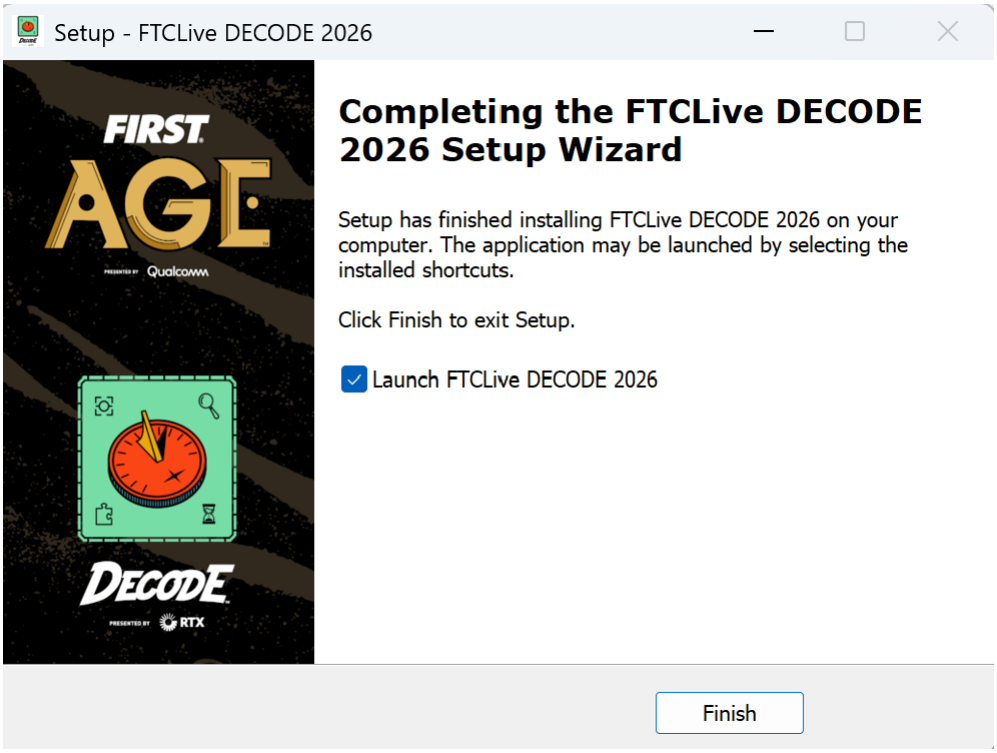
Be sure to choose a file folder location that is easily retrievable to the user.



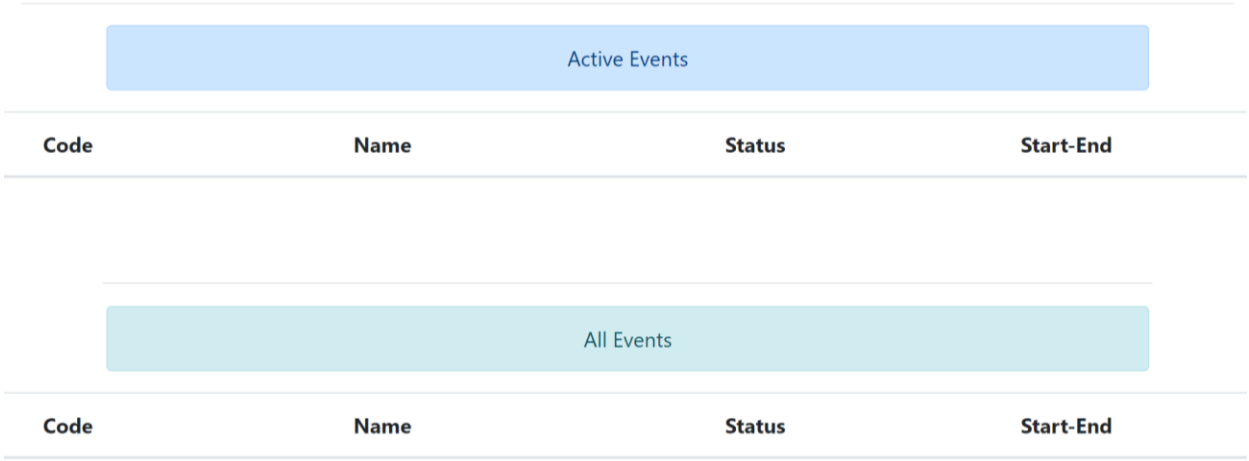
Install the software on the computer. Once installed, the software will appear open on your computer.



Check the box to launch the software, then Finish.



After the server is started, your default web browser (which should be Google Chrome) should launch and display the main webpage (web address of “localhost”).



FTC-Live macOS Installation

Download and open the DMG:

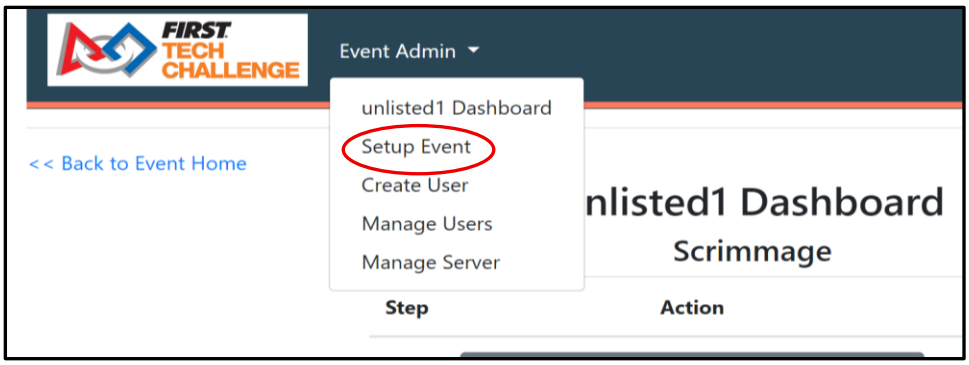
- Drag the application into the “Applications” folder, open the “Applications” folder, and open “FTC-Live DECODE.”
- After the server is started, your default web browser will launch and display the main webpage (web address of “localhost”).

Appendix B: Set Up an Unlisted Event

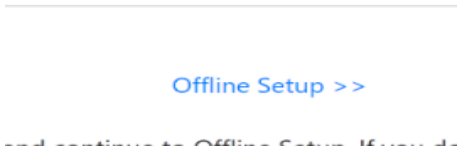
If you are interested in testing the system to experience the full features or plan to have unlisted matches that will not appear on ftc-events.firstinspires.org, please use the following workflow for these purposes.

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

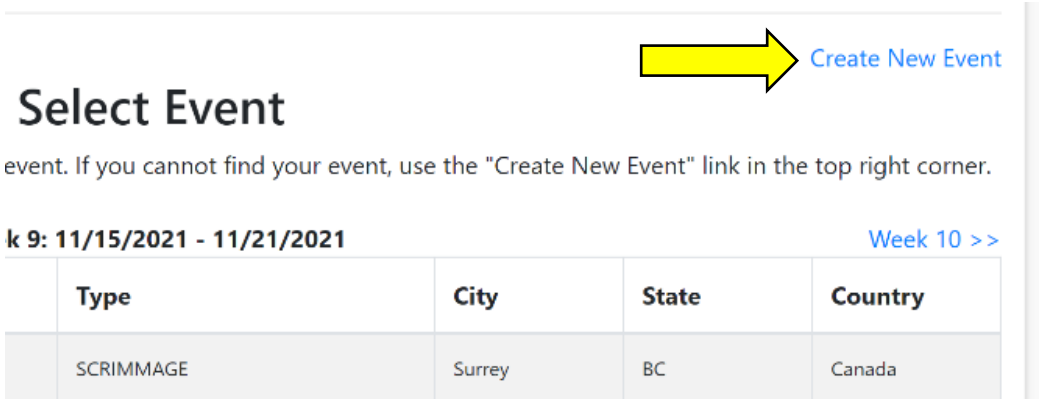
1. Log into the downloaded version of FTC-Live and login as the event admin using “local” as the username with no password. Once logged in, go to the “Event Admin” drop-down to select “Setup Event.”



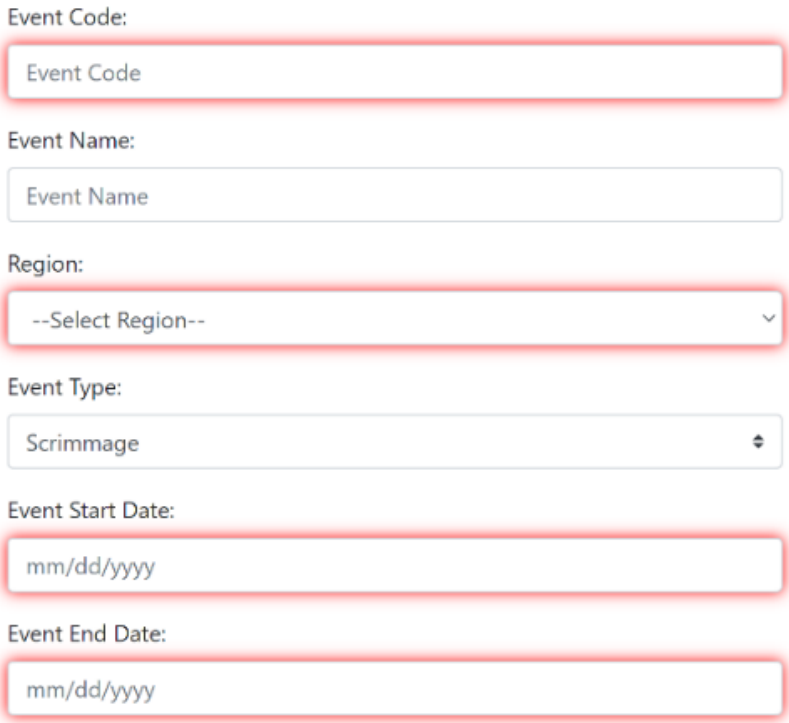
2. Select the “Offline Setup” option and disregard the “Note.”



3. On the next screen, select “Manual Setup” to continue the process.
4. On the “Select Event” page, choose the “Create New Event” link.



5. You will need to create an unlisted event that is not synchronized with the cloud FTC Scoring. The red highlighted screens denote the required fields: Event Code, Region, Event Start Date/End Date. Once complete, select “Create Event.”

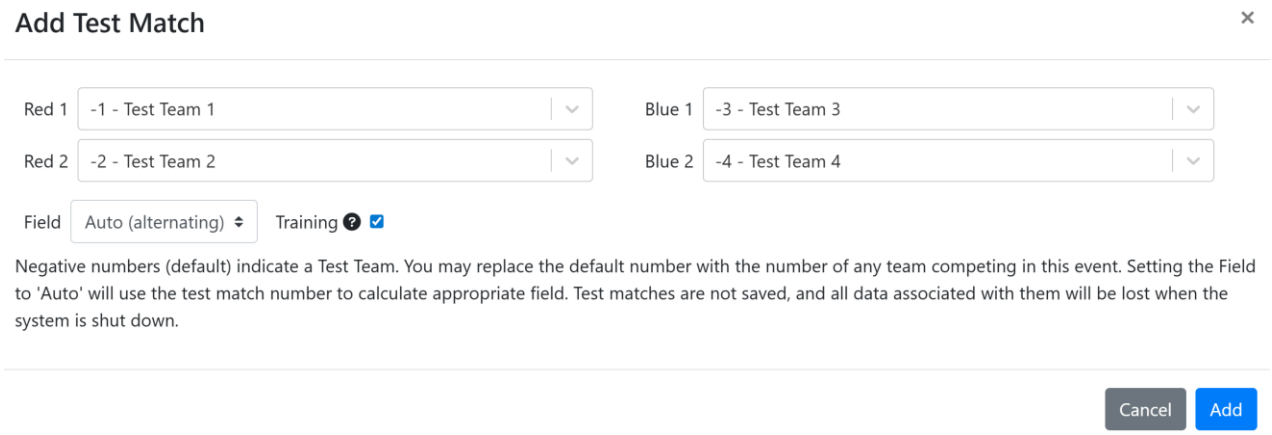


6. Once the prior steps are complete, you can go to “Back to Event Home” to begin using the FTC-Live - Match Control Page and Settings and other features.

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

Appendix C: Test Matches

Test matches are found in the “Settings” tab on the Match Control page.



What to Test

Check that the entire system including displays and ref tablets is working properly. This can be achieved by playing the test matches on the Match Control page after the system has been set up, volunteers are assigned their accounts and logged into the tablets.

- Check that the tablets are working correctly.
  - Does each alliance’s ref tablet connect throughout the entire match?
  - Can they submit autonomous, tele-op, and final submit buttons?
- Are the displays updating through the phases of the match?
  - Start Match, Randomization, etc.
- Are the correct display types on the correct display laptops?
- Are “Post” and “Commit” pushing the winning animation to the displays?

How to Exit Test Matches

Go back to the “Settings” page to “Exit Test.”

Appendix D: Team Profiles and Icons

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 the same for both systems, but the data should be stored in the cloud so that it will synchronize with [FTC Event Web : Home (firstinspires.org)]

If needed, add/edit teams in FTC-Live for teams that arrive or edit the no shows FTC-Live will synchronize those teams when online.

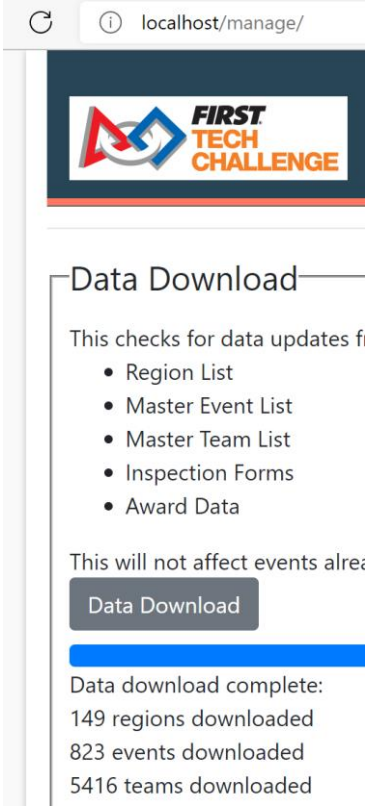
1. Add- Make sure all registered/paid teams have been added.
2. Remove - Any teams that are not participating at all.
3. Edit team status to:
   a. Judging Only, if necessary. This will remove the team from the match schedule.
   b. Not Competing will allow a Dean's List team to appear on the Awards drop-down for a Dean's List student.

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

Note: The cloud-based system comes with a pre-populated list of *FIRST* Tech Challenge teams that are registered, paid, and registered with Lead Coach 1 and 2. These will be updated via the Data Download link.

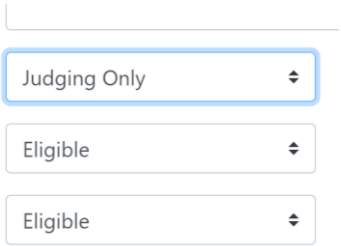
Data Download

This step is not generally necessary as the "Data Download" process is performed on every launch of the FTC-Live software. However, this can be done manually. You can access this service via "Manage Server" in the "Event Admin" menu.

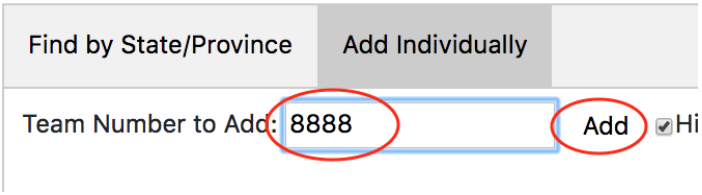


Adding a Team Individually

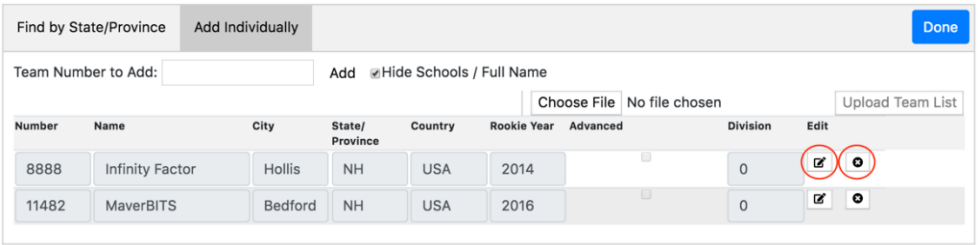
Under the "Add Individually" tab, "Edit" a team's event status: "Matches and Judging," "Judging" and "Not Competing" or change any detailed information. This can only be done in "Add Individually."



- 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.



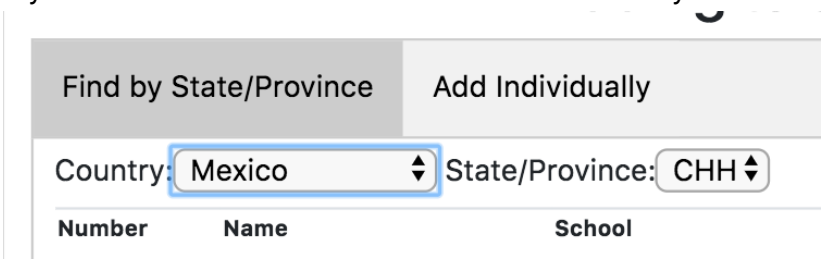
- If the system already has the team's data prepopulated, the newly added team number will appear along with its team information. If the system does not have any team data, the remaining columns for the newly added team must be filled in.
- You can remove a team by pushing the delete button towards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



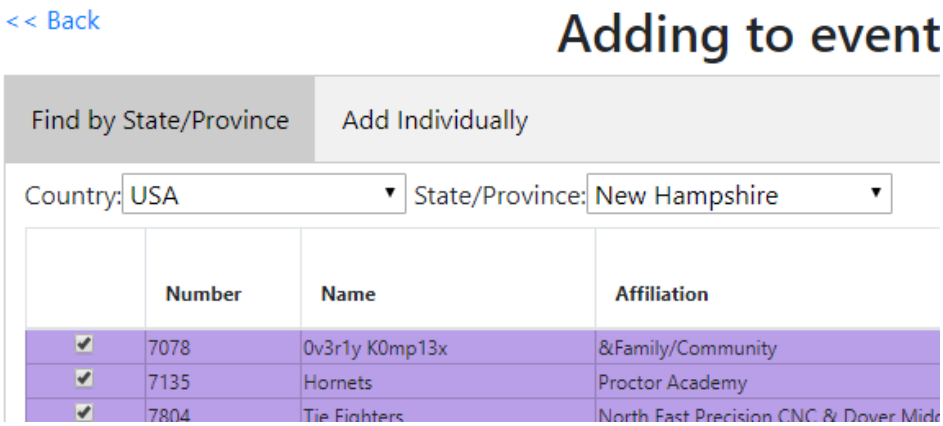
Adding Teams by State or Province

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 regions.
- Use the Country and State/Province controls to select the country and state/province to display.



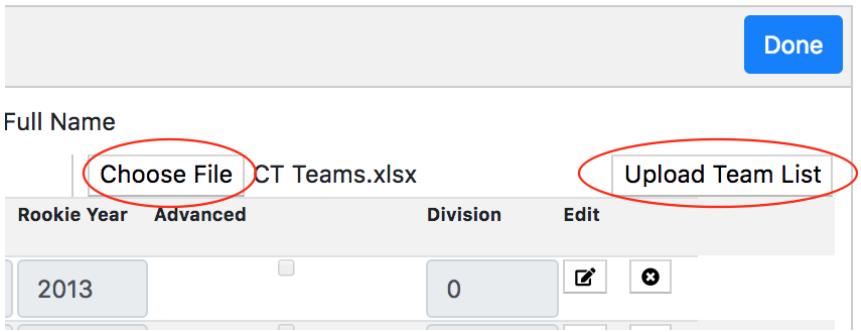
- Check boxes to add teams to the event (turns purple).
- Select single teams with the "Add Individually" tab.
- When you are done adding and editing teams, press the "Done" button.



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 Admin can also create a plain 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.



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 several icons that appear beside a team with data inconsistency.

> The icons do not affect your ability to run a traditional event using FTC-Live. It may affect the match results shown on ftc-events.

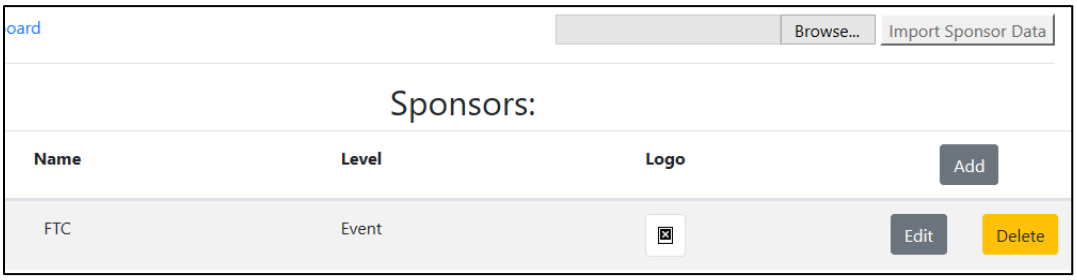
Icon	Definition
	Team will not appear in the match schedule because they are marked for Judging-Only or Not-Competing
	Team's data does not match the corresponding team in *FIRST*'s database. Team info displayed with event results may appear differently.
	This team is not registered with *FIRST*.
	This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

Appendix E: Sponsors

The software comes populated with the *FIRST* Tech Challenge Season Presenting Sponsor. That 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.

Add/Edit Sponsors

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

Level:

Event

Sponsor Name:

Sponsor Name

Sponsor Title:

Sponsor

Logo:

Choose File No file chosen Import Logo

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

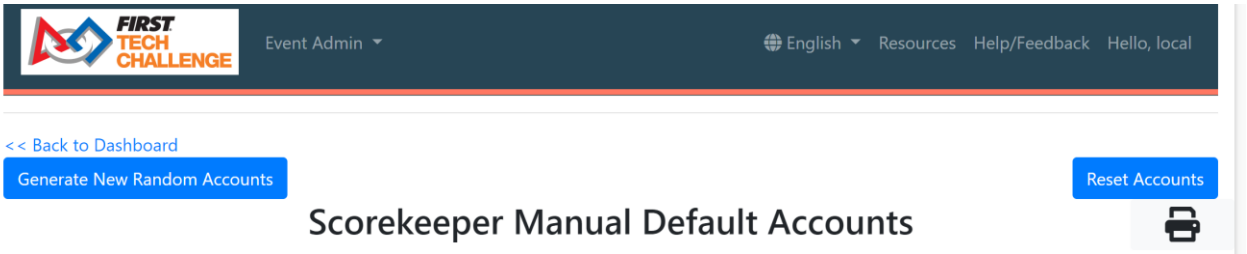
Create Sponsor

How to Display a Sponsor

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”).

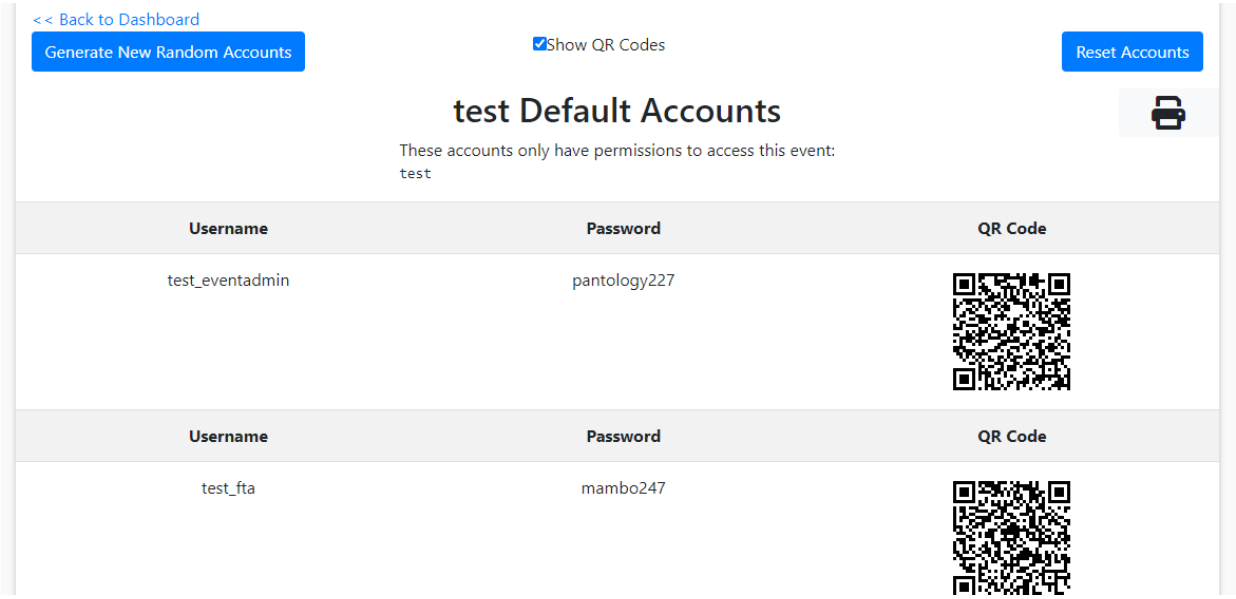
Appendix F: Creating Default User Accounts

You will need to create a set of user accounts that your volunteers can use during the event to access their tablet pages. 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.

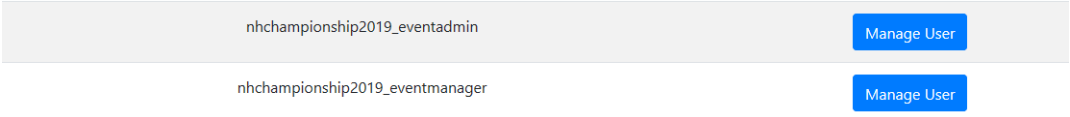


Press the “Generate New Random Accounts” to generate a set of user accounts that can be used to provide limited access to the system for specific users for the selected event. This may take a few seconds. QR Codes are generated which allows users to scan the QR Code to set up their tablet for scoring, inspections, and other functions. If QR code reader software is not installed on the tablet, navigate in the browser to the IP address of the FTC-Live server and use the “Scan QR Code” feature on the login page.

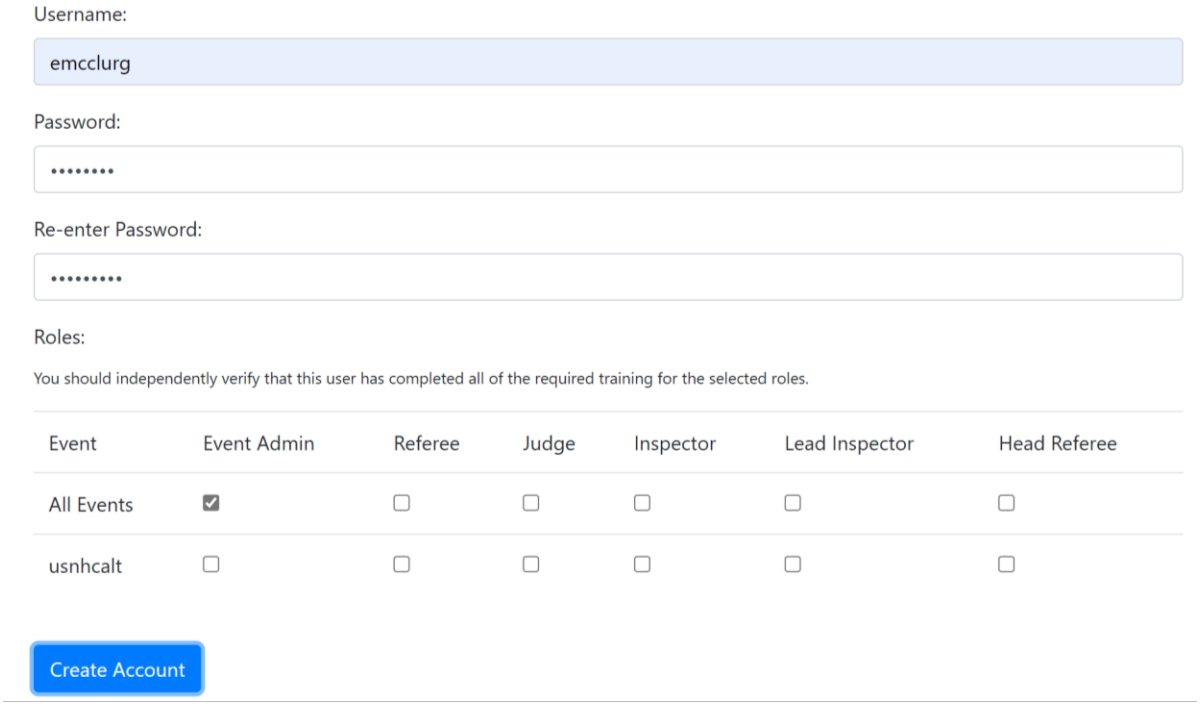
Press the printer icon in the upper right-hand portion of the screen if you want to print a hard copy of the list. Clicking on the QR code itself will provide a larger version of the QR code.



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.



New users can be added by the Scorekeeper 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.



When 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.

Appendix G: Dual Division

Dual Division is a version of event setup with two divisions acting as individual events (two parallel Qualifying Tournaments each with a minimum of two fields each) until they reach the interdivisional play to determine the event winner. The Competition Manual provides the official explanation of a Dual Division event. Make sure to review the rules etc. especially T801, T802, T803.

> Dual Division events are required to be requested in the FTC Scoring Event Request – Event Variant for review and approval by *FIRST* Headquarters staff. This process can take a few weeks. Make sure the event has been approved at least two weeks prior to the start date.

After the event is approved, a Dual Division event must be configured in the FTC Scoring system FIRST Tech Challenge Scoring (firstinspires.org) as a dual division event with division names two weeks prior to the start date.

This section is intended to help you walk through the steps to successfully set up the divisions and merge the division databases into the parent event for inter-divisional matches. Make sure to read the appropriate sections on other features of FTC-Live required to run an event.

Download the FTC-Live Dual Division Software Release

A specific version of the software is released for Dual Division each season according to the pre-determined season and software release timeline. To fully comprehend the updates made for this version, read the release notes. Download this release on the event laptop or make sure to restart an existing install to ensure it updates to the Dual Division release. If the volunteers have never set up a Dual Division event, set up the system and network to test the software and network, use `Appendix C: Test Matches`, if needed.

The Dual Division Parent/Child Relationship

The Dual Division event structure consists of one parent event and two child events. The parent event ends with _0 in its name and URL, while the child events are labeled event_1 and event_2 in name and URL.

Data Flow

The child events contain all the data for their division play. That data must be imported into the parent event _0 after the division play is completed for both child events (divisions). Once imported into the parent, the interdivision finals are generated in the parent, and all the audience displays should point to the parent_0 event.

Parent Event (0) Requirements

- The parent event_0 is where the division will be generated, all teams participating in the entire event are added, and awards are given.

Child Events (1 and 2) Requirements

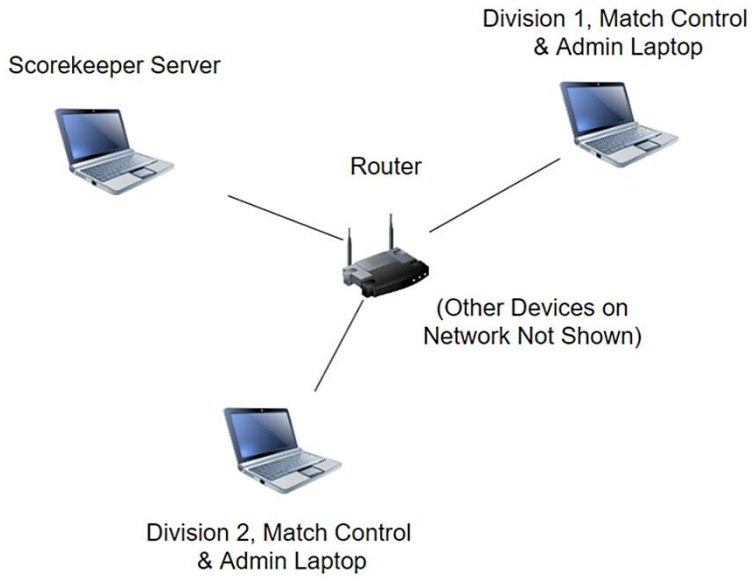
- The child events are where the teams participating in the division are added, the individual divisions play, but no awards are given.

Hardware/System Requirements

- Single scorekeeper server running the event_0 and both divisions.
- Devices connected on the same private network.
    - Note: The FTC-Live system supports running separate servers for each division (child event), then importing results back into the parent event server, if needed.

Each event has specific hardware requirements:

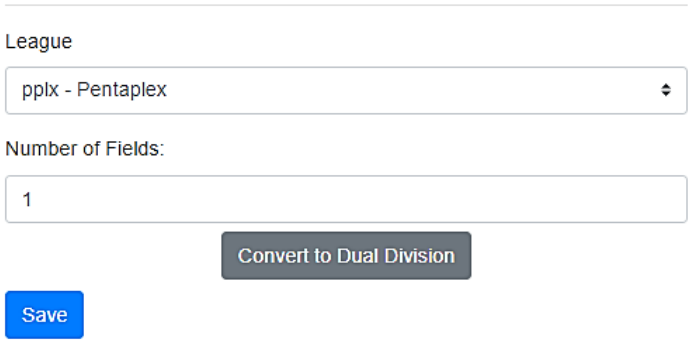
- Each event (_0, _1, _2)/division will require a laptop for its Match Control/Admin page.
- Each event (_0, _1, _2)/division also requires its own displays' laptops and monitors.
- Each event requires tablets for live scoring.



Dual Division Setup in Cloud-Based FTC Scoring

The Dual Division setup requires that the Region Administrator logs into FTC Scoring system to configure the event at least two weeks prior.

1. Convert to Dual Division.

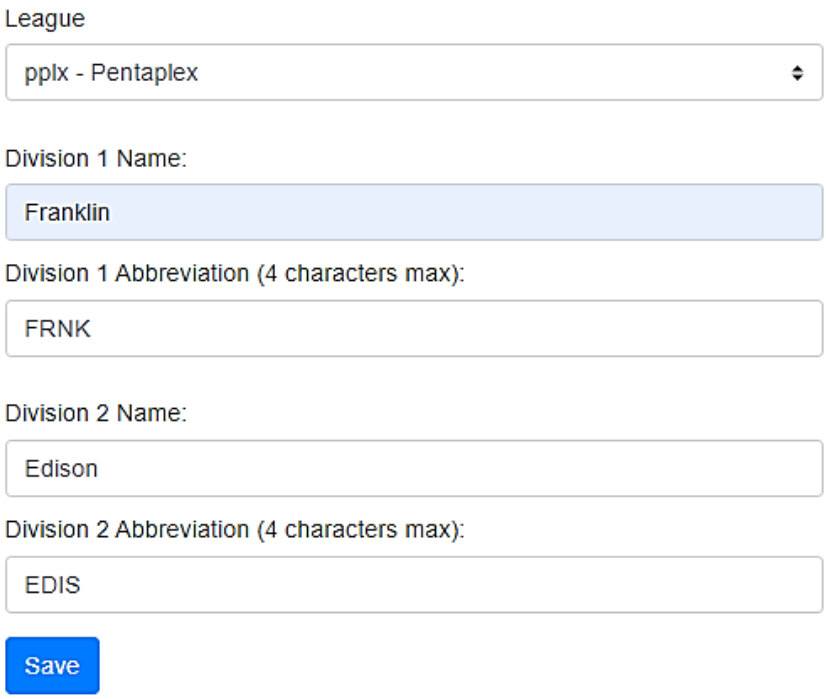


Important Note: The “Convert to Dual Division” button only appears for regions that have HQ-approved DD events.

Configure the Dual Divisions

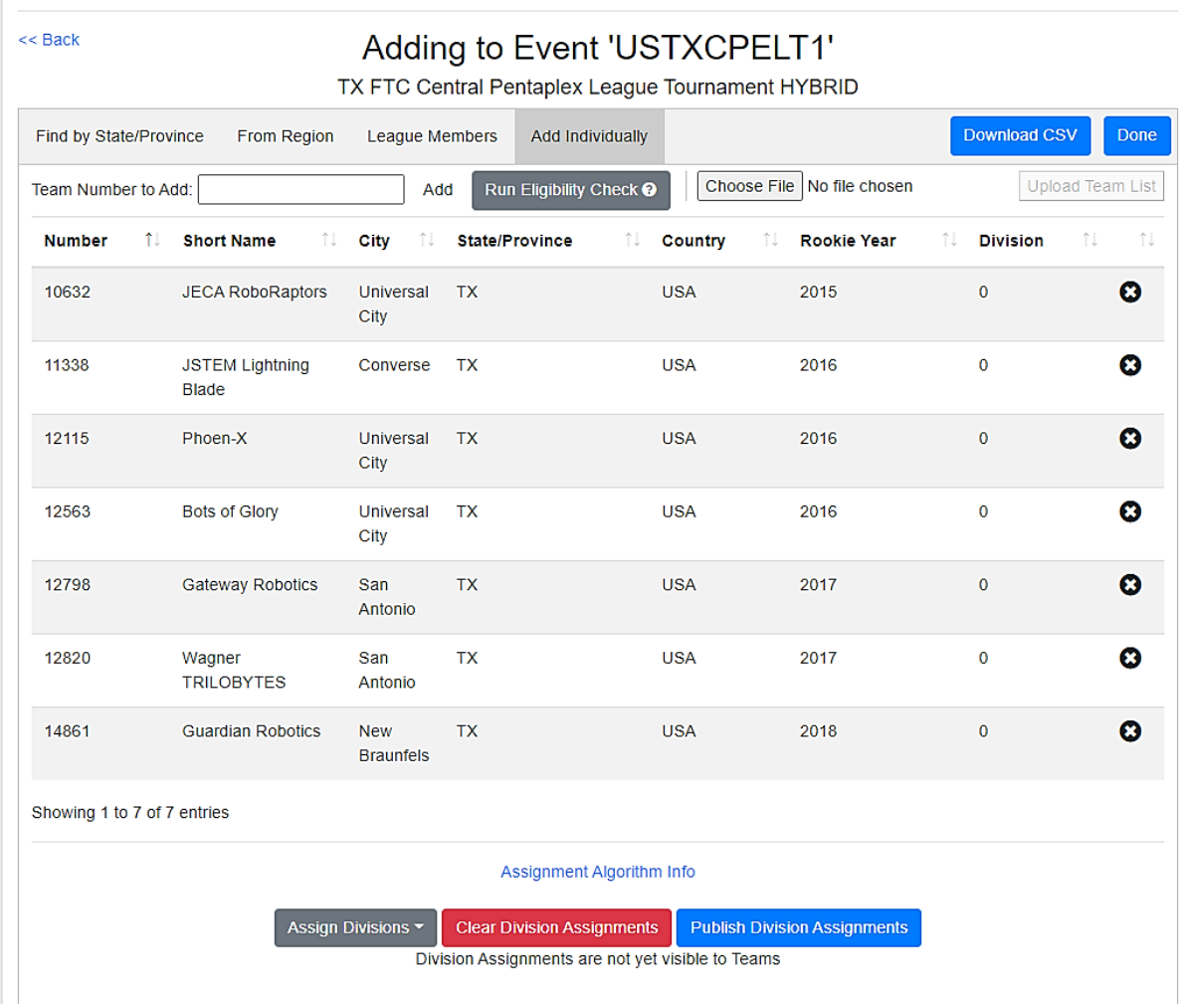
The division configuration requires division naming and an abbreviation for each division. This configuration will determine the divisions as child events.

Note: Division abbreviations should be four (4) characters or less.

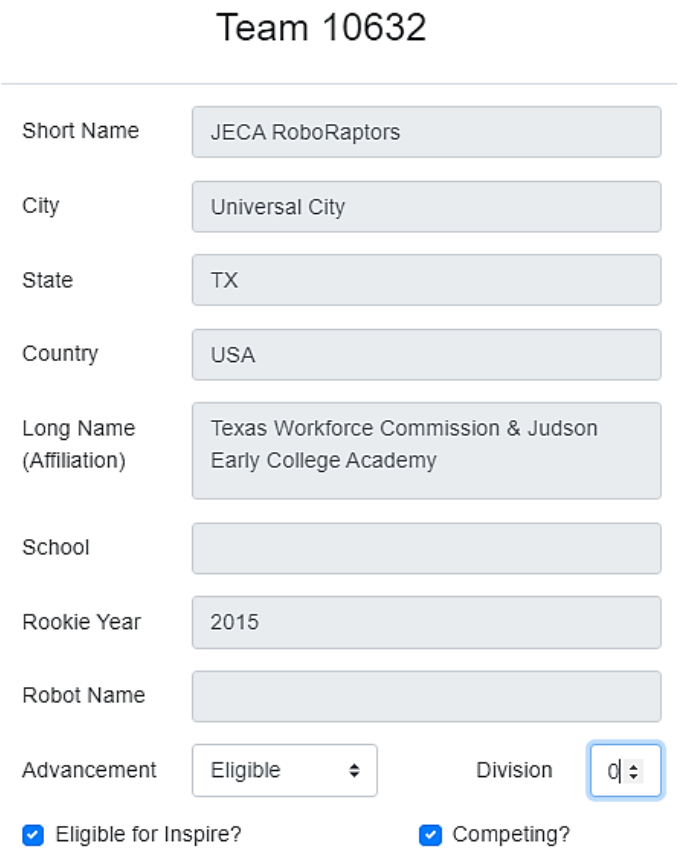


Add Teams to the Event(s)

Participating teams need to be added to the parent event that lives in FTC Scoring. Go to the Event Dashboard to add teams to the parent event (USTXCPELT1 in this example) in FTC Scoring. Then add teams to each division using the Assign Divisions button on the lower left-side of the page.



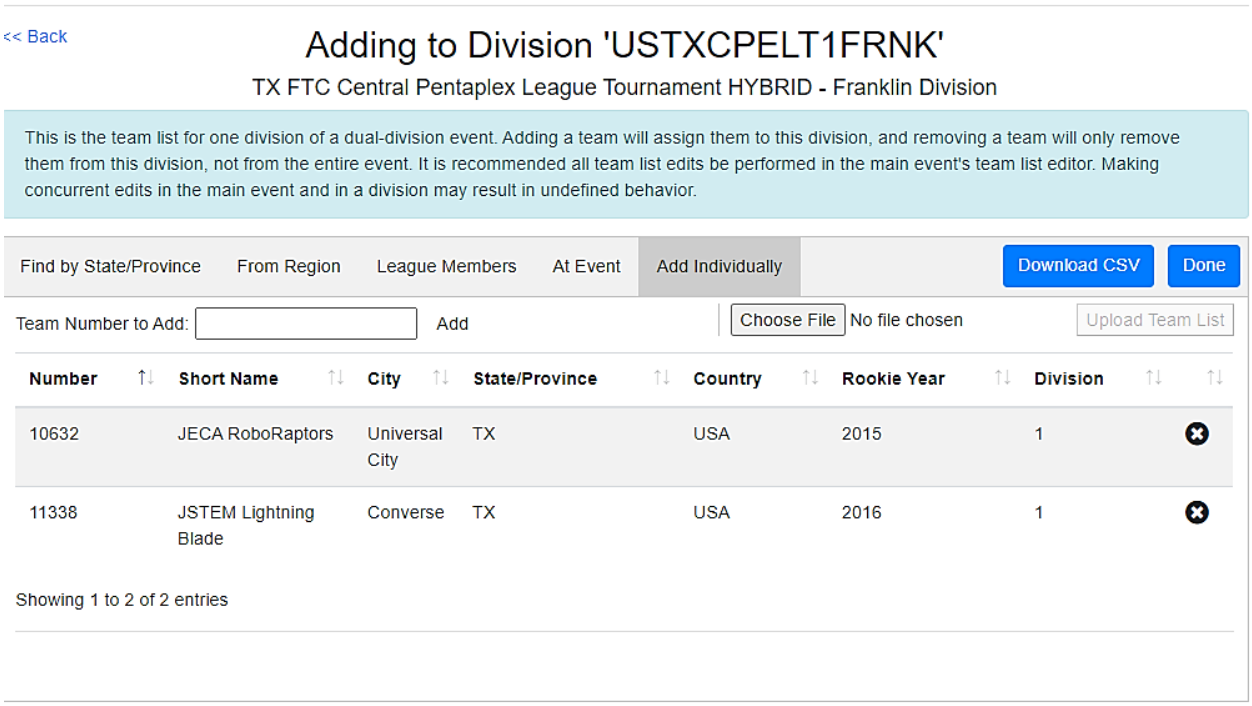
To edit the division a team is assigned, select the parent event's Add/Edit, then Add Individually. Edit the "Division" field.



Editing Teams

Sometimes an event will require moving teams from one division to another due to team conflicts, Conflict of Interest, or other competition level setting requirement. The best practice is to edit team profiles within the “Add Individually” tab of the parent event’s “Add/Edit Teams.”

Important Note: In FTC Scoring, if you select a division to assign teams to that division they will be added to both the parent event and the division. Removing a team from a division will NOT remove them from the parent event, be sure to remove the team from the parent event as well.



Transfer to FTC-Live, Dual Division – Divisions (Child Events)

On the FTC Scoring parent event's home page, each of the divisions appear.

1. To transfer the event data, go back to the parent event dashboard.
2. Select the "Play Event Locally" button to transfer to FTC-Live.

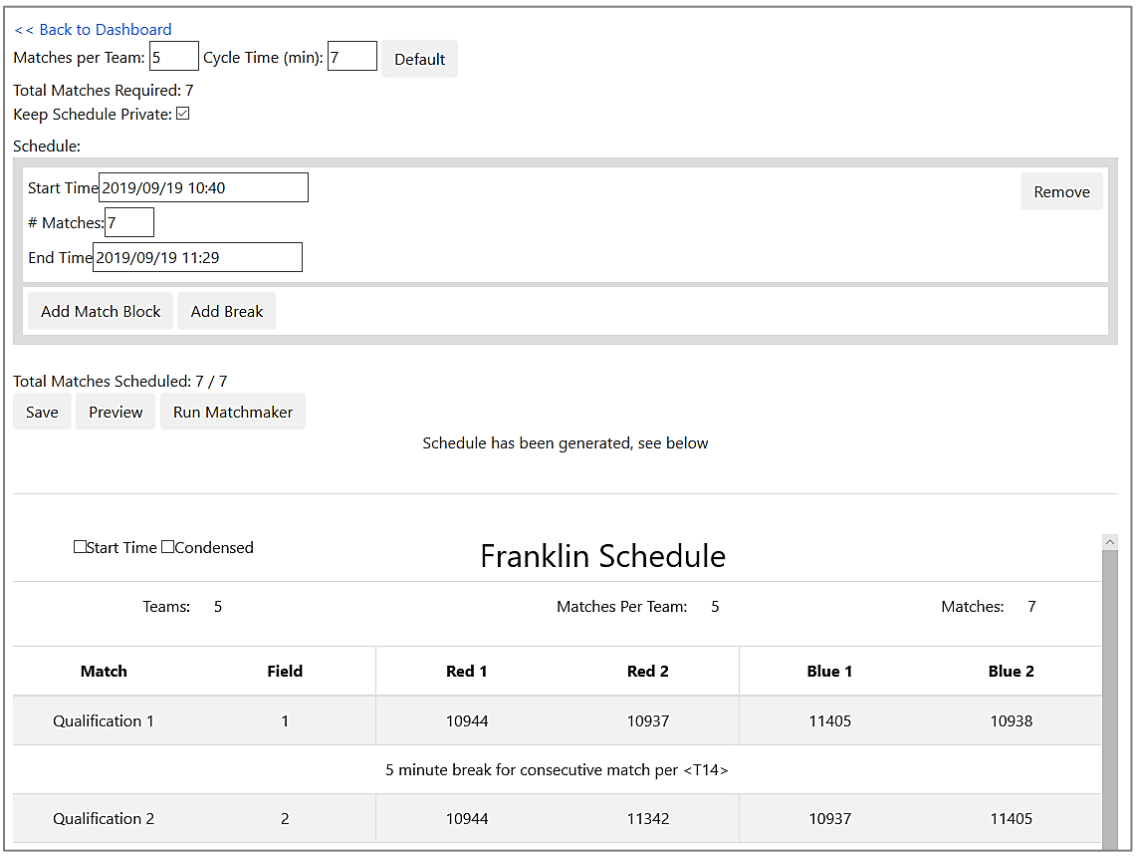
FTC-Live - Generate Matches for Each Division

On each division's event laptop, the qualification matches for that division will need to be generated.

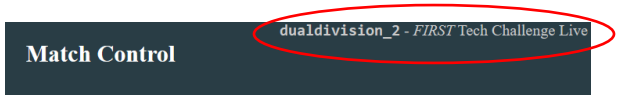
> Make sure the correct teams have been assigned to the division before generating matches for the division.

1. In FTC-Live, select the "Divisions" dropdown to select the correct division for each laptop. One division per laptop.
2. Opens the division's dashboard, displays either _1 Dashboard or _2 Dashboard.
3. Complete steps prior to creating the match schedule, as needed, for the event. Consult the Event Director and FTA, if needed.
4. Select "Create Match Schedule." This step needs to be completed on each of the division laptops.

Select Run Matchmaker to create a division's schedule. Review `Qualification Matches` for details.



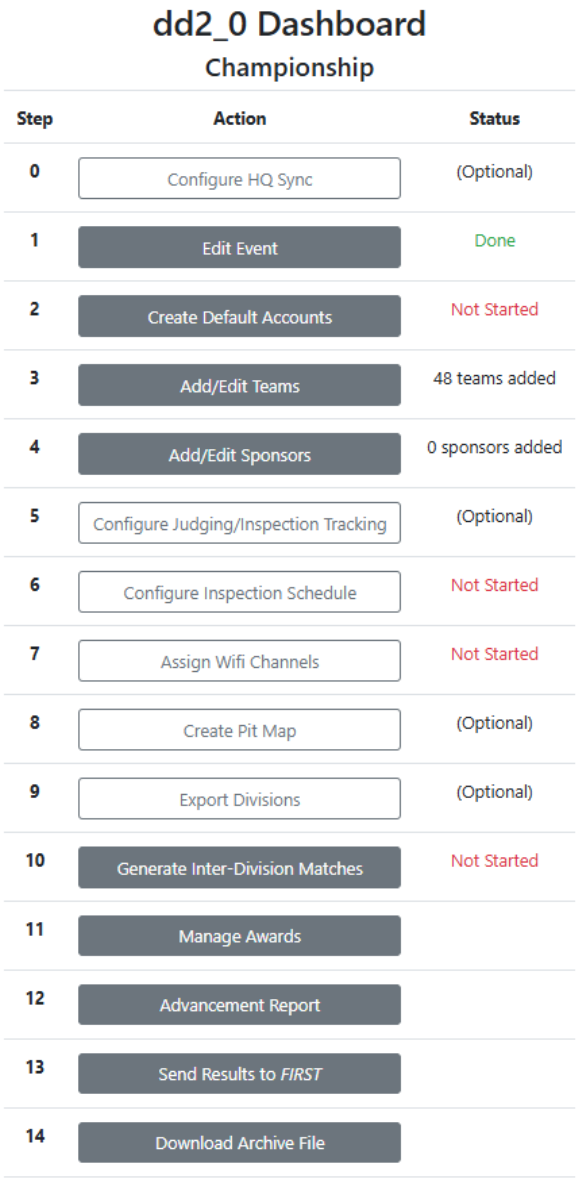
Each division will have its own Match Control Page and be decipherable by the _0,_1, or _2 in the upper right-hand corner. Each division must be scored in the correct Match Control Page and completed before the interdivision finals can happen.



FTC-Live - Generate the Interdivision Final

The “Generate Interdivision Final” button lives on the parent event’s Event Dashboard. A couple tasks need to occur before the button will work.

1. The scores for both divisions must be entered in their Match Control pages, before generating the interdivision finals.
2. Once the scores are input, push the button and the interdivision matches will be listed on the parent event, Match Control Page (_0)



dd2_0 Dashboard

Championship

Step	Action	Status
0	Configure HQ Sync	(Optional)
1	Edit Event	Done
2	Create Default Accounts	Not Started
3	Add/Edit Teams	48 teams added
4	Add/Edit Sponsors	0 sponsors added
5	Configure Judging/Inspection Tracking	(Optional)
6	Configure Inspection Schedule	Not Started
7	Assign Wifi Channels	Not Started
8	Create Pit Map	(Optional)
9	Export Divisions	(Optional)
10	Generate Inter-Division Matches	Not Started
11	Manage Awards	
12	Advancement Report	
13	Send Results to *FIRST*	
14	Download Archive File	

Note: If the scores have not been completed in the Match Control Page, the Generate Inter-Division Finals button will not work.

Export Divisions DB/Import the Database for Each Division – Scenario when Running Separate Servers

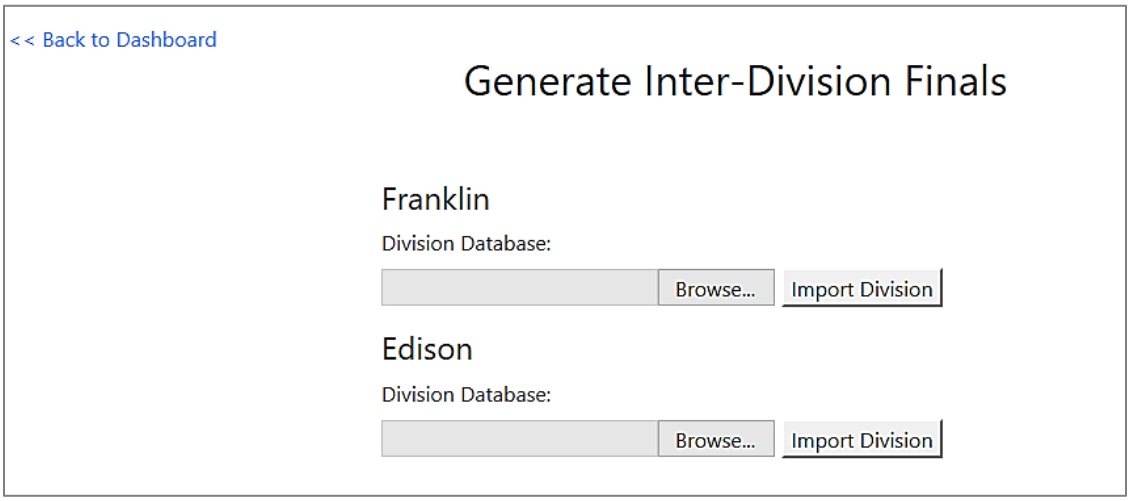
If only one scoring server is used for the network, then there is no need to Export/Import divisions. The files exist within the scoring server laptop. – skip to "Generate Inter-Division Finals" page on Parent Event.

If separate servers were used for each division, then the division database files will need to be exported from the division laptop via the Wizard explained in Appendix K: Access the Database (db) Files and Logs

"Generate Inter-Division Finals" page on Parent Event

If using a single server for the event, on the parent laptop, press the "Generate Inter-Division Finals" button at the bottom once the divisions appear.

When using separate servers for each division, make sure that the two child events/divisions' databases have been imported to the parent event laptop as required. The files will need to be added via USB to the parent laptop, thenBroswe to the file, then press the "Import Division" button as shown in the "Generate Inter-Division Finals" page.



On the parent laptop, the "Generate Inter-Division Finals" page appears. Press the "Generate Inter-Division Finals" button at the bottom once the divisions appear.

Awards for Dual Division

The awards for a dual division event occur in the parent event. Review the Competition Manual and the Managing Awards section for the process of entering and presenting awards.

Appendix H: Inspection Tools

Optional Inspection Schedule and Tracking

The Event Dashboard has optional inspection tracking and a schedule. “Configure Inspection Tracking” and “Configure Inspection Schedule.”

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

Optional Scheduling and Tracking

Configure Inspection Tracking

Check off any boxes that will be handled by a tablet.

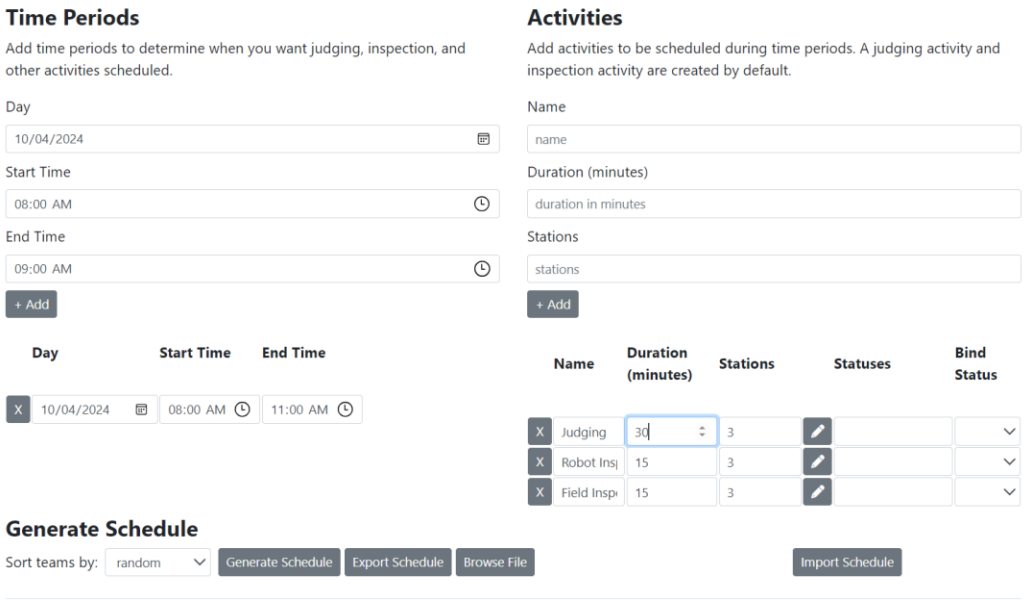
Status Tracking Configuration:

Tracking Settings

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

Configure Inspection Schedule

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



Generating the schedule will give you a list of teams, day and time for each team added to the event. The system sets default time and stations though this can be edited.

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.

- Choose a Duration. This is the number of minutes for the sessions.
- Decide how many Stations are needed for the number of teams at the event.
- Statuses show where they are in the queue.
- Select “Bind Status” if you want the system to flag when a team is late to a specific type of inspection, i.e., judging.

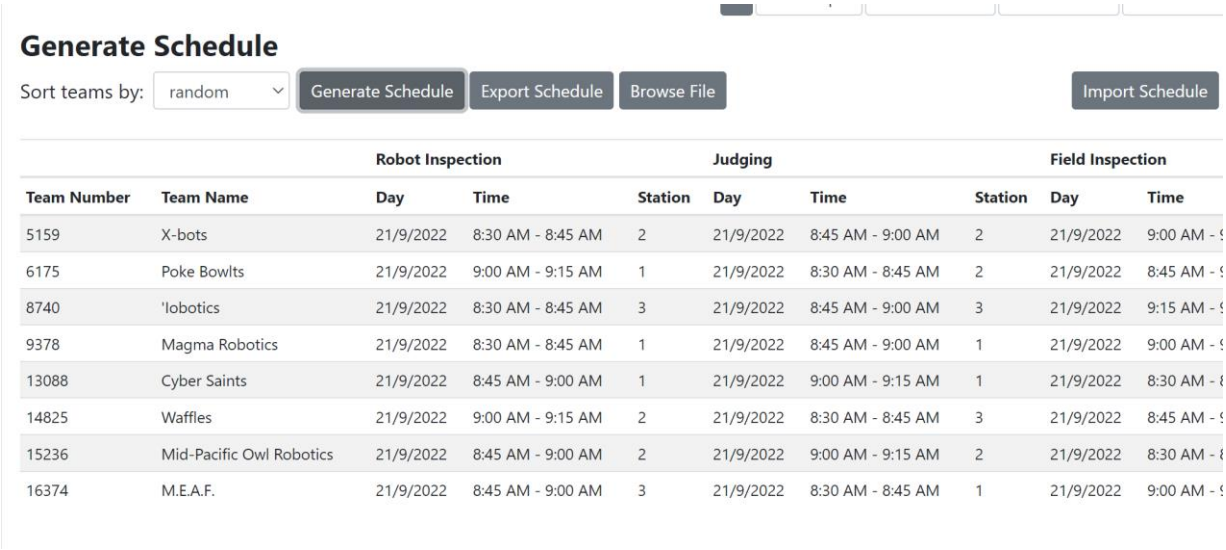
> Do not use FTC-Live software to schedule judging for hybrid events. Hybrid event judging is scheduled in FTC Scoring, cloud-based software, by the Judge Advisor/Region Administrator.

Example of Generated Schedule

The generated schedule includes all the details from filled inputs.

- Press Generate Schedule to generate.

- Sort teams
- Export the schedule.
- Import the schedule that has already been created.



Generate Schedule

Sort teams by: random | Generate Schedule | Export Schedule | Browse File | Import Schedule

		Robot Inspection			Judging			Field Inspection	
Team Number	Team Name	Day	Time	Station	Day	Time	Station	Day	Time
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 -
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 -
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 -
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 -
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 -
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 -
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 -
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 -

Appendix I: Audience Displays

The audience display section shows the display screens for an event. The screens are listed in order of display at an event, with some listed as optional depending on the event size and capabilities.

Non-Match Screens

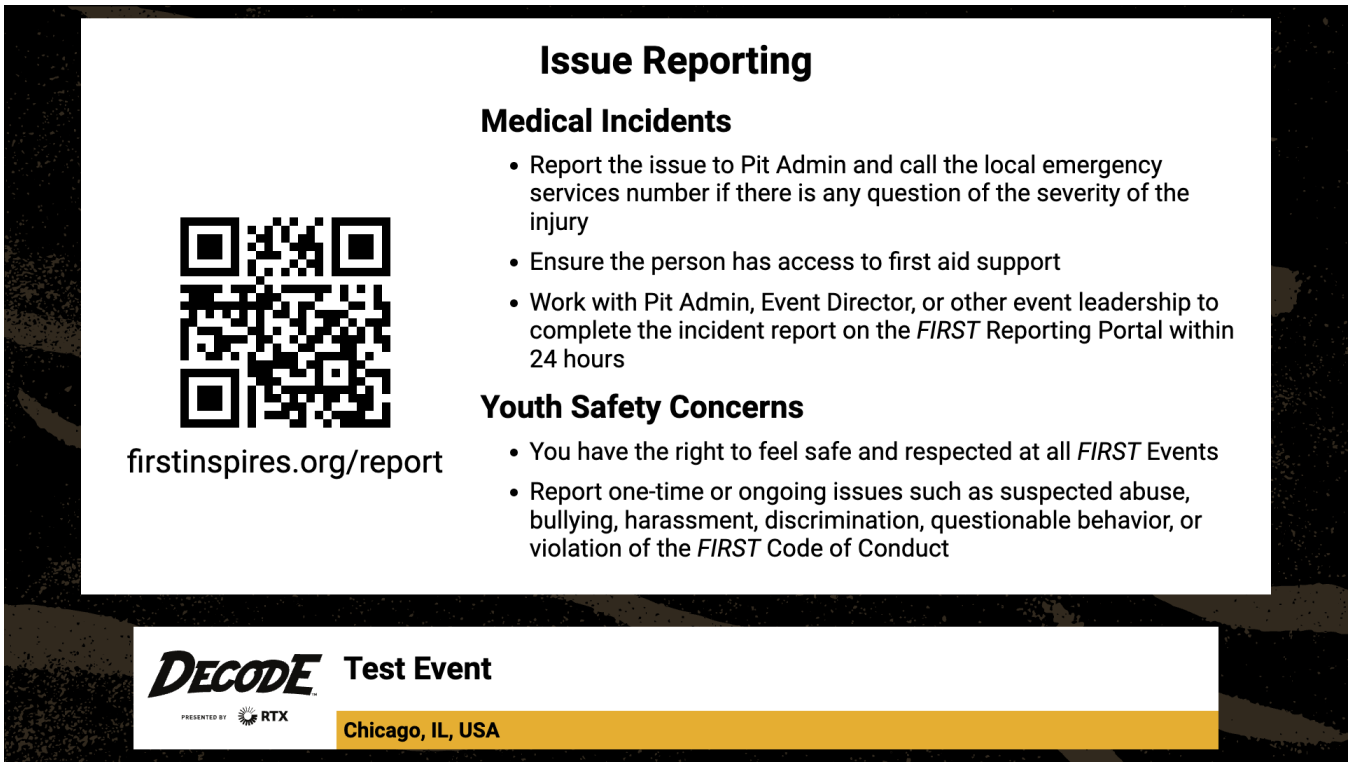
The non-match screens shown typically at the beginning of the event or during breaks live within the Match Control - Video Switch tab.

Sponsors

Sponsors are vital to program support. Please be sure to represent the program sponsor and any local sponsors that have donated to the program in your region or event.

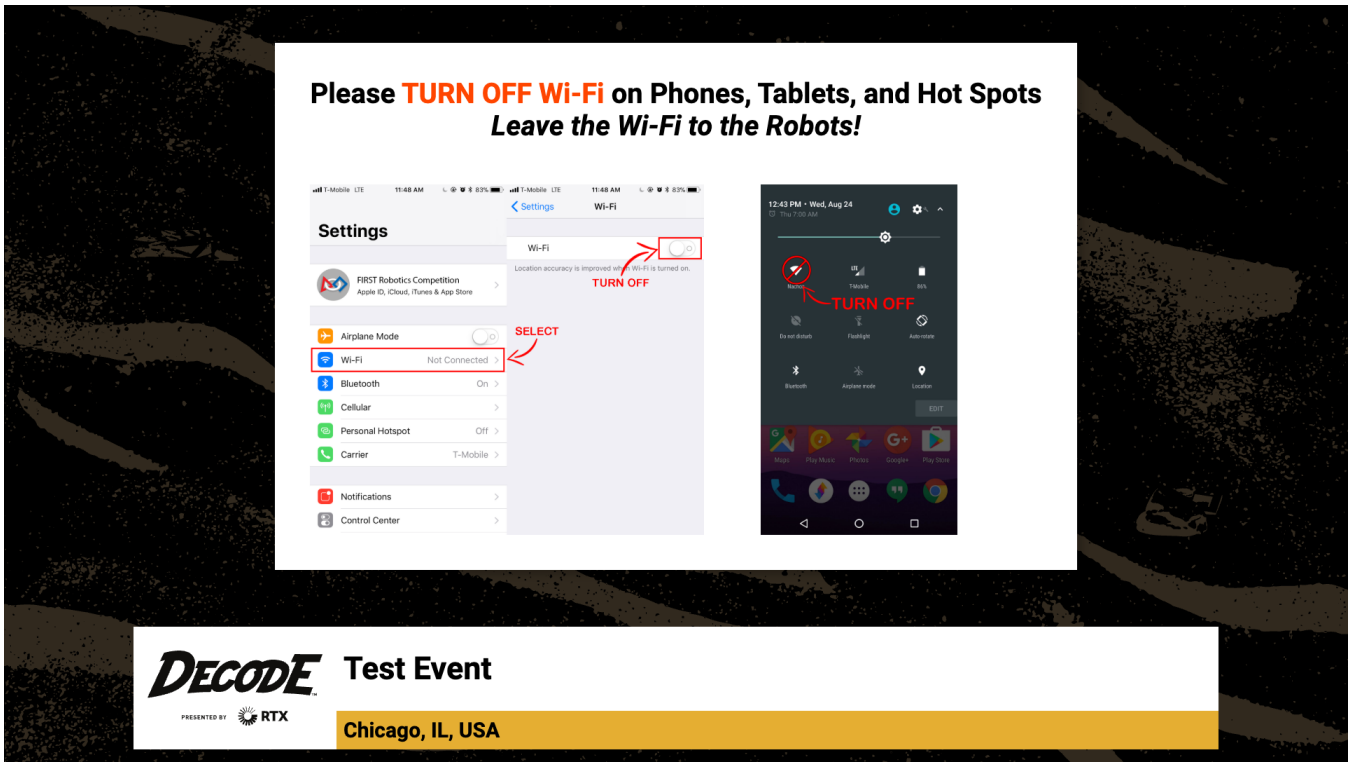
Safety/Security

Safety and security are an important part of a successful event. Communicate how to issue reporting by displaying this screen at the beginning of the event and any breaks.



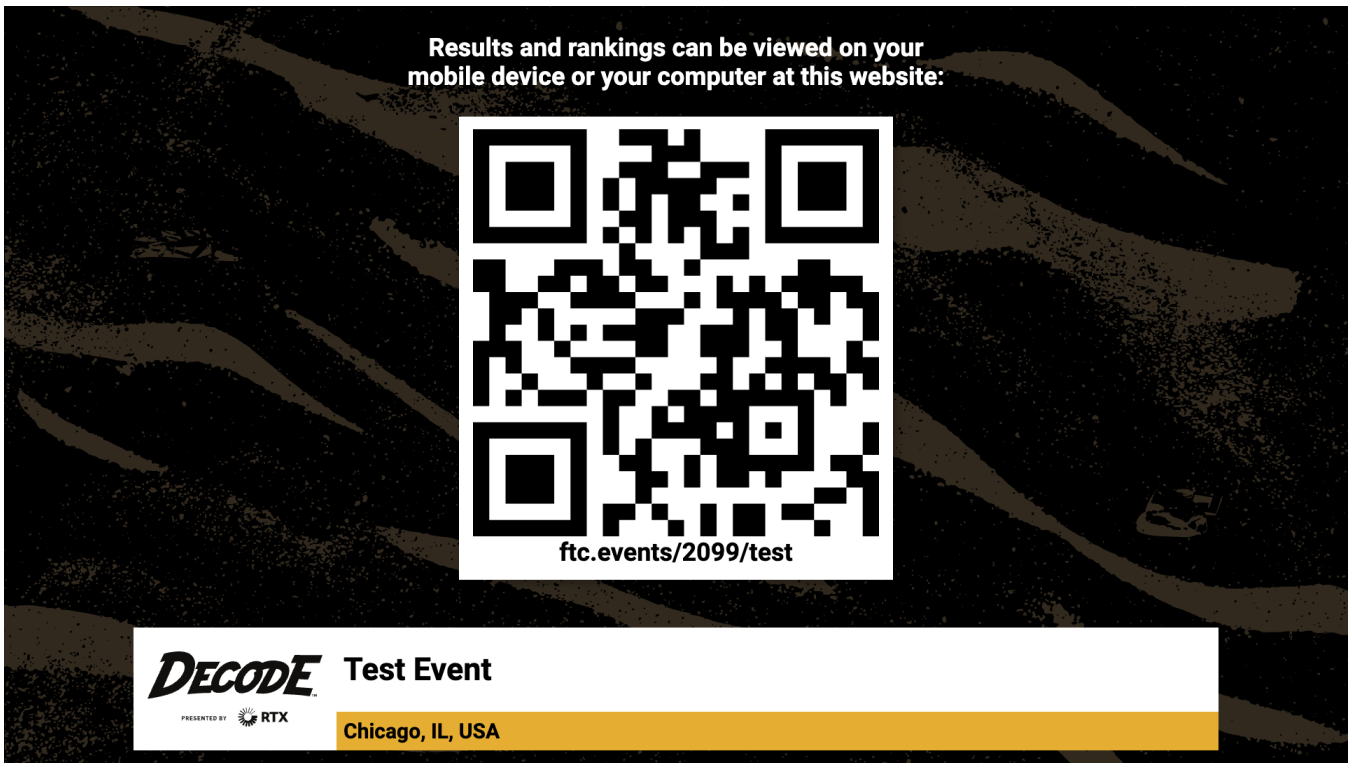
Wi-Fi Message

Turn off Wi-Fi needs to be announced at all events. Make sure to share this screen at the beginning of the event and at the lunch break.



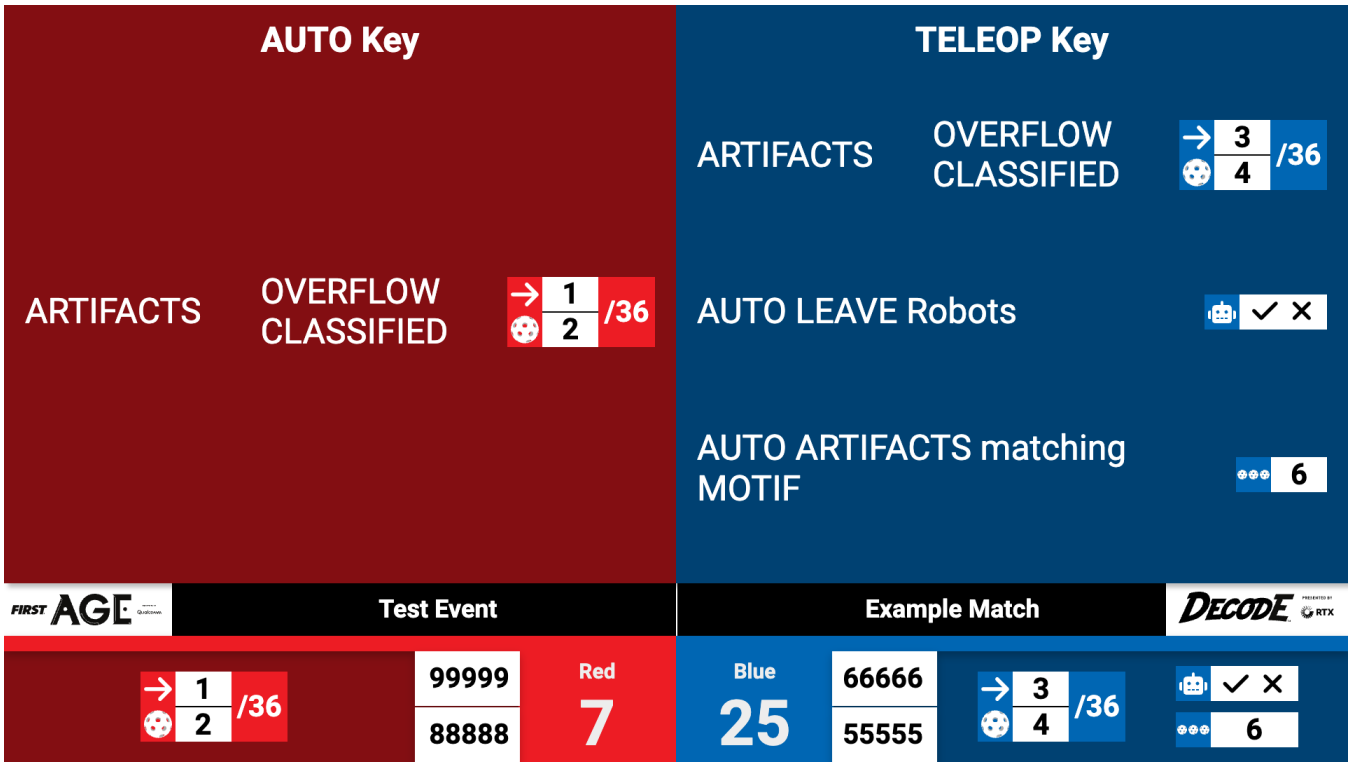
Online Results

The audience may want to access the event results from [FTC Event Web : Home](). Display the online results at the beginning and the end of the event.



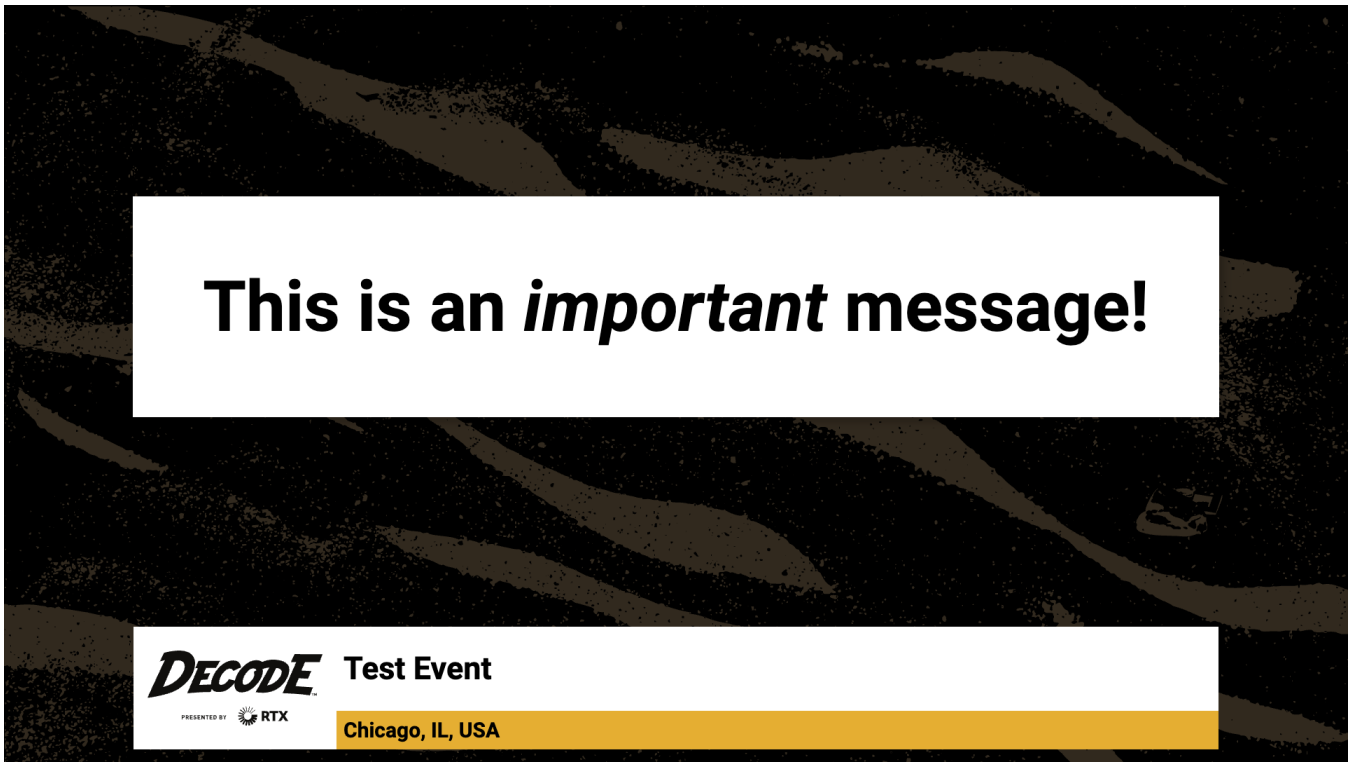
Audience Key

The audience key screens are to educate the audience about the phases of the game, what will be scored in each phase and how the scores of game elements will be displayed.



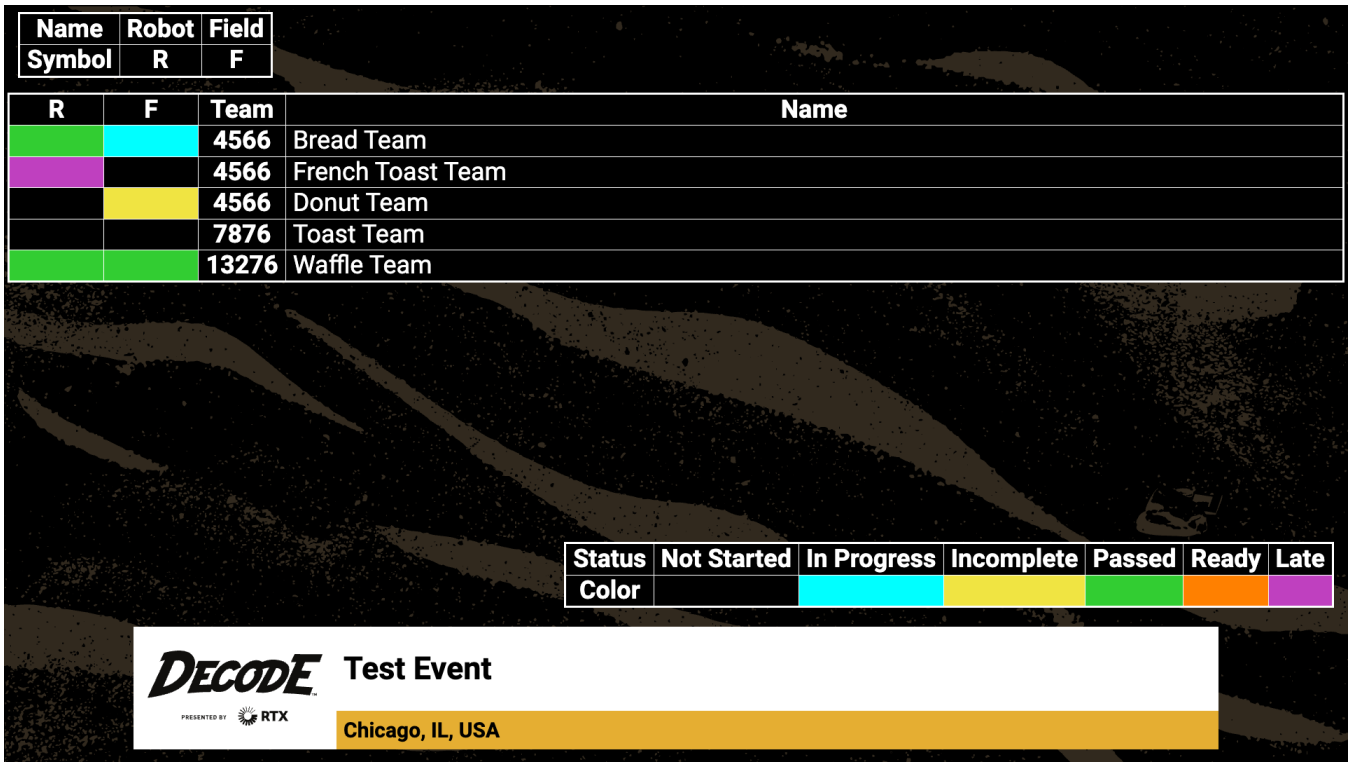
Message (Optional)

A message(s) may be requested by the Event Director throughout the event. Enter the text in the Video Switch page and displays, as needed.

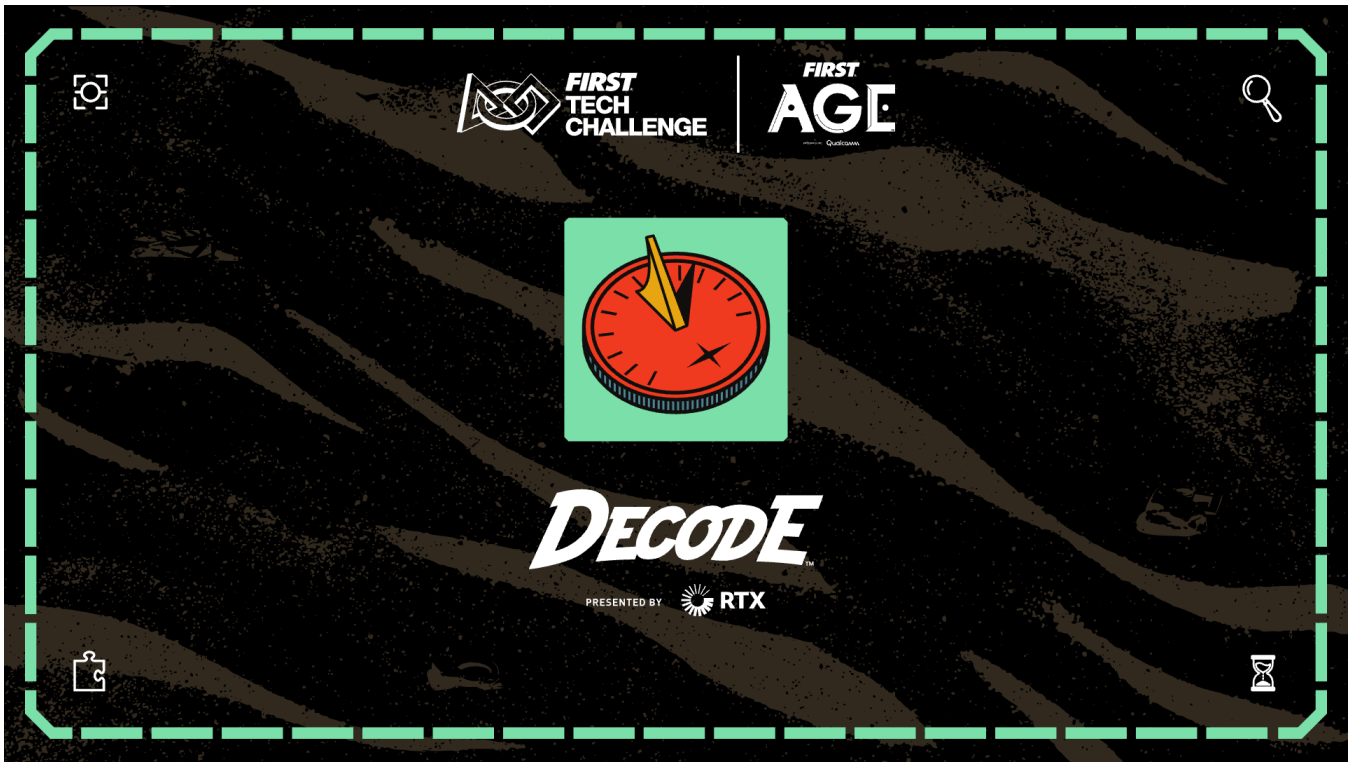


Inspection Status (Optional)

If inspection tracking and schedule have been set up, then this screen can be displayed at the beginning of the event.



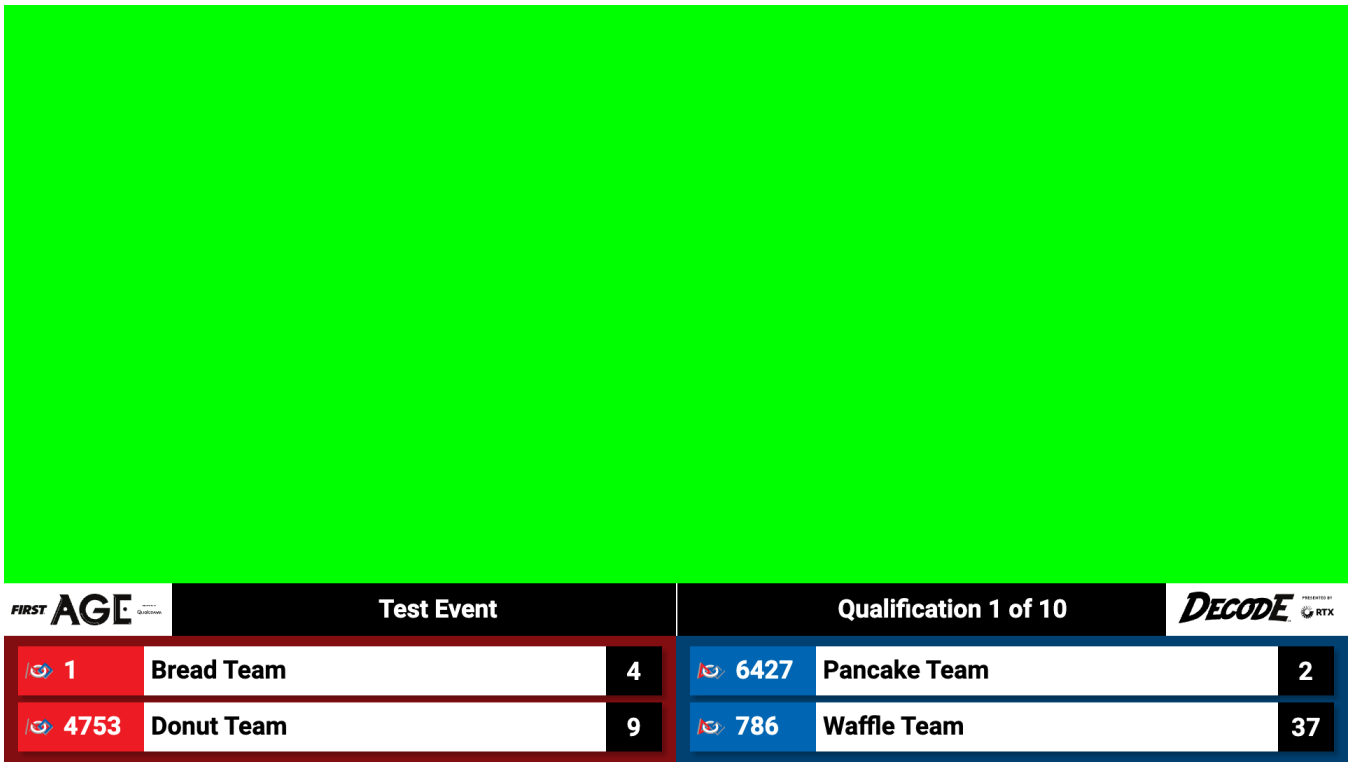
Blank (Optional)



Event Match Screens

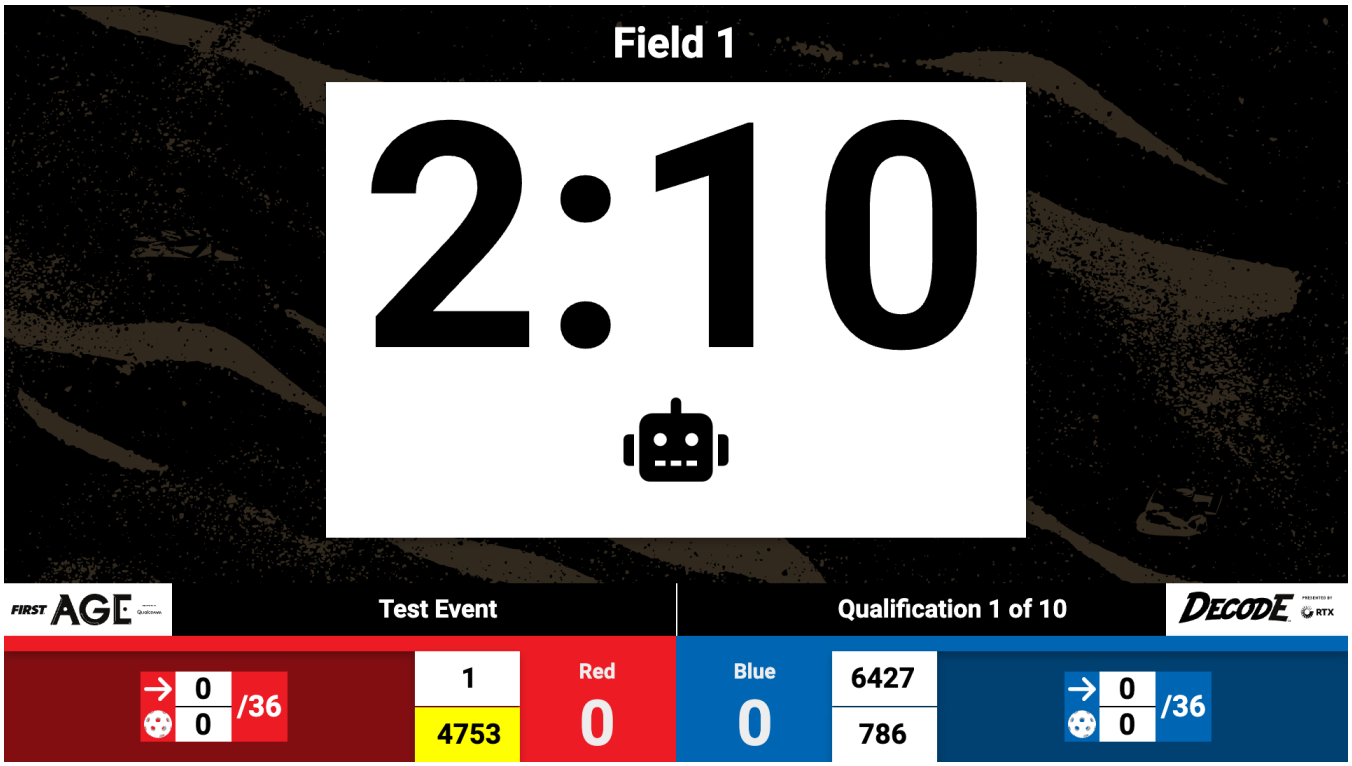
As described in Displays the audience views the live match, match results, alliance selection, advancement on the audience display(s). The match screens appear as the Scorekeeper pushes buttons on the Match Control page for an active match through the phases of the match. Any screens with “Overlay” in the title are for events using AV.

Overlay Preview (Optional)

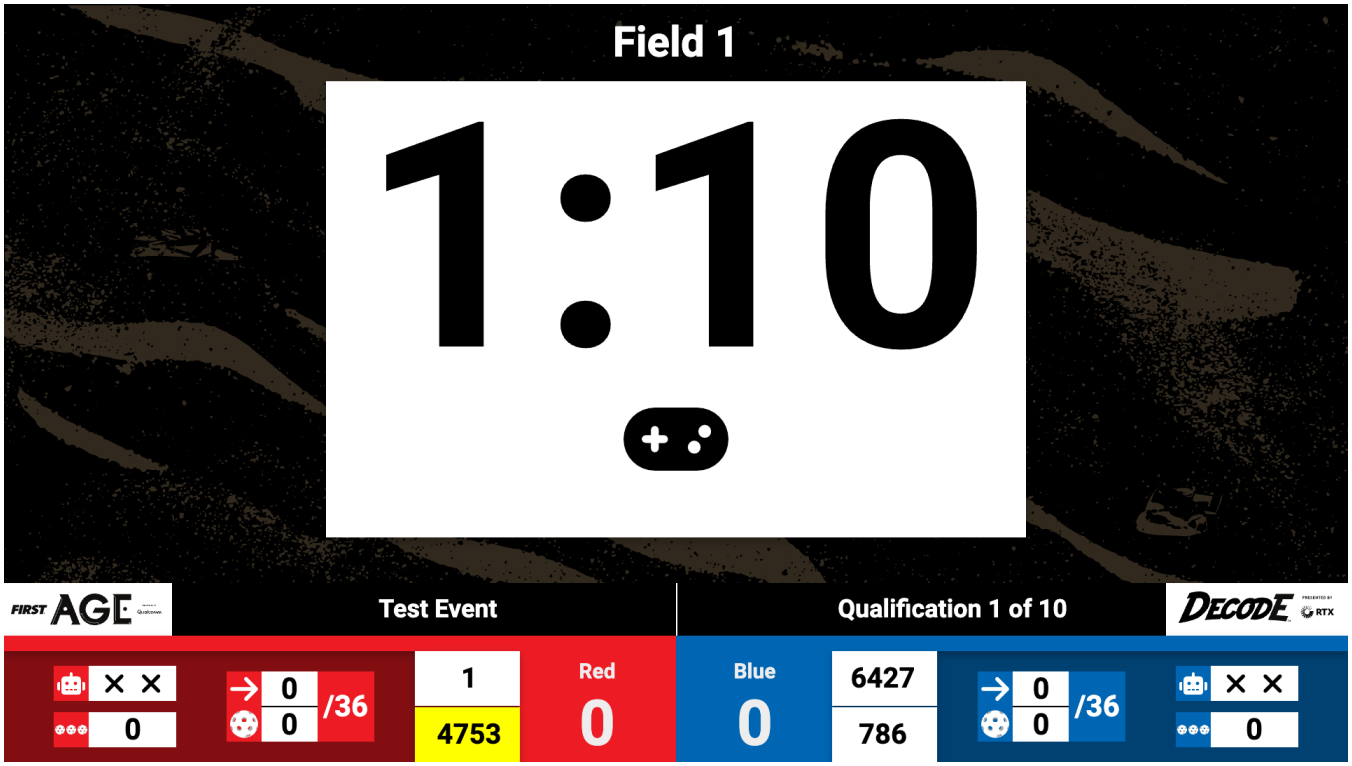


Match – Field Display

This screen shows the AUTO period of the match.

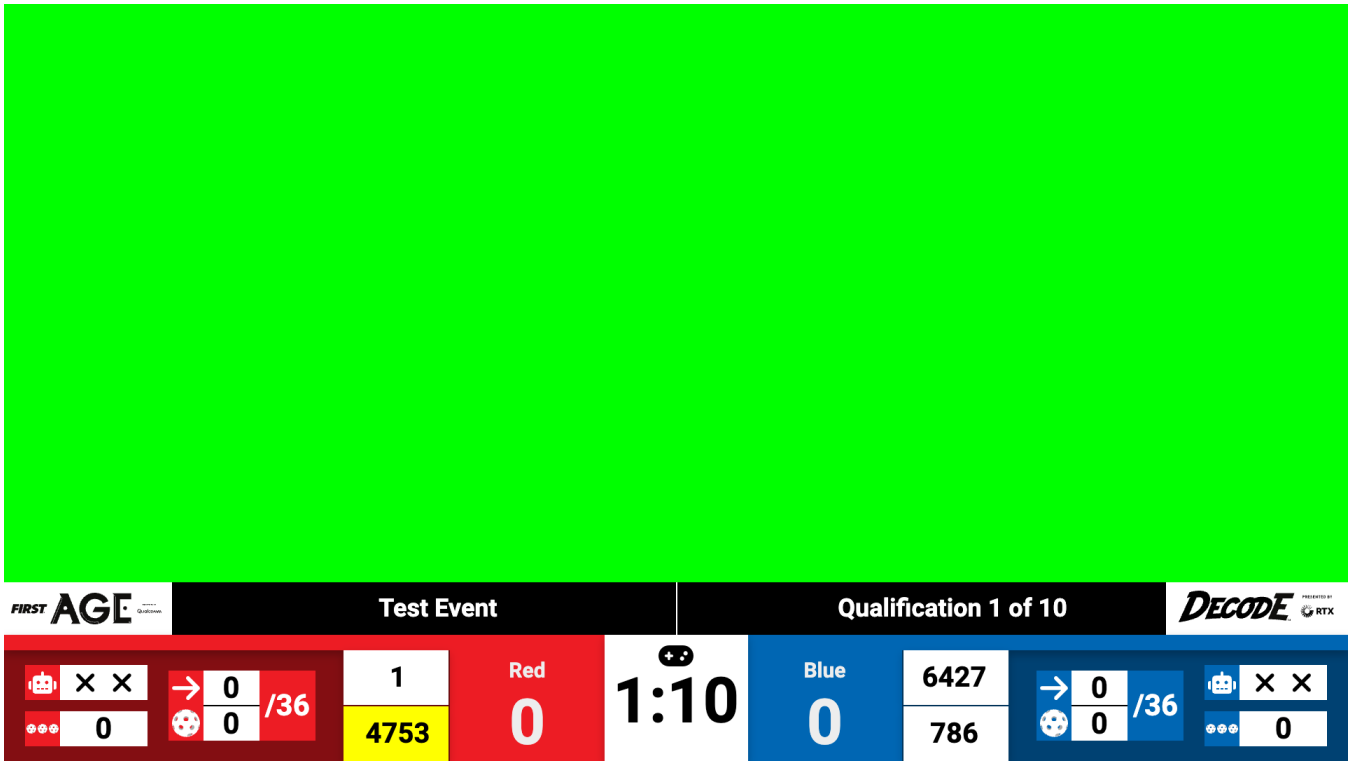


This screen shows the TELEOP period of the match.



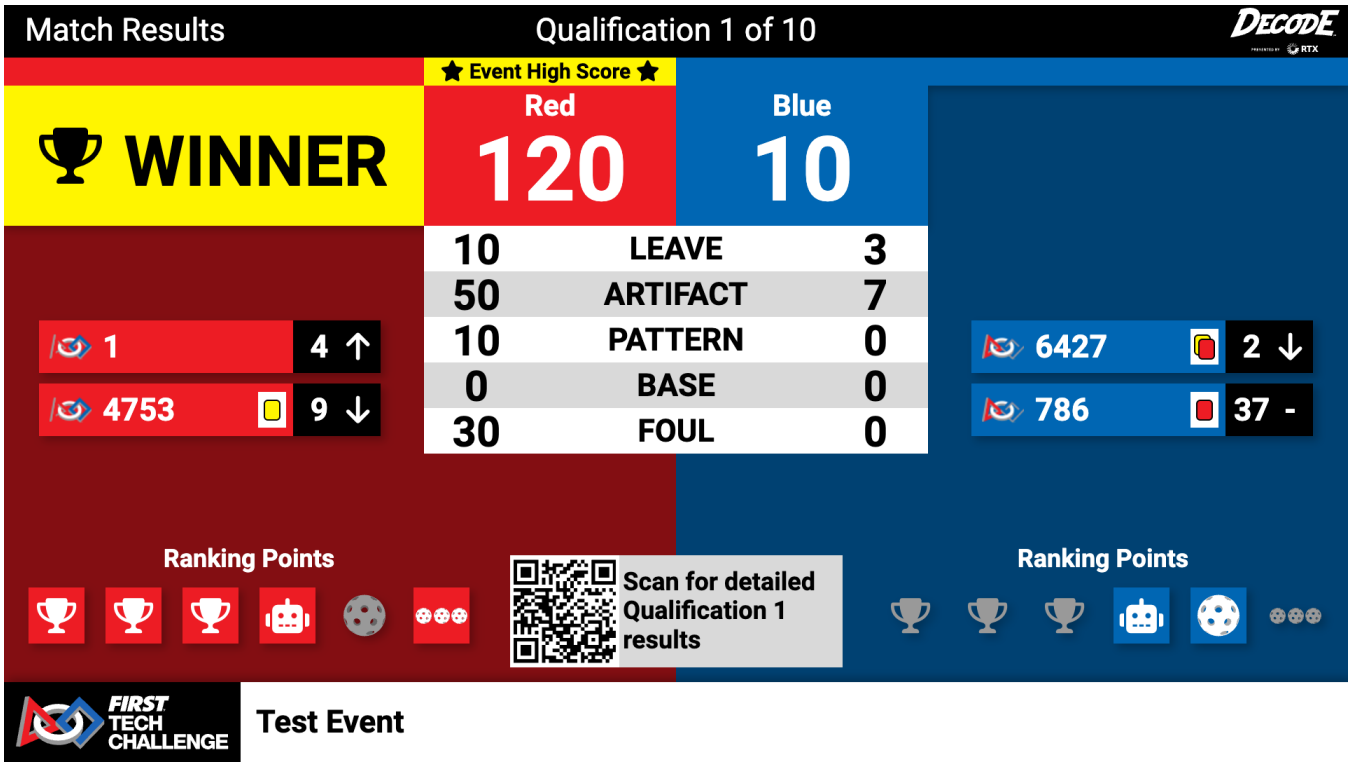
Overlay Match – Field Display

The field display shows the big center-aligned timer for all matches throughout the event.



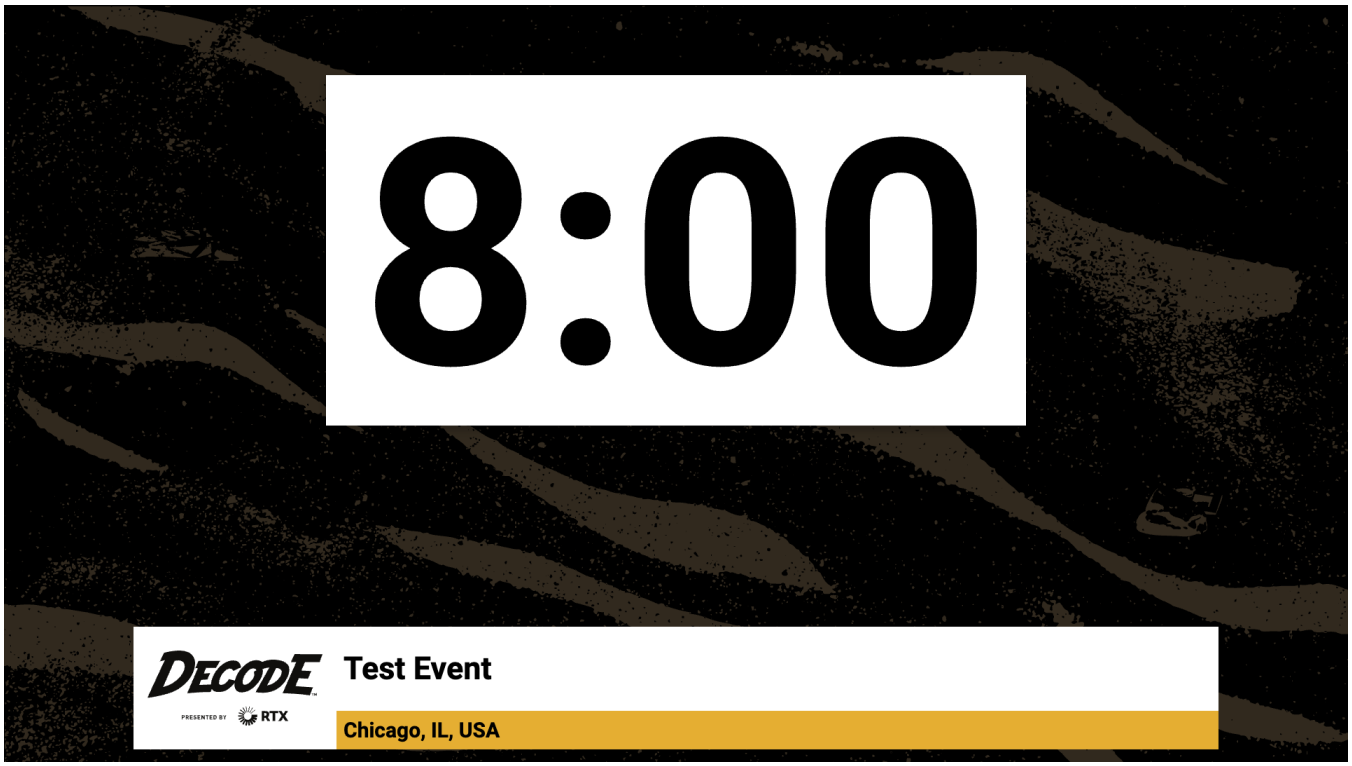
Match Results – Qualifications

One of the most important screens during the event is the match results screen. This screen shows the match winner, teams' rankings, match scores, and the earned ranking points. The QR code links to [FTC Event Web : Home]



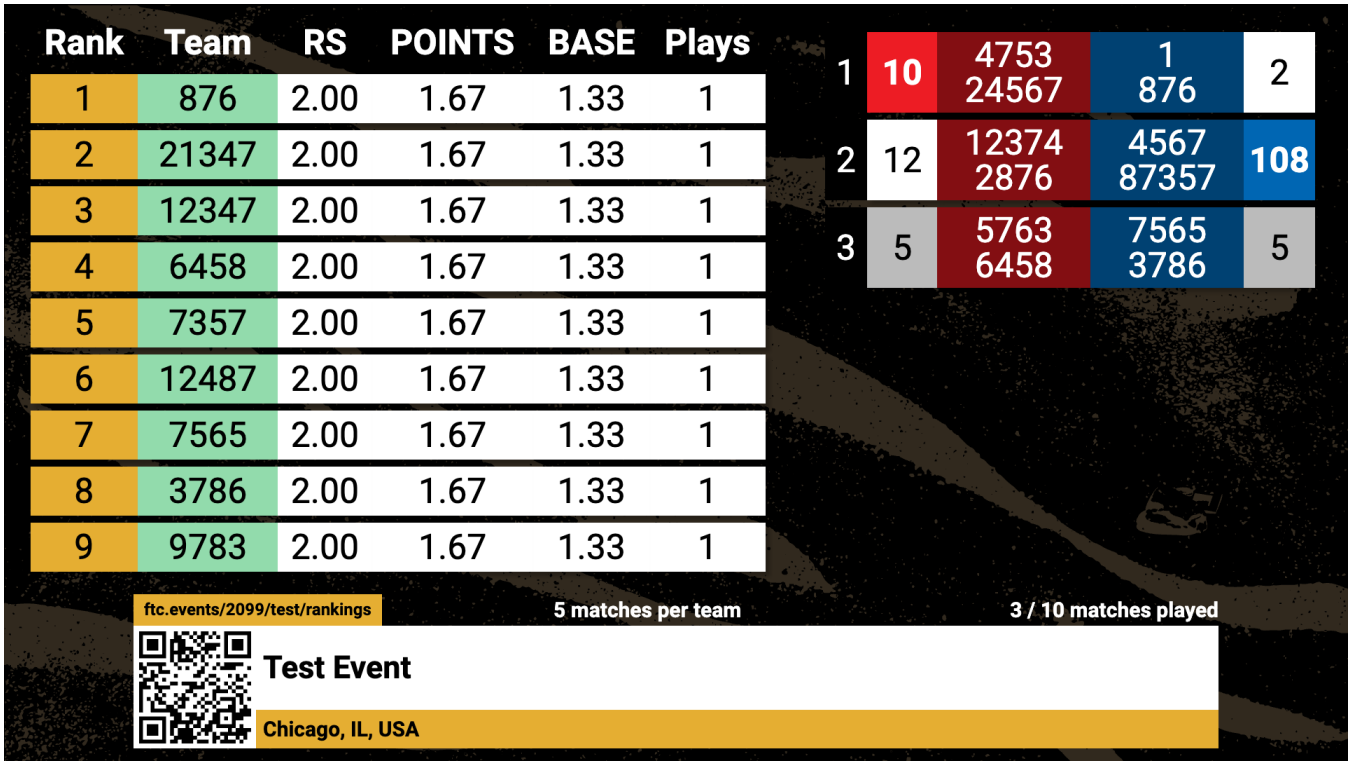
Timeout

The timeout screens occur between matches. The length of the timeout for qualification or playoffs is defined in the Competition Manual.



Rankings

Rankings screen displays the current ranking as the event progresses through the matches.



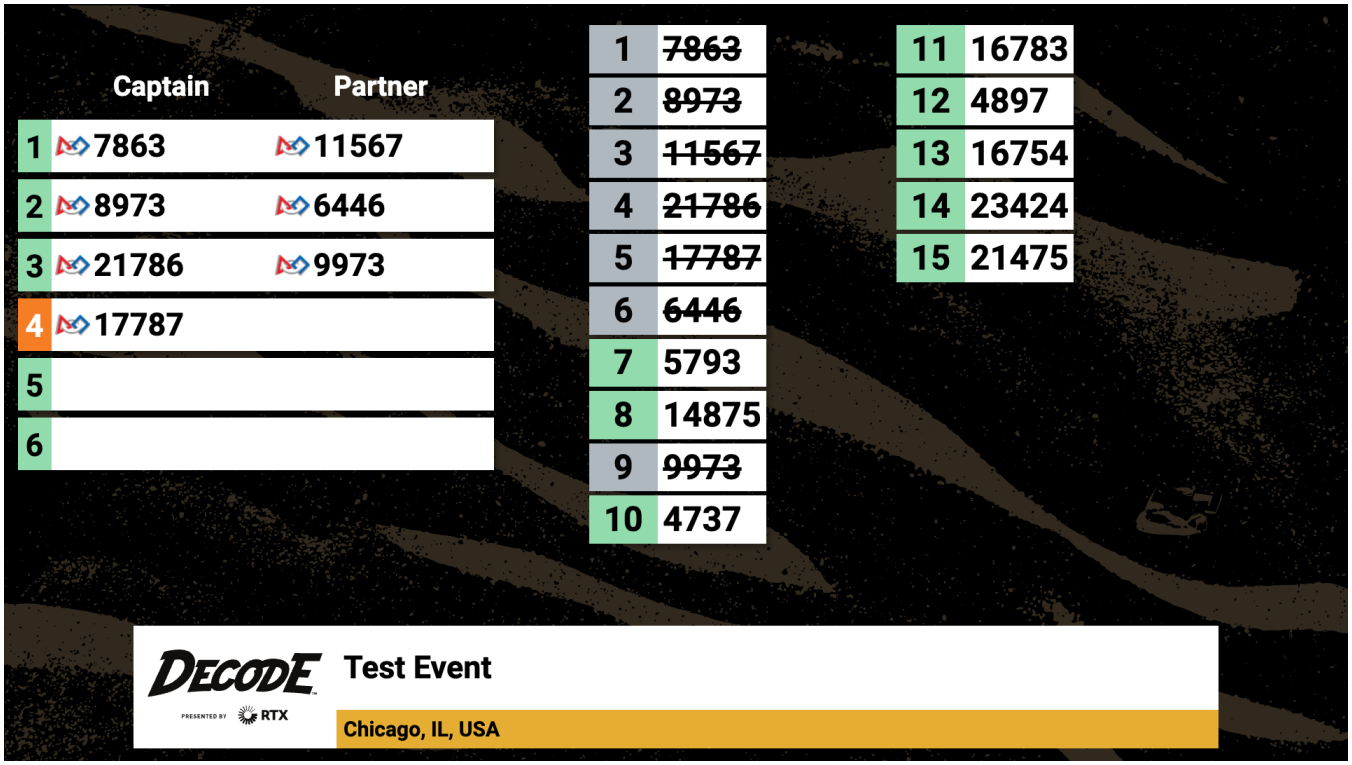
Rank	Team	RS	POINTS	BASE	Plays
1	876	2.00	1.67	1.33	1
2	21347	2.00	1.67	1.33	1
3	12347	2.00	1.67	1.33	1
4	6458	2.00	1.67	1.33	1
5	7357	2.00	1.67	1.33	1
6	12487	2.00	1.67	1.33	1
7	7565	2.00	1.67	1.33	1
8	3786	2.00	1.67	1.33	1
9	9783	2.00	1.67	1.33	1

1	10	4753 24567	1 876	2
2	12	12374 2876	4567 87357	108
3	5	5763 6458	7565 3786	5

Alliance Selection Screens

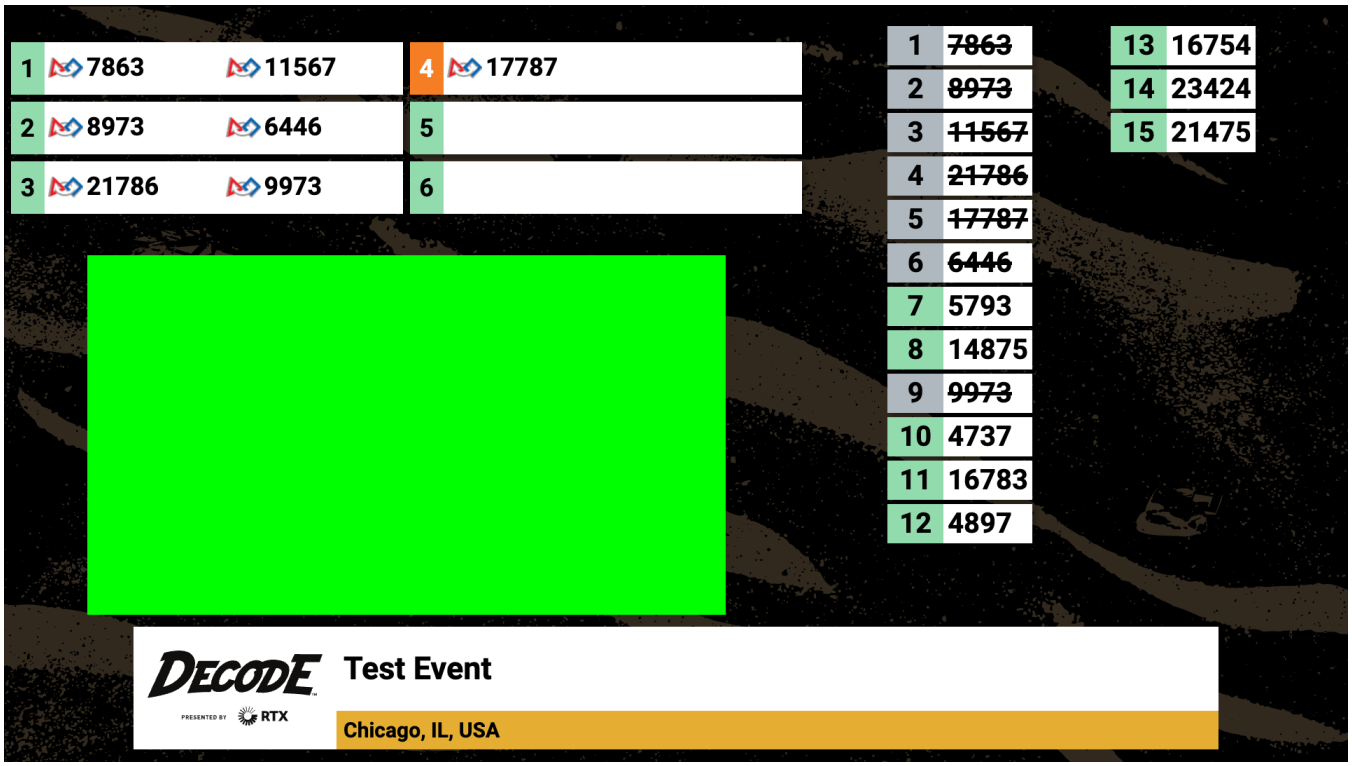
Alliance Selection

The alliance selection screen shows the audience what is happening during `Alliance Selection`. The teams that appear crossed out can no longer be selected. Once the number of columns has been filled, alliance selection is complete. The next screens will be for the playoff matches.



Hybrid Alliance Selection – Overlay

The hybrid alliance selection is for AV overlay. The teams that appear crossed out can no longer be selected. Once the number of columns has been filled, alliance selection is complete. The next screens will be for the playoff matches.

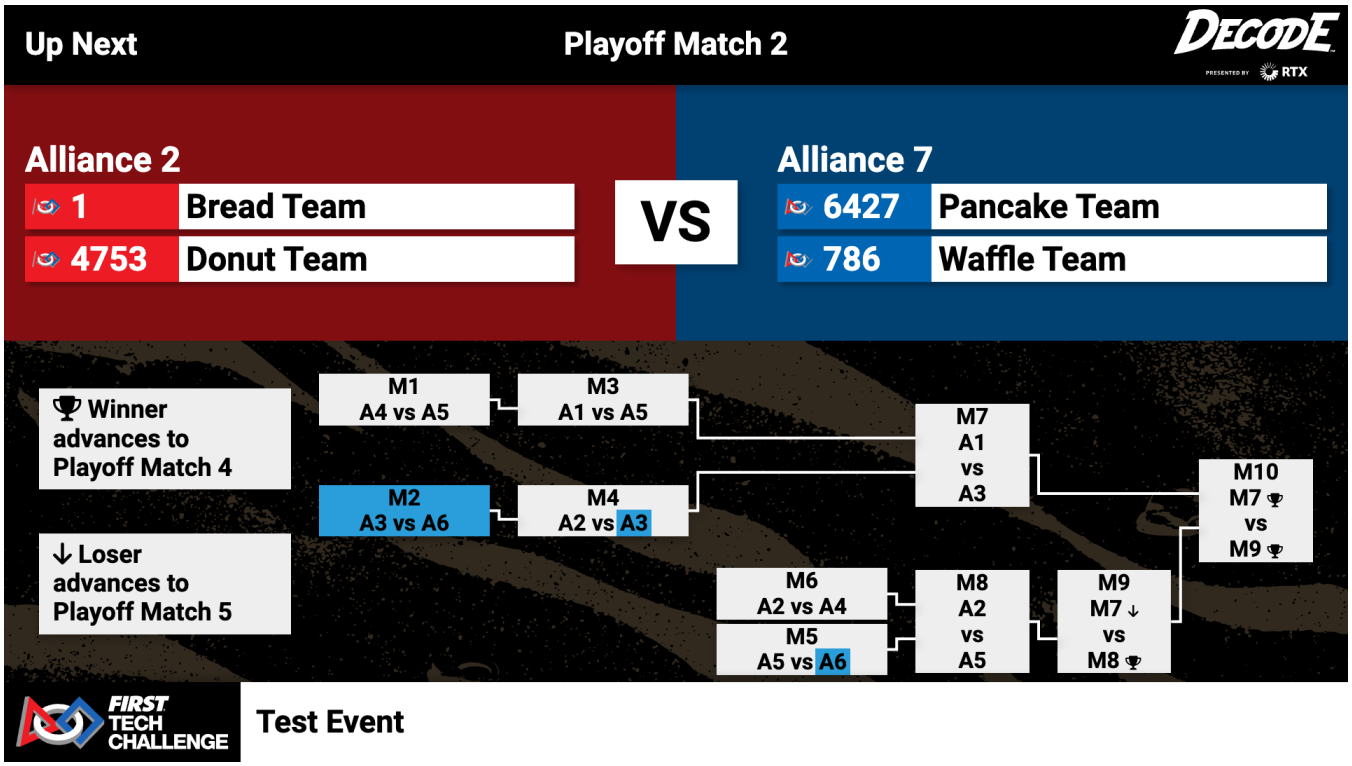


Playoff Screens

The playoff match screens pair with the playoff bracket screen that shows the progression of the advancement of alliances through the playoff matches. A QR code for FTC Event Web : Home can be found in most of the playoff screens.

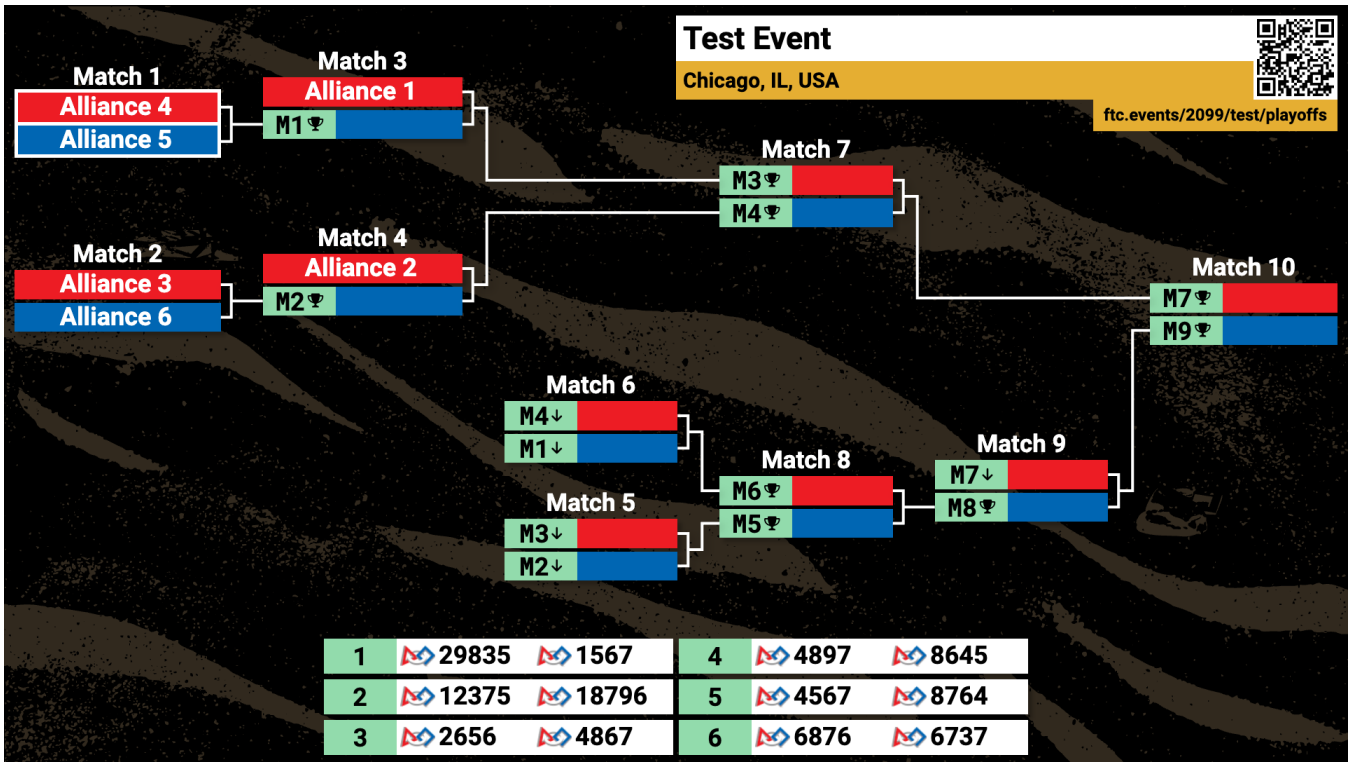
Playoff Preview

The playoff preview shows what match, what teams, what alliance, and the progress of the alliance to the next match.



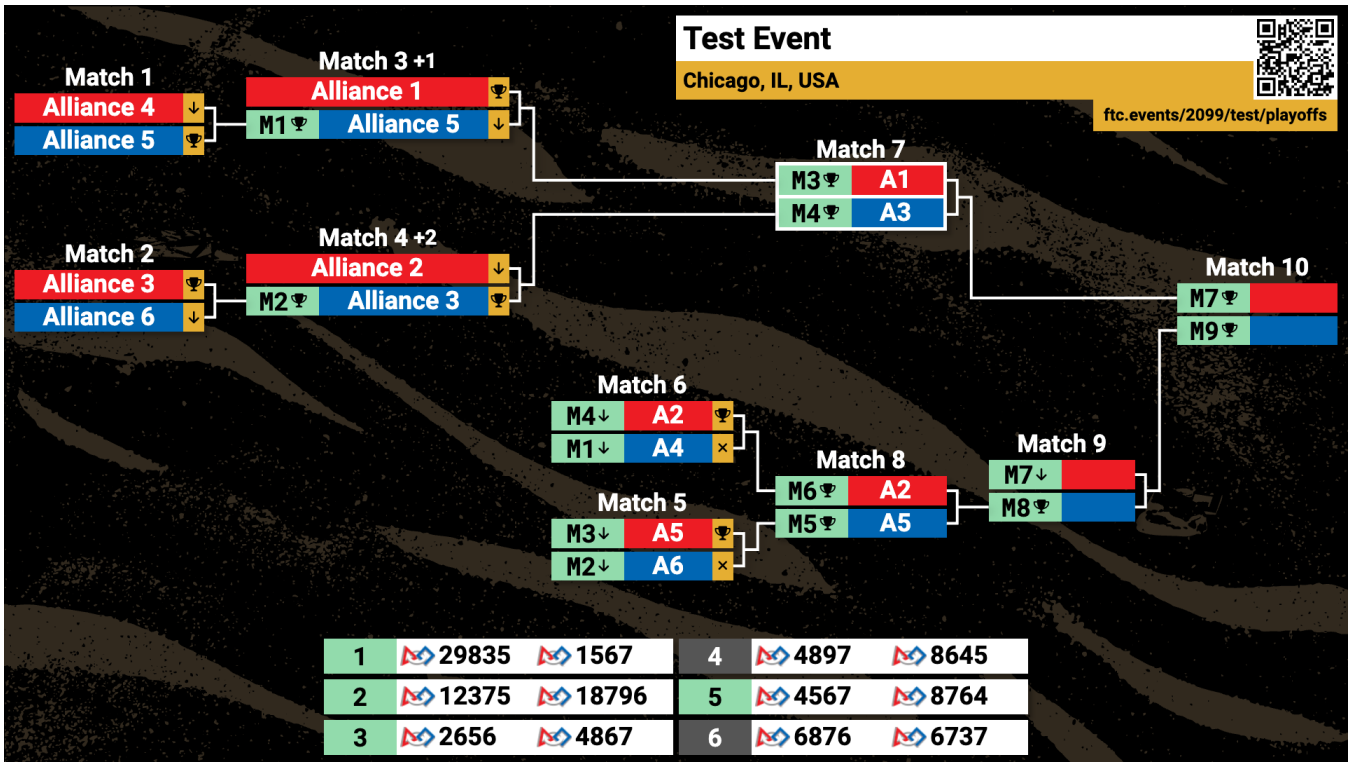
Empty Playoff Bracket – Pre Playoff State

Playoff bracket screens are a great resource to show the audience the progress of the alliances as they move through the playoffs. Matches with a trophy show the alliance that won the previous match and matches with a down-facing arrow show the alliance that lost the previous match.



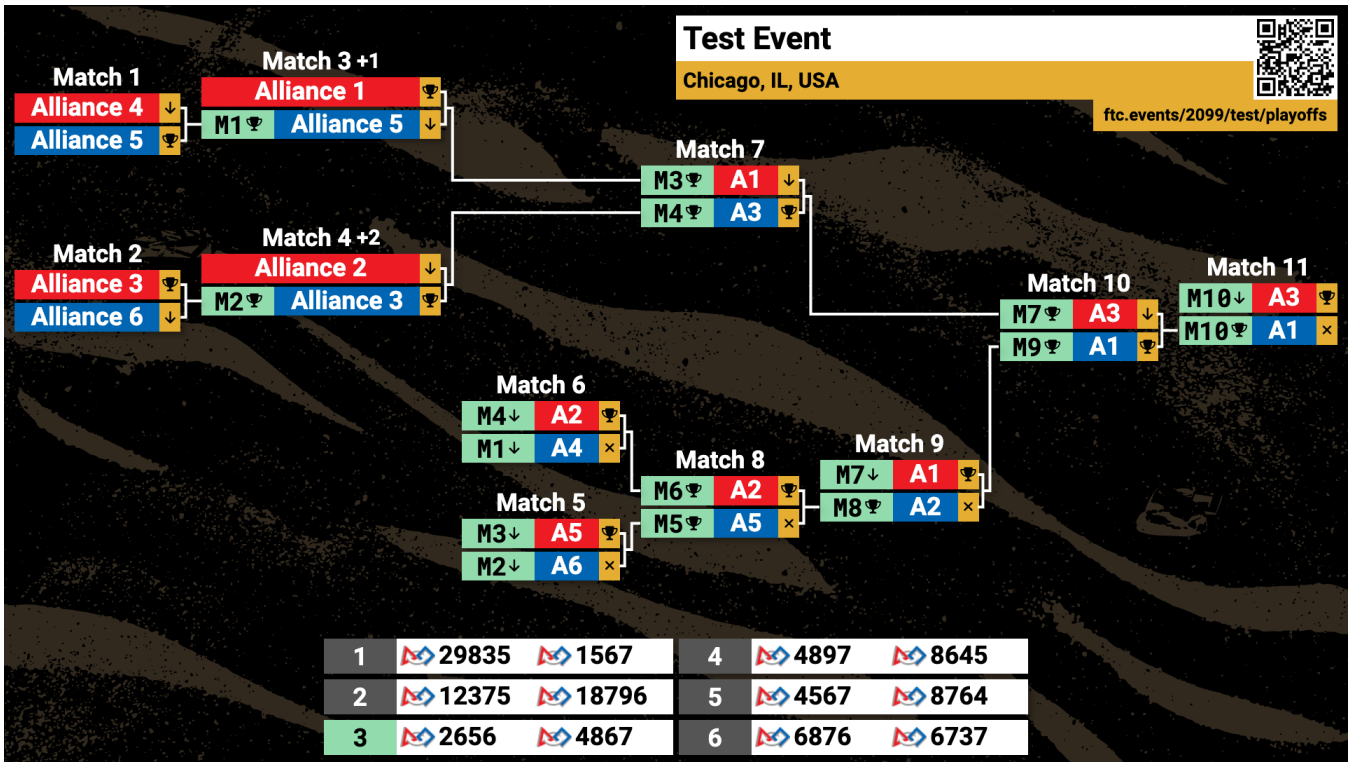
Playoff Partial Bracket

In the playoff partial bracket, the alliances populate the matches. Matches with a trophy show the alliance that won the previous match and matches with a down-facing arrow show the alliance that lost the previous match.



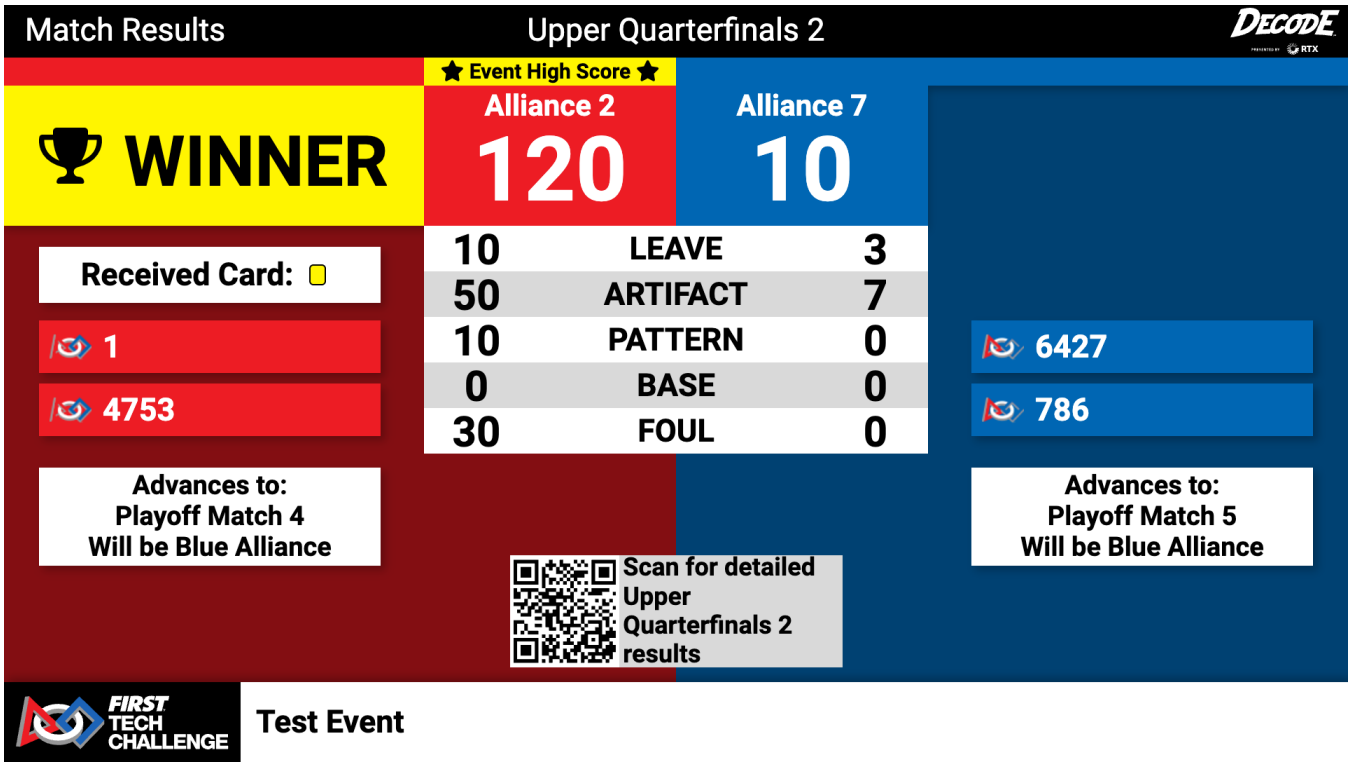
Playoff Full Bracket

In the playoff full bracket, the alliances populate the matches. Matches with a trophy show the alliance that won the previous match and matches with a down-facing arrow show the alliance that lost the previous match. Matches with an alliance with an X do not progress past that match.



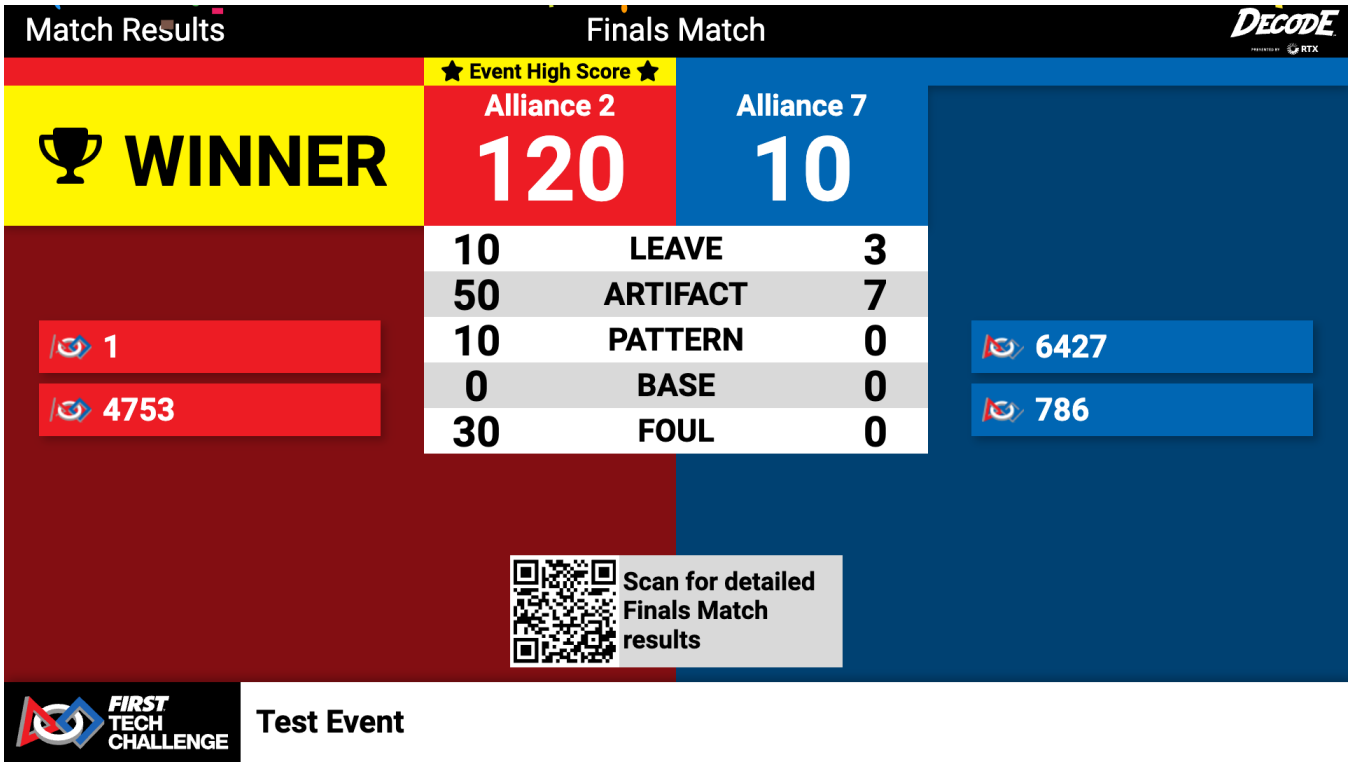
Match Results – Playoffs

One of the most important screens during the event is the match results screen. This screen shows the next playoff match and which alliance teams are advancing to, match winner, teams' rankings, match scores, and the earned ranking points. The QR code links to [FTC Event Web : Home]



Match Results – Final Match

One of the most important screens during the event is the match results screen. This screen shows the final match winner and match scores. The QR code links to [FTC Event Web : Home]

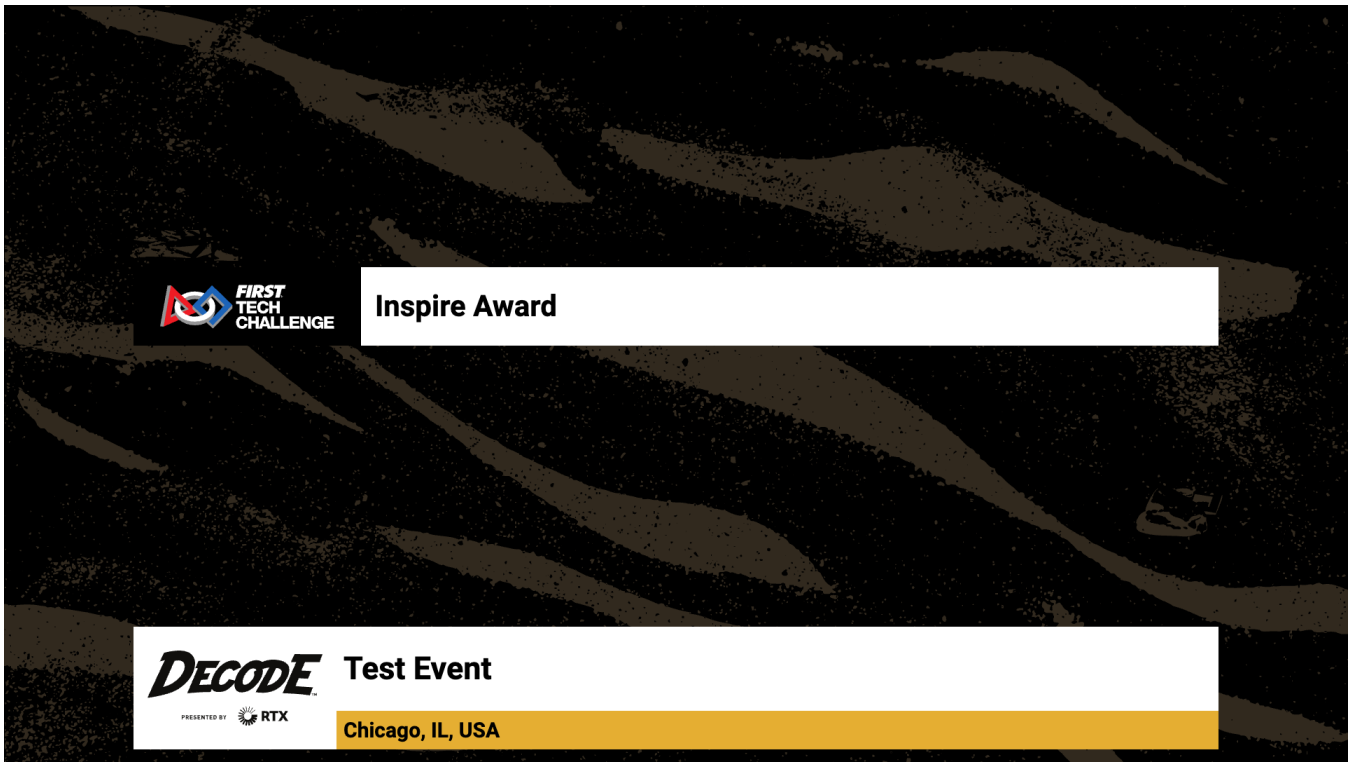


Awards

The awards screens are provided to celebrate the teams that have won awards. The order of awards to show are in the `Present Awards` page.

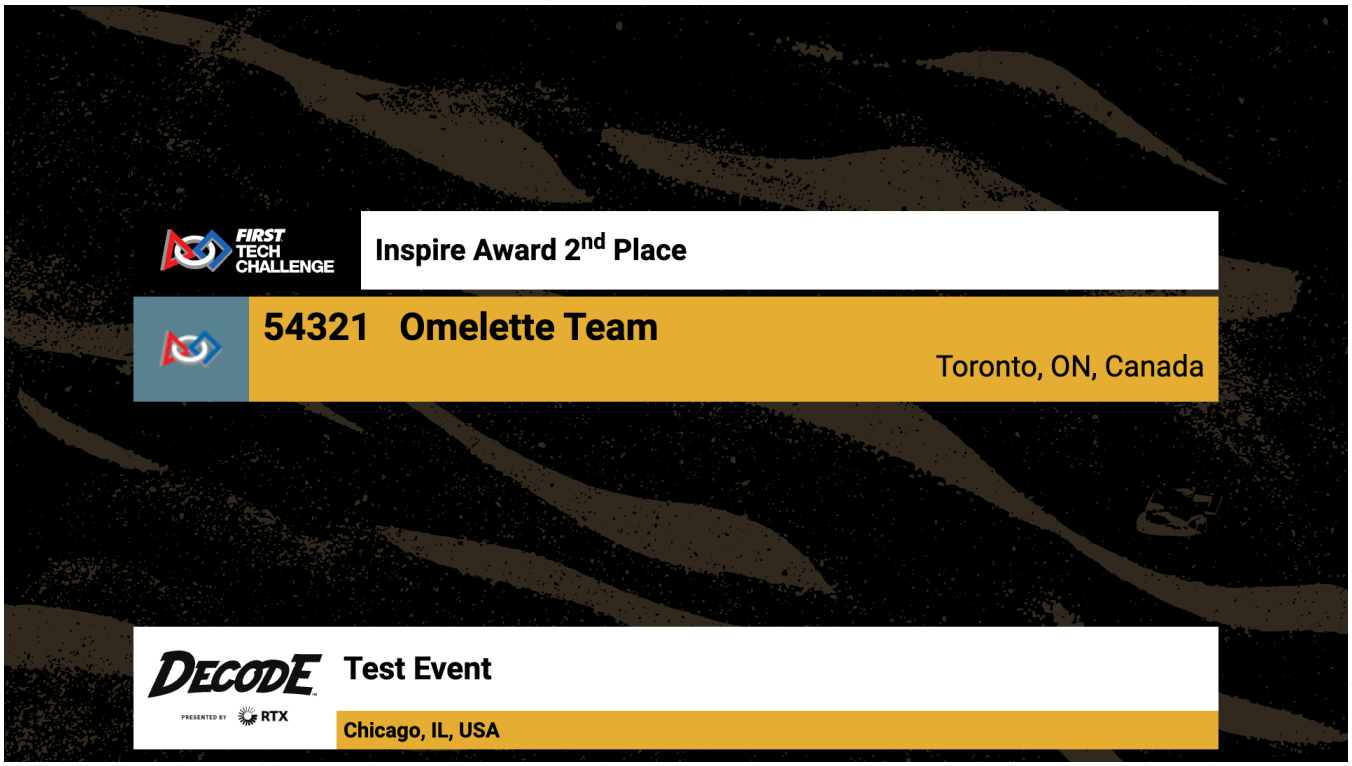
Awards Screen - Unfilled

The award screen without the award winner means that the awards have not been entered, as required for all tournaments.

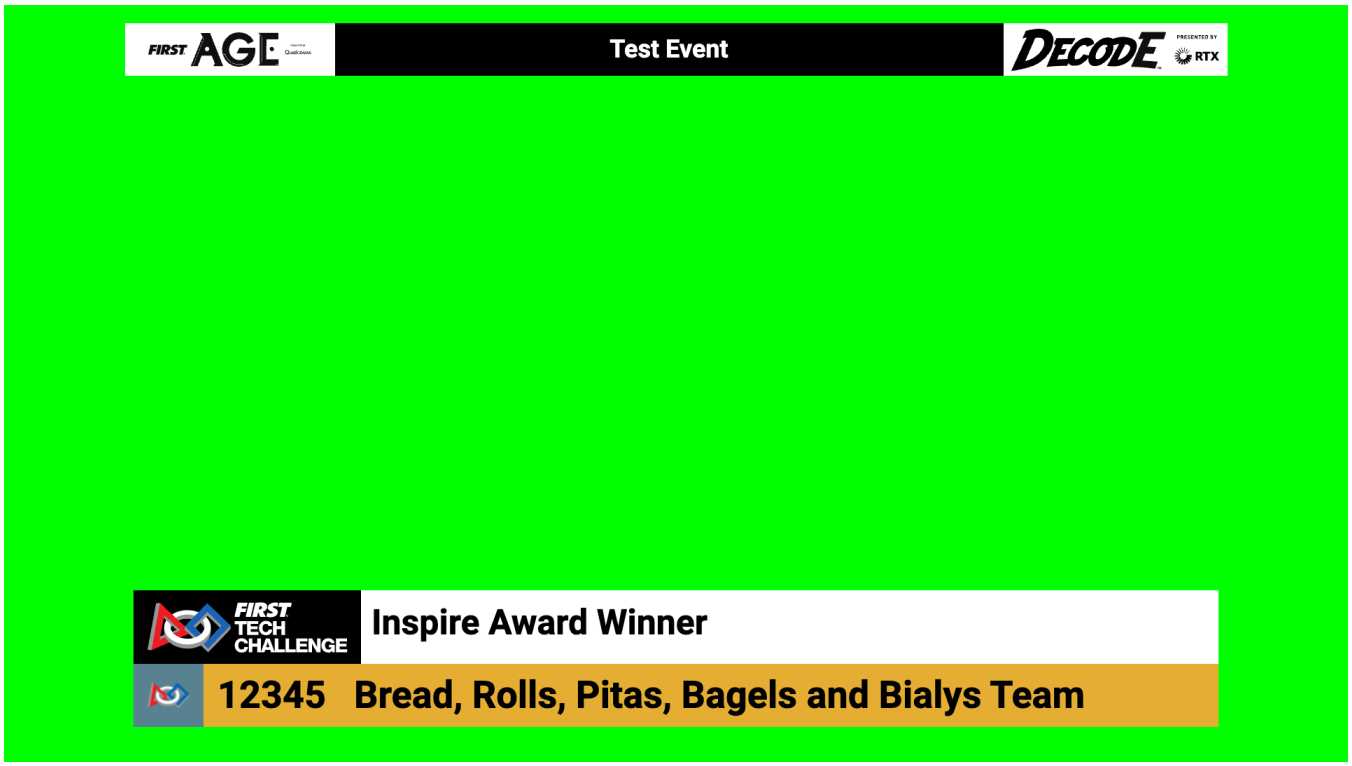


Awards Screen - Filled

Once the awards have been entered/imported into FTC-Live, the awards screen will populate the awards with the name of the award, the team name, location, and number.

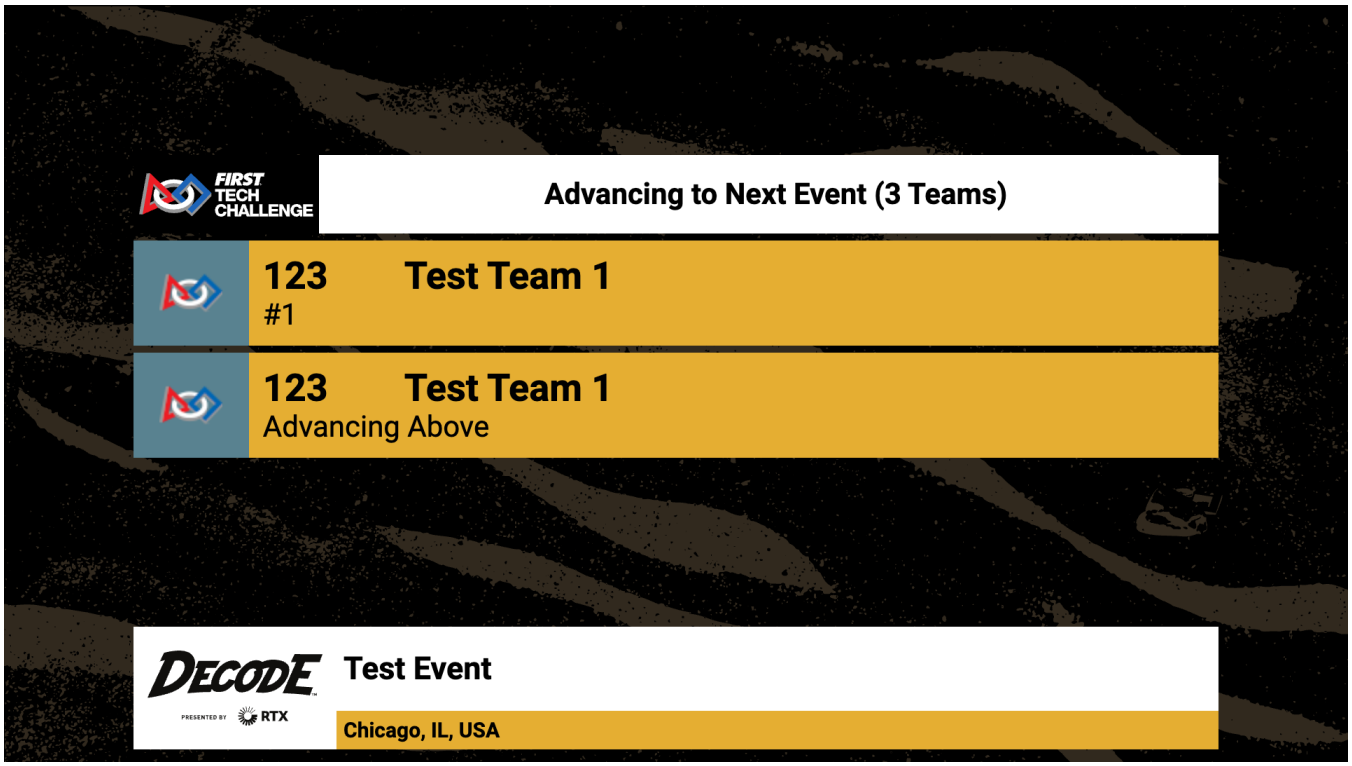


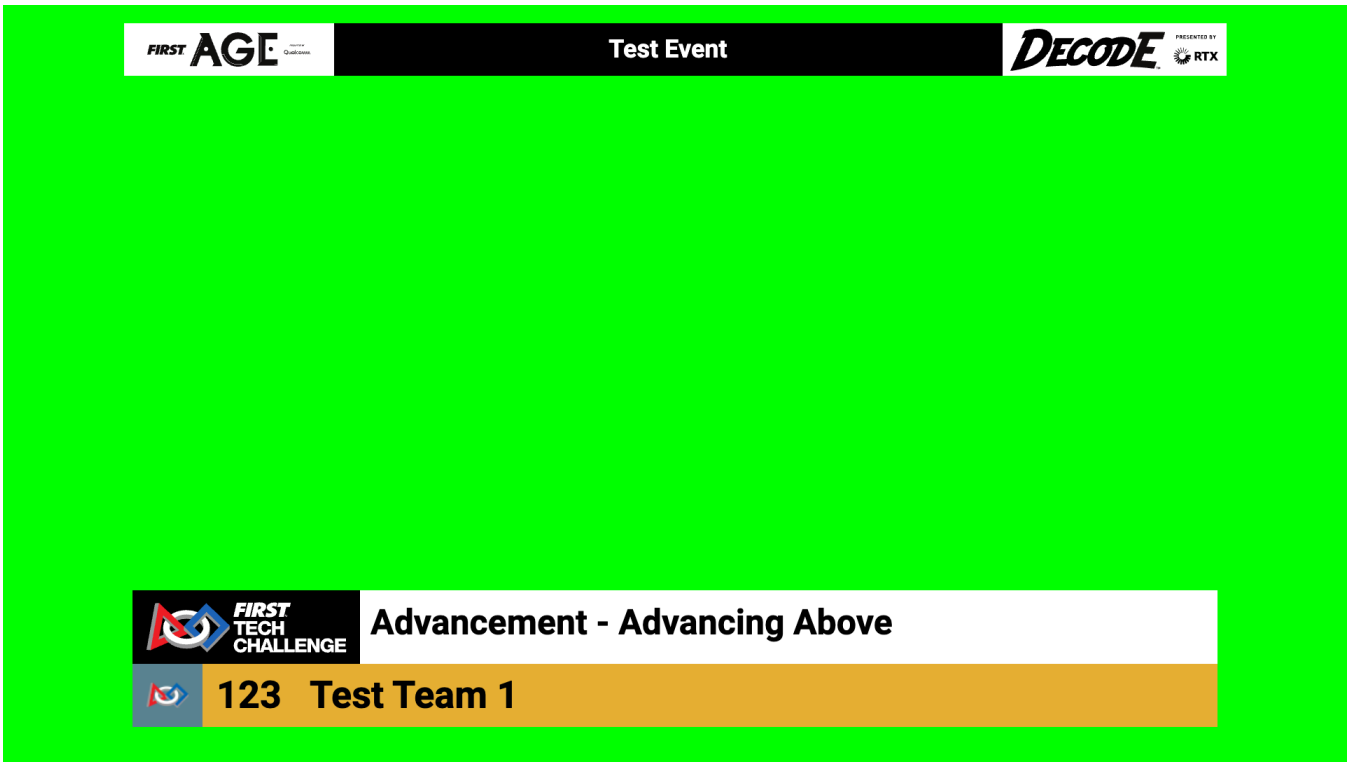
Awards Screen - Overlay Full Screen



Advancement

These screens are shown at the end of the event. It shows the number of teams advancing and their advancement order. Verify that the advancement order is correct with the Event Director before presenting this screen.


FIRST TECH CHALLENGE
Advancing to Next Event (3 Teams)
123 Test Team 1
#1
123 Test Team 1
Advancing Above
DECODE
PRESENTED BY RTX
Test Event
Chicago, IL, USA

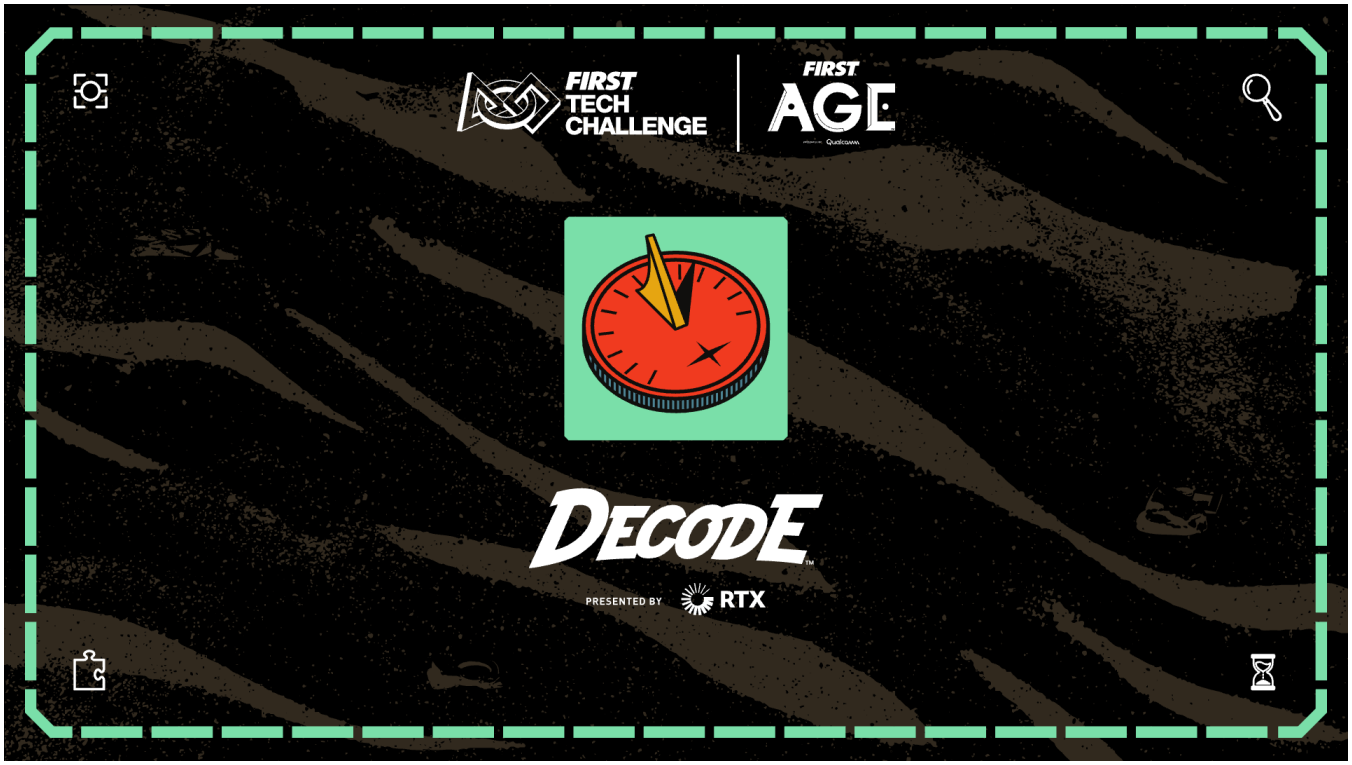

FIRST AGE
Test Event
DECODE
PRESENTED BY RTX
FIRST TECH CHALLENGE
Advancement - Advancing Above
123 Test Team 1

Slideshow

RTX
DECODE
PRESENTED BY RTX
Test Event
Chicago, IL, USA

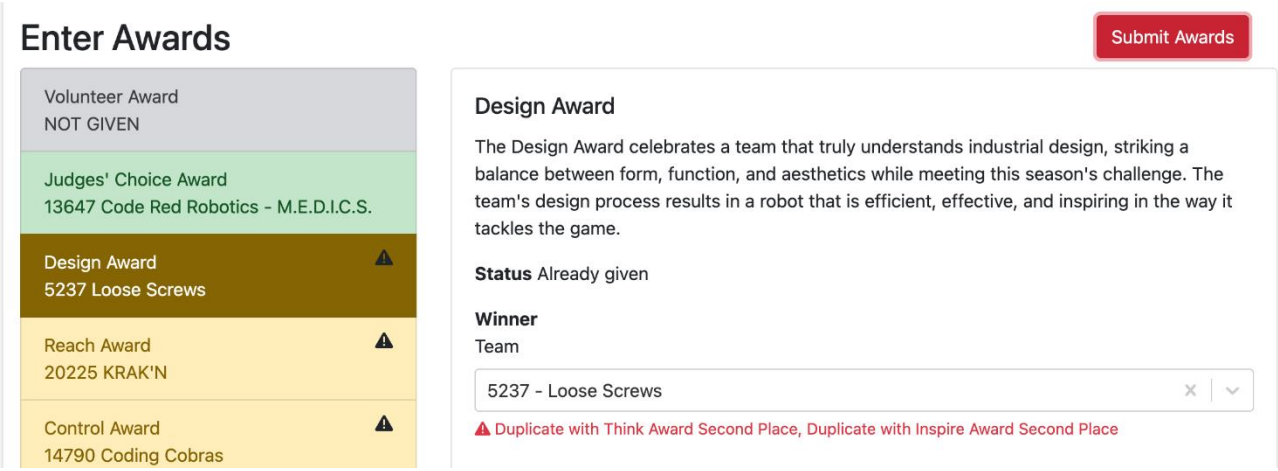
Video

Download Event Videos to use the video screen.

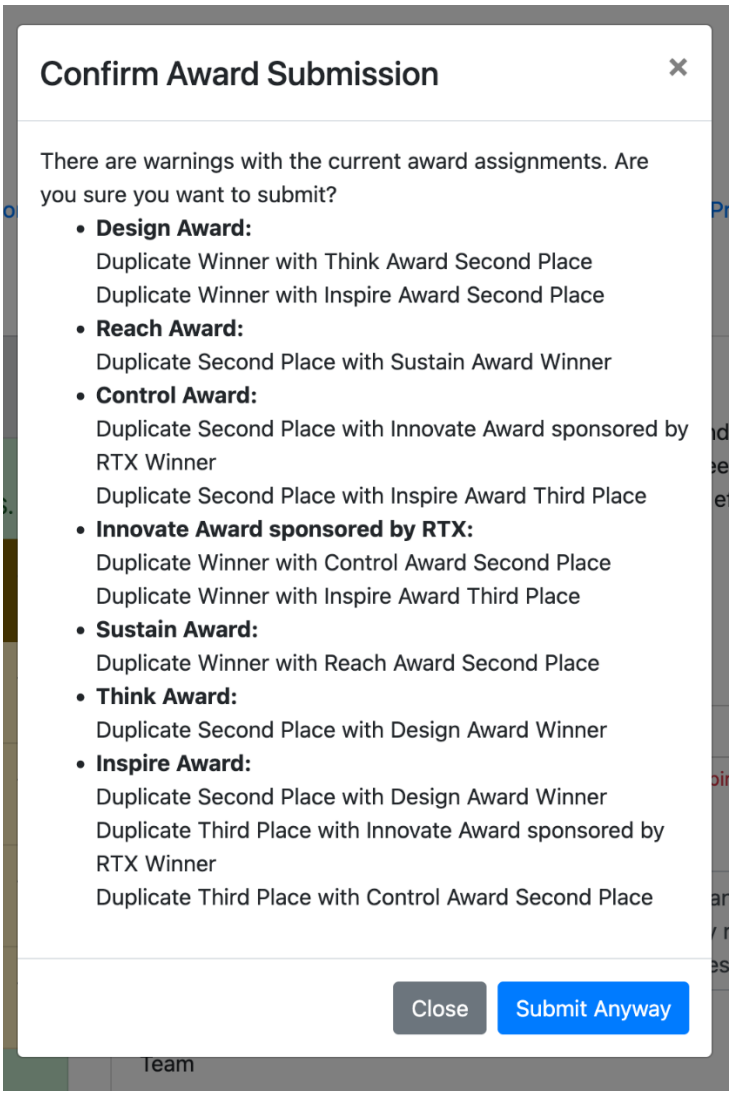


Appendix J: Award Submission Warnings

Awards must be entered before submitting the event .db to *FIRST*. Warnings have been added to ensure the proper process of entering awards is followed. A duplicated team in a required award(s) for an event will produce the “Duplicate with Think Second Place, Duplicate with Inspire Award Second Place” warning. Missing awards required for the event will also produce a warning here.

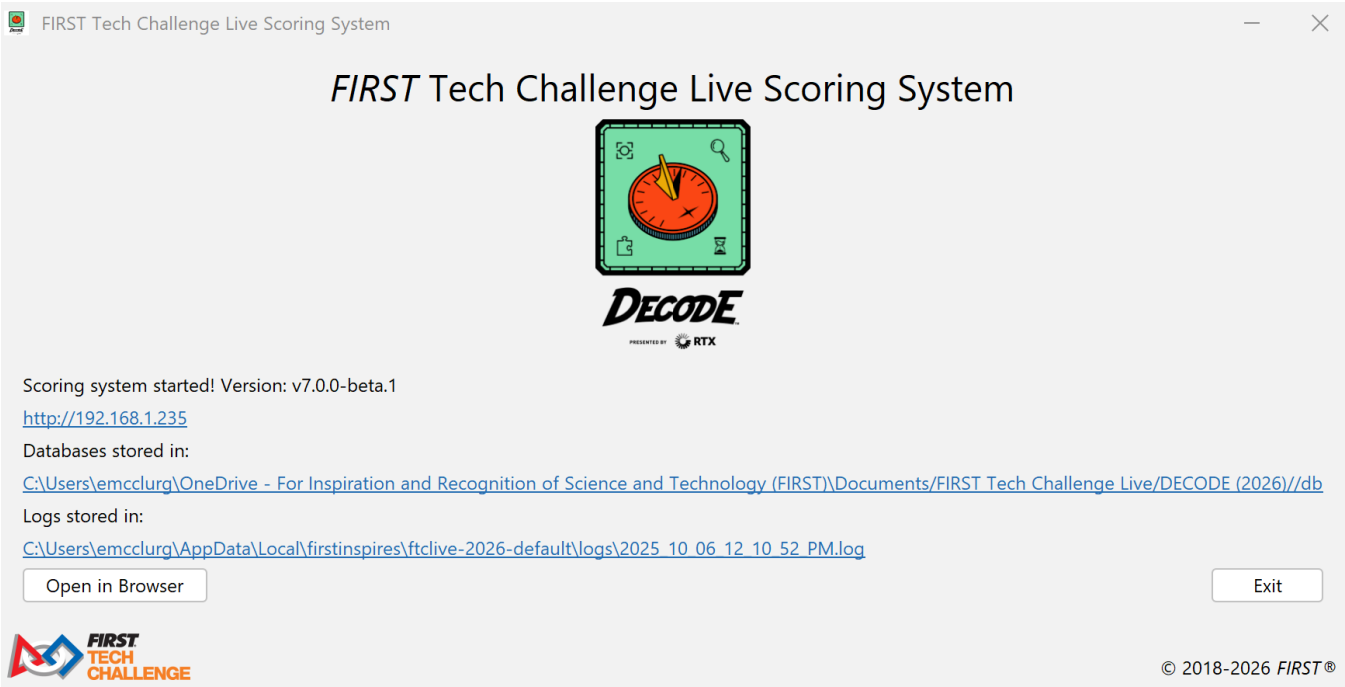


The Award Submission will also provide warnings of duplicated or missing awards that are required for the event.


Confirm Award Submission
There are warnings with the current award assignments. Are you sure you want to submit?
Design Award:
Duplicate Winner with Think Award Second Place
Duplicate Winner with Inspire Award Second Place
Reach Award:
Duplicate Second Place with Sustain Award Winner
Control Award:
Duplicate Second Place with Innovate Award sponsored by RTX Winner
Duplicate Second Place with Inspire Award Third Place
Innovate Award sponsored by RTX:
Duplicate Winner with Control Award Second Place
Duplicate Winner with Inspire Award Third Place
Sustain Award:
Duplicate Winner with Reach Award Second Place
Think Award:
Duplicate Second Place with Design Award Winner
Inspire Award:
Duplicate Second Place with Design Award Winner
Duplicate Third Place with Innovate Award sponsored by RTX Winner
Duplicate Third Place with Control Award Second Place
Close
Submit Anyway
Team

Appendix K: Access the Database (db) Files and Logs

On the FTC-Live app “splash screen” page there are links for the db files and logs to view issue and access if tech support requests them.



Appendix L: Basic Configuration with Paper Scoring

Paper scoring is intended to be an emergency backup in the event of an unexpected failure in the event scoring system network. In this case paper scoresheets are used instead of scoring tablets, which precludes the ability for teams to have real-time scoring information. In this case, 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.

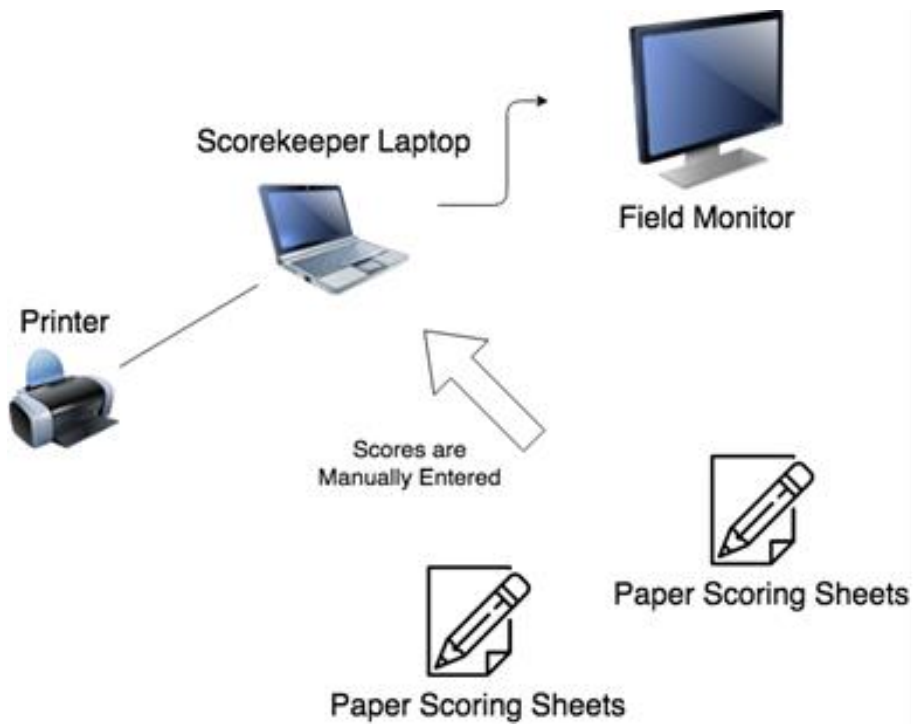


Figure 7 - Paper scoresheets require a scoring server laptop to manually enter the scores.