





2023-2024 FIRST® Tech Challenge

FTC Scoring Team Guide

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Revision History			
Revision	Date	Description	
1	12/13/2023	Initial Release	

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Introduction to FIRST Tech Challenge (FTC) Scoring for Teams

FTC Scoring FIRST Tech Challenge Scoring (firstinspires.org) is the FIRST Tech Challenge event management system, a cloud-based system integrated with FIRST's other systems for a robust team and volunteer experience. There are several features teams can use to improve their experience. Teams can use the "Scoring Calculator" to determine their scores when they practice for in-person events, and access important resources for the season FIRST Tech Challenge Scoring (firstinspires.org). Most importantly, FTC Scoring is used to manage remote and hybrid event resources (Engineering Portfolio and other submissions), hold judging presentations via video conferences for remote and hybrid events, and input remote match play and practice matches all in one system.

Remote Events

In some regions, teams who participate in the *FIRST* Tech Challenge who compete in *remote* events, including Dean's List Interviews and advancing events. For remote events:

- 1. Teams will perform the challenge by themselves (without an alliance partner), from a modified 12' x 8' field set up.
- 2. Teams will use a cloud-based system, FTC Scoring, to score their matches from home. A team member or student can keep score for remote matches.
- 3. Participate in remote judging presentations through a video conferencing link provided to the judges and the coach/team admin of the team. (Also, for hybrid events.) The team administrator will need to email the link to student participants on the team. Student participants do not need a *FIRST* dashboard account to use the video conference link.
- 4. Upload engineering portfolios, Control Award submissions, and retrieve their judging feedback. (Also, for hybrid events.)
- 5. Match results and awards information from the remote event will be available on FTC Event Web:
 Home (firstinspires.org) once the event has been concluded and published.

This document shows a team how to access, score their matches, and participate in remote judging for an event using the FTC Scoring system.

What's Needed

To score a remote event, you will need the following:

- 1. A stable Internet connection.
- 2. A device for entering scores:
 - a. Can be a laptop, Chromebook, tablet, or smart phone.
- 3. Access to the FTC Scoring system through a web browser. A second (optional) device can be used as a Field or Audience Display:
 - a. Can be a laptop, Chromebook, or tablet (a larger screen is recommended).
 - b. Access the FTC Scoring system through web browser.
 - c. Displays match clock, current score and plays audio cues.



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If you do not have access to a reliable Internet connection, you should use paper scoresheets (available from the firstinspires.org website) to score your remote matches. After you have scored your matches, you can have someone (such as your coach or the remote event organizer) enter your scores from the paper scoresheets into the FTC Scoring system once they have access to the Internet. This must occur during the submission window for the event.

Accessing the System

The FTC Scoring system connected to the <u>firstinspires.org</u> Dashboard sign in. To be able to access the FTC Scoring system, your team must be officially registered for the current season. If your team has officially registered through the FIRST team dashboard, then your lead coach can login to the team's FIRST dashboard account and access the FTC Scoring system. There are two options for accessing the FTC Scoring system.



1. Visit www.firstinspires.org and select the "LOG IN" link in the upper right-hand corner. On your team dashboard select the FTC Scoring link:

Figure 1 – Login to your FIRST dashboard account through the FIRSTInspires.org website.

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2. Visit ftc-scoring.firstinspires.org into your web browser to navigate to the FTC Scoring website then log in with your FIRST dashboard account.

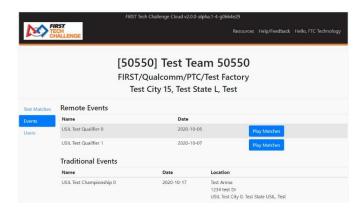


Figure 2 – The team landing page should display your team info and list your team's remote events.

- 3. You should see the FTC Scoring system landing page for your team.
 - a. Team info is displayed at the top.
 - b. A list of your team's remote events should be visible.
 - c. A list of your team's traditional events should also be visible.



Navigating to Your Landing Page

While logged in to the FTC Scoring system, if you want to return to the main landing page for your account, select the FIRST Tech Challenge logo in the upper left-hand corner to navigate back to this page.



Figure 3 – Select the FIRST Tech Challenge logo to navigate to the main landing page for your team.

Managing Your Team Account

You can manage your FTC Scoring team account (change display name, logout, etc.) by selecting the "Hello <USERNAME>" link in the upper right-hand corner of the screen.



Figure 4 – Select this link to manage your FTC Scoring user account.

Adding Users to Help Manage Your Team Account

By default, the email address used to register the team through the FIRST dashboard will be the one used for the team administrator. If you would like to add a YPP (Youth Protection Program) screened user (Coach 2) to help manage your team's account, you can select the "Users" link on the left-hand side of the landing page.



Figure 5 – Select the "Users" link to add/edit users to help manage the team.

Then select the "Add Role" button of the Users screen. The system will prompt you for a user email and ask you to specify the role. The email you provide should be one associated with an existing *FIRST* dashboard account. You should select "Team Administrator" as the desired role.

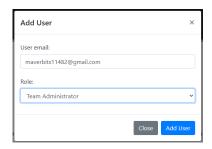


Figure 6 – The email that you provide should be associated with an existing FIRST dashboard account.

If the email of the user that you are adding is not yet associated with a *FIRST* dashboard account, then the user should visit the firstinspires.org website to create one for that email address. The new user will have to login to their *FIRST* dashboard account to get access to the FTC Scoring system.



Figure 7 – The user should create a FIRST dashboard account if the user does not already have one.

Remote Judging and Dean's List Interviews

Remote judging/interview sessions are designated for the following events styles: remote, hybrid and remote Dean's List Interviews. Remote judging requires two judges to be present before a team will be admitted to the session. A team can only access the judging session through the Team Admin (coach 1 or 2) via the "Judging" button that appears for designated event styles. The following information should help you understand the rules for youth protection and to become familiar with the user interface of the video conferencing tool prior your judging session.

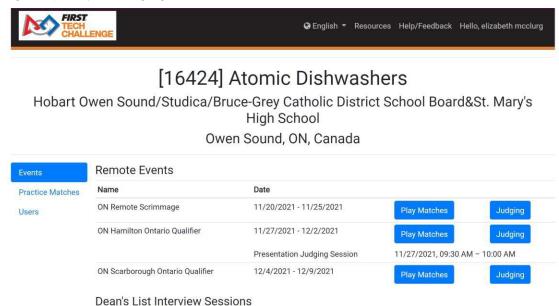


Figure 8 - A team's Judging and Interviews are displayed on their "Events" page.

The Team Admin has access to the Judging button. This button only appears for designated event styles. Once selected, the judging session timeslot and the judging submissions upload links appear. Be sure to email the links and times of the judging sessions to your team members.

Note: Team members do not need to access/login to FTC Scoring to use the judging session links.

Uploading Judging Materials

Judging materials have a submission window for upload of the materials. Please be aware of the judging submission window for remote and hybrid events.

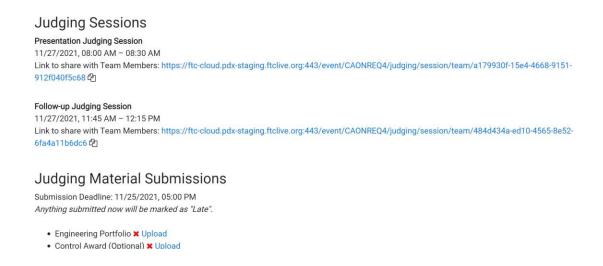


Figure 9 - A team's judging session with "Join" links.

Once you've uploaded judging material, you can view the submission or completely remove it, if necessary.

Note: The judges will only see the latest version of uploaded judging materials. In this example, there are multiple version from the Team Admin view but the judges will only see "Version 2".



Figure 10 - For remote judging, a team's uploaded engineering portfolio is shown.

Judging Sessions with the Integrated Video Conferencing Tool - Big Blue Button

There is an integrated video conferencing tool called Big Blue Button (BBB) for the judging sessions. Be aware that the judges for the session act as the host of the session, therefore have control of some of the user interface (UI), including admitting other participants to the session and allowing participants to share their screen and present.

Once you select the link, a prompt to enter your name appears.



Figure 11 - Integrated video conferencing tool prompts the user to enter their first name.

If you plan to participate as a presenter or speak in the meeting, select "Microphone" otherwise you will be muted for the session. You can leave and use the link to rejoin if you accidentally select "Listen Only".

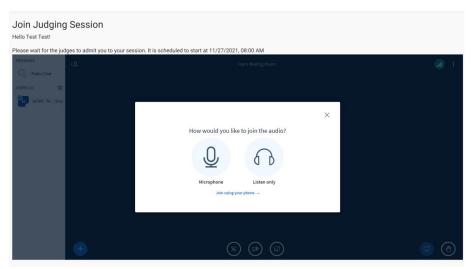
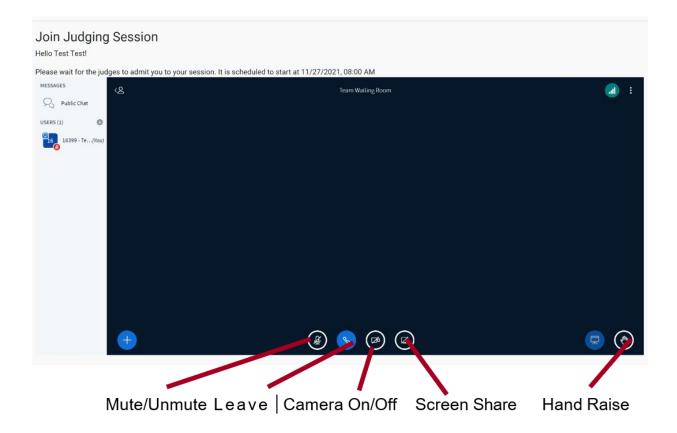


Figure 12 - Join the judging session using "Microphone" option to speak.

Icons of the UI



The three dots in the corner expand to a menu to accomplish most of the icon actions.

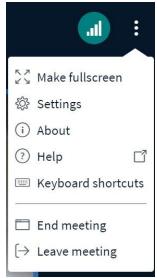


Figure 13 - Image shows the Settings and other modification options.

On the right-hand side, a chat is available for those in the session. You will also find tutorials on using BBB. This can be accessed in advance of your judging session, if needed. If team members need to join by phone please send them the following information for your specific judging session. This is also available in advance of the session time.

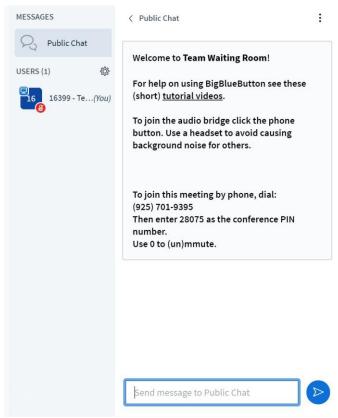


Figure 14 - Shows the UI for joining by phone.

Share Your Screen

Once the host (judges) has granted you permission to share your screen, select the icon at the bottom of the screen. Open the following options to choose from:

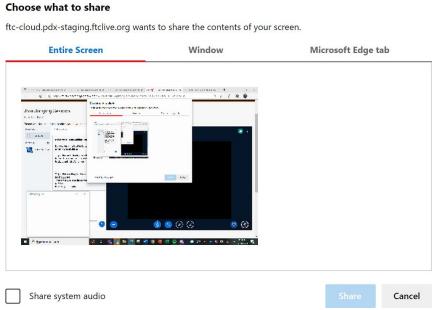


Figure 15 - Choose to share screen.

If another member of the team needs to share their screen, make the judges aware. It is a good idea to give the judges a sequential list of team members who will be screen sharing.

If a team member is having trouble with their connection, try the following:

- Turn camera off
- Switch browsers
- Turn off OneDrive and/or Google Drive.
- Limit the number of users on the member's network during the session.

Scoring a Remote Match

Scoring with an Internet Connection

To score a remote match, a team must choose someone to act as the scorekeeper during the match.



Important Note: The scorekeeper cannot also be a part of the drive team during a match. The team will need at least one device that is connected to the Internet and logged into the ftc-scoring firstinspires.org website (see Figure 8 below). Use this device to enter in the scores during a remote match.

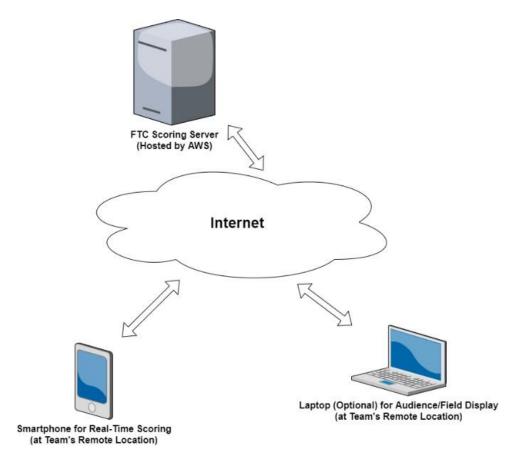


Figure 16 - The FTC Scoring system is a cloud solution hosted on an AWS (Amazon Web Services) server.

The team can have an optional second device, typically a laptop, which is connected to the Internet to act as an audience or field display. This display includes a game clock and plays audio cues during a remote match.

Selecting a Practice Match or an Official Match

Teams have the option of running a practice match or can score an official match using the FTC Scoring system.

- For a practice match, the results are not saved to the FTC Scoring server after the match has completed.
- For an official match, the results are saved for the active remote event to the FTC Scoring server and cannot be changed by a team once the results have been submitted. This is analogous to how an official match for a traditional (in-person) match is scored.

Note: The process for scoring a practice match is similar to scoring an official match. This document focuses on scoring an official match, but the steps covered also apply to the process for scoring a practice match.

If you would like to keep score for a practice match, select the "Remote Practice Matches" link from the side menu.

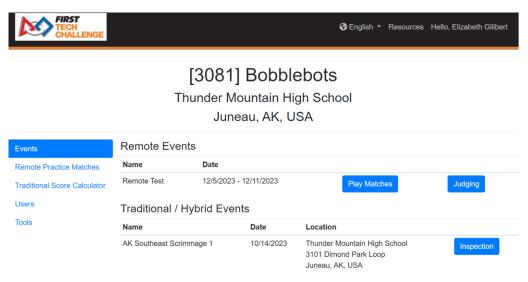


Figure 17 - Select "Test Matches" link to run a test match.

If you would like to record an official score for an active remote event, select the "Play Matches" button for that remote event.

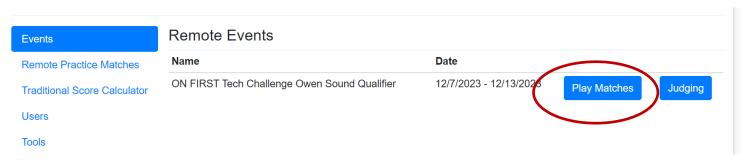


Figure 18 - Select "Play Matches" to record a score for an active remote event.

Team Event Screen

Pressing the "Play Matches" button for a remote event takes you to a page that displays information about your team for the selected event.



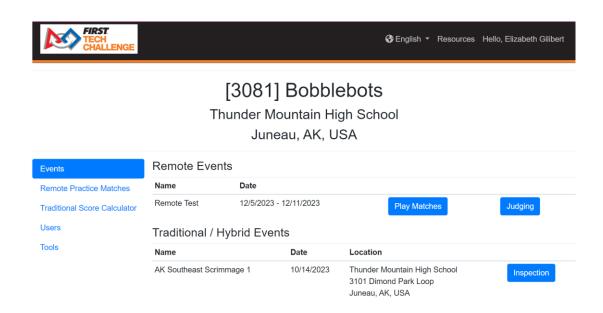


Figure 19 - Pressing the "Play Matches" button will display a screen with information about the matches a team has played.

Note: Teams get to play six matches per remote event. The matches do not have to be played on the same day. Although, all six matches need to be played, scored, and submitted within the event's submission window.

For an active event, ranking information is not displayed. However, the screen does include a team's current ranking points, tie breaker points and high score for the active remote event.

Configuring a Display Screen (Optional)

To score a remote match using the FTC Scoring system, you will need at least one device that is connected to the Internet to enter scores to the system. This device is referred to as the score tracker or scorekeeper device. The scorekeeper device can also be used to play audio cues to show when to start or start different phases of a match.

In addition to the scorekeeper device, a team might want to set up a second, optional device to act as a display screen. During a match, a display screen shows useful information to the drive team and to other participants of the remote match. A display screen is not required, but it can be helpful since the drive team can view the display to keep track of the time during a match.

One of the options on the right-hand side of the Play Matches page is labeled "Open Display." If you select this link, your browser should navigate to a screen that you can use to configure an audience or field display that you can use to display a game timer, show the live score, and play audio cues for your remote match.

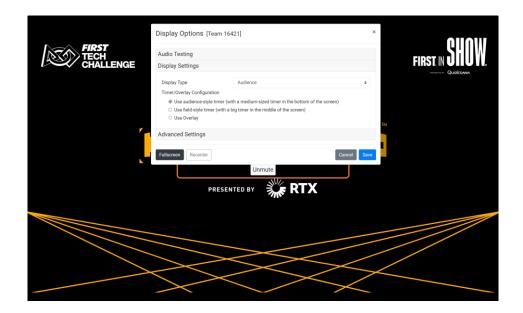


Figure 20 - System will prompt you to set display options.

You should select this link from the computer you want to use as your display device. The system will prompt you to set the options for your display screen.

- If you would like to use a display that is designed primarily for an audience, select the "Audience Display" option for the display type.
- If you would like to use a display that is designed primarily for use by teams on the competition field, select the "Field Display" option (used at traditional events) for the display type.
 - The field display has a bigger match clock, which is easier for the drive team to see.
- If you would like to mute the audio, check the "Mute" box, under "Advanced Settings."

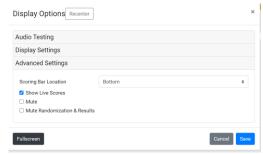


Figure 21 - Display Options

Note in your field area, to avoid audio synchronization issues, you typically only want tohave one device (scorekeeper or display device) playing audio.



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Press the "Save" button after you have configured your options.

Scoring a Match

A FIRST Tech Challenge match consists of an autonomous phase and a driver-controlled phase. During the autonomous phase, which is the first 30 seconds of a match, the robot must operate independently, without any input from the team. The remaining two minutes of a match are the driver-controlled phase. The last 30 seconds of the driver-controlled phase is a special phase known as the end game period of a match. It is important to prepare to score the team's matches.

When you are ready to play a match for an active remote event, select the Play Matches link on the team's event page on the device that will be used to enter in the live scores during your match. If the submission window for the remote event is still open, the system will display a screen that lists your team's played and unplayed matches for the event.

Important Note: Once you have begun the process to score your official remote match, you cannot cancel or restart this process! Do not start to score an official remote match unless your team and robot are ready to play the match. Also, once the match has begun, do not navigate away from the scoring web page until the match has completed.

Remote Test Team 3081

Select a match to play or view below. Submission window closes at 2023/12/07 23:59 Alaska Standard Time



Figure 22 - The system should list your played and un-played matches for an active Remote Event.

To score an un-played match, select the match from the list of matches. The pre-match setup screen should appear.

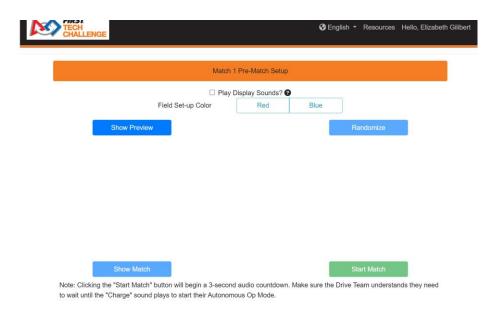
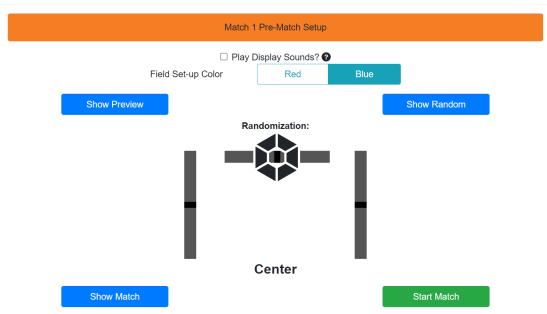


Figure 23 - Pre-Match Setup screen.

When your team is ready to start the match, press the "Show Preview" button. This will display the match information (team info and match number) on any Audience or Field display that you have open.

Press the "Randomize" button to randomize the field. The pre-match setup page on the scorekeeper device and the audience and field displays will display the randomized autonomous goal for this match. A team member or mentor should place the appropriate number game elements as shown in the randomized field on the screen. Once the field has been randomized, the team must not touch their robot or driver station, except for pushing the play button to start their autonomous op mode once the match has officially started.

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Note: Clicking the "Start Match" button will begin a 3-second audio countdown. Make sure the Drive Team understands they need to wait until the "Charge" sound plays to start their Autonomous Op Mode.

Figure 24 - Pressing the "Randomize" button displays the randomized state for the autonomous phase of the match.

After the field has been randomized, the match is ready to start. Press the "Show Match" button to display the match clock and pre-match information on the audience or field display.

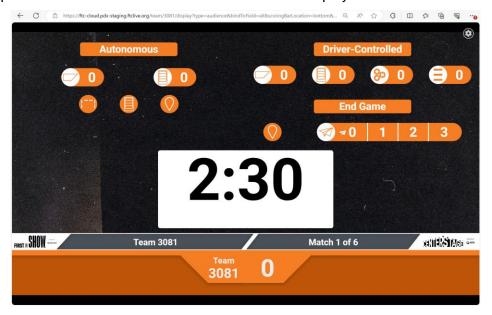


Figure 25 - Pressing the "Show Match" button displays the match clock and pre-match info on the audience or field display. Audience display is shown.

If the drive team members, the scorekeeper, and the human player are all ready to begin, press the "Start Match" button on the Pre-Match Setup page to begin scoring your match. The system will play an audio countdown ("3-2-1" and then a start sound) and then the match clock will begin running and the scorekeeper's screen should display the input screen for the autonomous phase.

Note: You cannot cancel or restart the match once it has begun. Also, you should stay on the score tracking input screen while the match is running (i.e., do not close the tab or navigate away to a different address).

Scoring the Autonomous Phase of a Remote Match

During the autonomous period, the scoring screen will look like this:

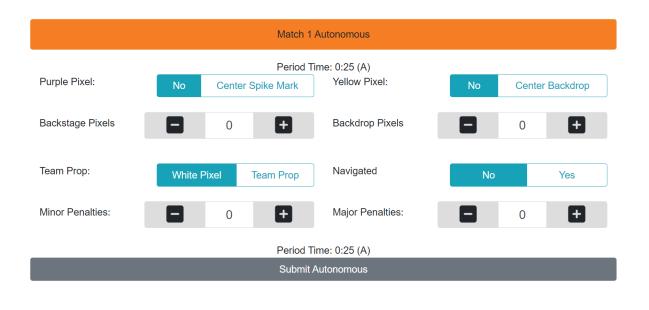


Figure 26 - Scorekeeper's screen during the autonomous part of a match.

At the top of the screen is the match number. The screen also shows the "Period Time" at the top and bottom of the input screen. This is the amount of time left during the autonomous period.

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When the autonomous period is over, the Period Time field will go to zero and an audio cue with an end of phase buzzer will play. The scorekeeper should finish scoring the autonomous part of the match and press the "Submit Autonomous" button to give the autonomous score and get ready to score the driver-controlled part of the match.

Scoring the Driver-Controlled Phase of a Remote Match

There will be a brief period between the autonomous phase and the driver-controlled phase to allow the drive team to pick up their controllers and initiate their driver-controlled op modes. At the end of this transition phase the driver-controlled phase begins. The scorekeeper can use the controls on the driver-controlled input screen to track the team's score during this part of the match.

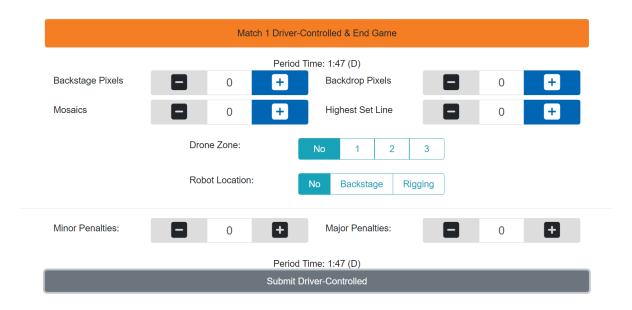


Figure 27 - Scorekeeper's screen during the driver-controlled part of a match.

The driver-controlled input screen is like the autonomous input screen, except the controls are for the driver-controlled and end game task.

When the driver-controlled period is over, the scorekeeper should finish assigning points (or penalties) to theteam and press the "Submit Driver-Controlled" button to submit the driver-controlled score and to enter the review mode of the match.

Reviewing and Submitting the Match Score

When the match is complete and both the autonomous and driver-controlled scores have been submitted, the scorekeeper can review (and adjust if needed) both sets of scores before submitting them to the system.

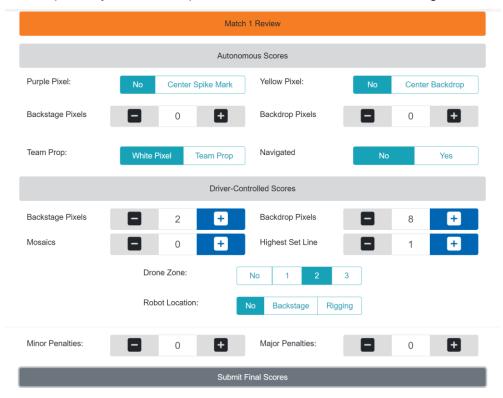


Figure 28 - The scorekeeper can review and adjust the autonomous and driver-controlled scores before submitting them.

When the team's scorekeeper has completed the match review, the scorekeeper will press the "Submit Final Scores" button to submit the scores to the system. If the match is an official match for an active remote event, the score will be recorded in the system and the team will no longer be able to change the scores for that match. If the match is a test match, the scores will not be saved in the FTC Scoring system.

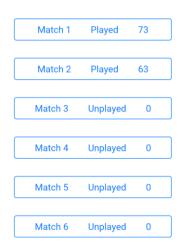


Figure 29 - After an official score has been submitted, the event page will be updated with the current match information.

Note: A team's ranking and tie breaking points are private (only visible to the team and to the event administrators) until the event's submission period is complete, and until the results are published by the event's administrator to FTC Event Web: Home (firstinspires.org) website.

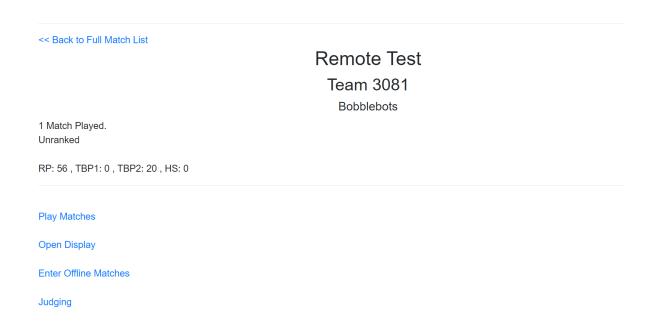


Figure 30 - A team's ranking and tie breaker points are private until the remote event is officially over.

Scoring a Match Using Paper Scoresheets

If you do not have a reliable Internet connection at the location of your remote game field, you will need to use paper scoresheets to keep track of your scores during your remote matches. You can download the remote scoresheet as a .PDF file from:

https://www.firstinspires.org/sites/default/files/uploads/resource_library/ftc/remote-scoresheet.pdf

You can print out these scoresheets in advance of your remote event, then use them to score your matches during the event.

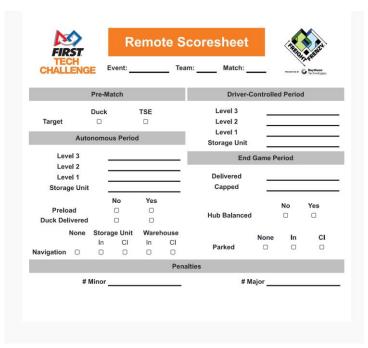


Figure 31 - Teams should use a paper scoresheet if they lack a reliable Internet connection at their remote competition field.

During a remote match, the team can use a stopwatch or set a countdown timer on their smartphone to keep track of the phases of the match. The first 30 seconds of a match are the autonomous phase. The remaining 2 minutes are the driver-controlled phase and the last 30 seconds of the driver-controlled phase is the end game.

Once a match has been scored, a team administrator, the FTC Scoring Event Admin, or the PDP (Program Delivery Program) who has access to the Internet can login to the FTC Scoring system and enter in the match data to the scoring system.

Select the "Enter Offline Matches" link from the team's event page in the FTC Scoring system to begin the process of entering the match results.

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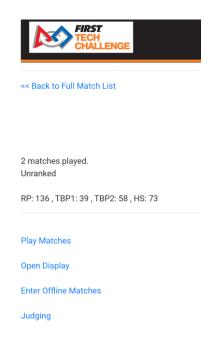


Figure 32 - Select the "Enter Offline Matches" link from the team's event page to enter match results.

The system will list the team's matches for the current active event. Select a match listing to enter scores for that match.



Figure 33 - Select a match listing to enter scores for that match.

Once you have entered and reviewed your scores, press the "Submit Final Scores" button to submit the finalscores for that remote match. Once the final scores are submitted, the team cannot edit the results for that match.

Remote judging sessions are designated to the following events styles: remote, hybrid and remote Dean's List Interviews. Remote judging requires two judges to be present before a team will be admitted to the session. A team can only access the judging session through the team admin (coach 1 or 2) via the "Judging" button that appears for designated event styles. The following information should help you understand the rules for youth protection and to become familiar with the user interface of the video conferencing tool prior your judging session.

Resource Links in FTC Scoring

There are two places in FTC Scoring where resources can be accessed. One is the "Tools" link on the team's home page. This provides links to FTC SDK software, the machine learning toolchain, and a link to FTC Event Web: Home (firstinspires.org).

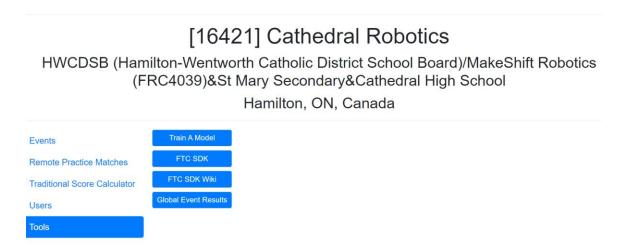


Figure 34 - "Tools" provides links to FTC software.

The other is the Resources link in the upper-left corner of the homepage. This link includes game-specific and scoring resources.

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Reviewing Your Scores on FTC-Events

After a remote event has finished, and the event administrator has reviewed and approved the final event results in the FTC Scoring system, the event results get published to the ftc-events.firstinspires.org website.

The FIRST community can visit ftc-events.firstinspires.org to browse event results for the current or prior FTC seasons.

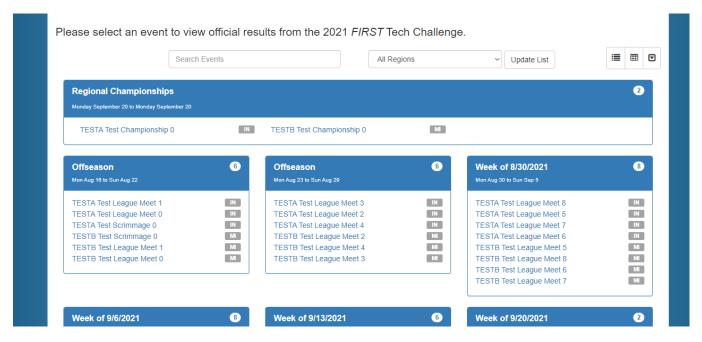


Figure 35 - After a remote event is over, the community can review the results at the ftc-events.firstinspires.org website.

Appendix A – Resources

Game Forum Q&A

https://ftc-ga.firstinspires.org/

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

Volunteer Forum

Volunteers can request access to role specific volunteer forums by emailing FTCTrainingSupport@firstinspires.org. You will receive access to the forum thread specific to your role.

FIRST Tech Challenge Game Manuals

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

FIRST Headquarters Pre-Event Support

Phone: 603-666-3906

Mon – Fri

8:30am – 5:00pm Eastern Time (UTC –5) Email: Firsttechchallenge@firstinspires.org

FIRST Websites

FIRST homepage – www.firstinspires.org

FIRST Tech Challenge Page – For everything FIRST Tech Challenge.

FIRST Tech Challenge Volunteer Resources - To access public volunteer manuals.

FIRST Tech Challenge Event Schedule – Find FIRST Tech Challenge events in your area.

FIRST Tech Challenge Social Media

FIRST Tech Challenge Twitter Feed - If you are on Twitter, follow the FIRST Tech Challenge Twitter feed for news updates.

FIRST Tech Challenge Facebook page - If you are on Facebook, follow the FIRST Tech Challenge page for news updates.

FIRST Tech Challenge YouTube Channel – Contains training videos, game animations, news clips, and more.

FIRST Tech Challenge Blog – Weekly articles for the FIRST Tech Challenge community, including outstanding volunteer recognition!

FIRST Tech Challenge Team Email Blasts - contain the most recent FIRST Tech Challenge news for teams.

Feedback

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

