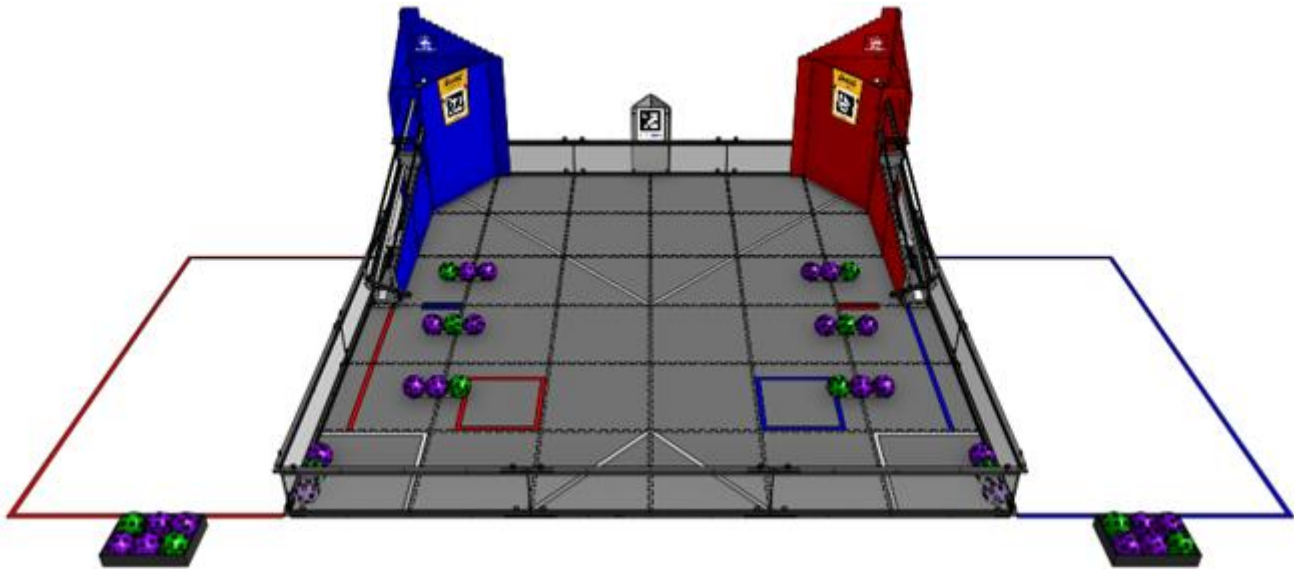


## 10 Game Details

Figure 10-1: FIELD for DECODE



In DECODE, 2 ALLIANCES (an ALLIANCE is a cooperative of 2 *FIRST* Tech Challenge teams) play MATCHES, set up and implemented per the details described below.

### 10.1 MATCH Overview

MATCHES run on a typical 5- to 12-minute cycle time per FIELD, which consists of pre-MATCH setup, a 30-second AUTO period, an 8-second transition period between AUTO and TELEOP, and a 2-minute TELEOP period, followed by the post-MATCH reset.

During the MATCH, ROBOTS collect ARTIFACTS and score them into their GOAL to CLASSIFY and create the randomly selected MOTIF. ROBOTS can then open their GATE to continue CLASSIFYING additional ARTIFACTS. ARTIFACTS which do not drop into the RAMP will count as OVERFLOW.

ROBOTS conclude the MATCH by returning to their BASE.

### 10.2 DRIVE TEAM

A DRIVE TEAM is a set of up to 4 people from the same *FIRST* Tech Challenge team responsible for team performance for a specific MATCH. There are 3 specific roles on a DRIVE TEAM which ALLIANCES can use to assist ROBOTS, and no more than 1 member of the DRIVE TEAM is allowed to be a non-STUDENT.

The intent of the definition of DRIVE TEAM and DRIVE TEAM related rules is that, barring extenuating circumstances, the DRIVE TEAM consists of people who arrived at the event affiliated with that team and are responsible for their team's and ROBOT'S performance at the event (this means a person may be affiliated with more than 1 team).

The intent is not to allow teams to “adopt” members of other teams for strategic advantage for the loaning team, borrowing team, and/or their ALLIANCE (e.g., an ALLIANCE Lead believes 1 of their DRIVERS has more experience than a DRIVER of their ALLIANCE partner, and the teams agree the partner team will “adopt” that DRIVER and make them a member of their DRIVE TEAM for Playoffs).

The definition is not stricter for 2 main reasons. First, to avoid additional bureaucratic burden on teams and event volunteers (e.g., requiring that teams submit official rosters that Queuing must check before allowing a DRIVE TEAM into the ARENA). Second, to provide space for exceptional circumstances that give teams the opportunity to display *Gracious Professionalism* (e.g., a bus is delayed, a DRIVE COACH has no DRIVERS, and their pit neighbors agree to help by loaning DRIVERS as temporary members of the team until their bus arrives).

Table 10-1: DRIVE TEAM roles

Role	Description	Max./ DRIVE TEAM	Criteria
<b>DRIVE COACH</b>	a guide or advisor	1	any team member and may be an adult, must wear “DRIVE COACH” badge
<b>DRIVER</b>	an operator and controller of the ROBOT	3	STUDENT, must wear a “DRIVE TEAM” badge
<b>HUMAN PLAYER</b>	a SCORING ELEMENT manager		

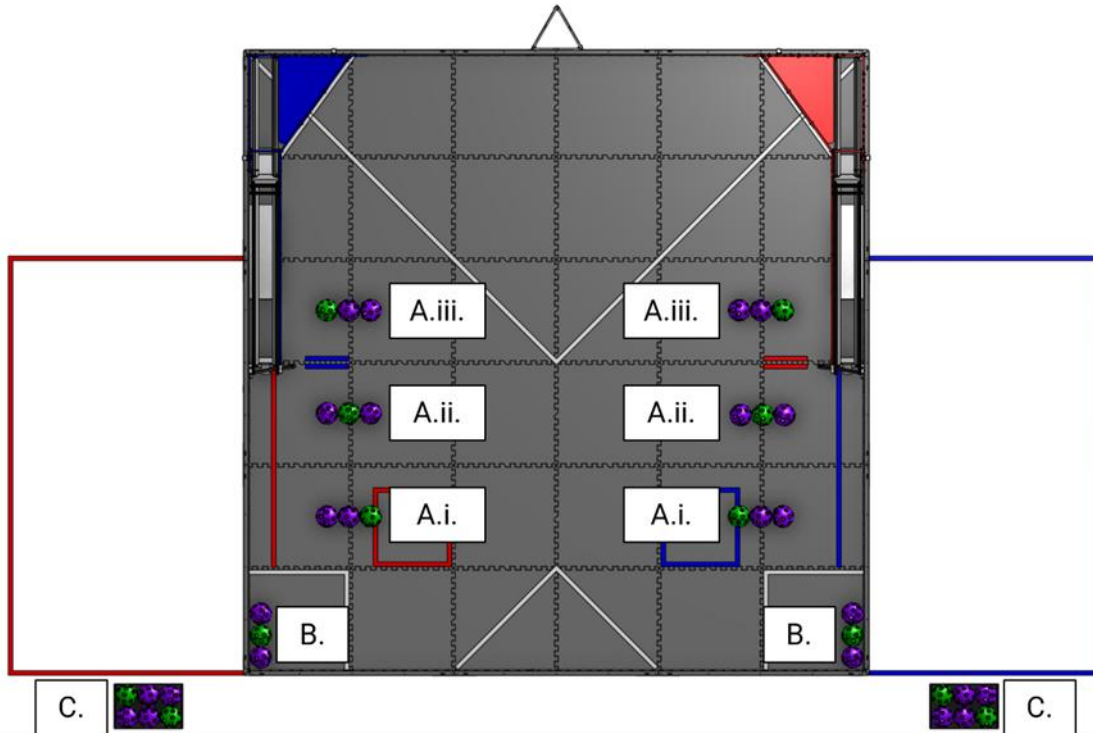
A STUDENT is a person who has not completed high-school, secondary school, or the comparable level in their home region as of September 1<sup>st</sup> of the current season.

### 10.3 Setup

Before each MATCH begins, FIELD STAFF stage SCORING ELEMENTS as described in section [10.3.1 SCORING ELEMENTS](#) DRIVE TEAMS stage their ROBOTS (as described in section [10.3.4 ROBOTS](#)) and OPERATOR CONSOLES (as described in section [10.3.3 OPERATOR CONSOLES](#)). Then, DRIVE TEAMS take their places as described in section [10.3.2 DRIVE TEAMS](#)

### 10.3.1 SCORING ELEMENTS

Figure 10-2: SCORING ELEMENTS staging positions



24 purple (P) and 12 green (G) ARTIFACTS and are staged on the FIELD as follows, with the MOTIFS starting from the middle of the FIELD and continuing toward the FIELD perimeter:

- A. 3 ARTIFACTS on each SPIKE MARK arranged as follows:
  - i. Near (audience side): GPP
  - ii. Middle: PGP
  - iii. Far (GOAL side): PPG
- B. 3 ARTIFACTS (2P, 1G) in each LOADING ZONE biased against the FIELD perimeter adjacent to the ALLIANCE AREA and closest to the corner arranged PGP.
- C. 6 ARTIFACTS (4P, 2G) in each ALLIANCE AREA (may be organized in provided ARTIFACT tray or similar container) with no set order

Each ROBOT may be pre-loaded with up to 3 ARTIFACTS from their own ALLIANCE AREA pre-staged ARTIFACTS in C such that each ARTIFACT is in direct contact with the ROBOT.

As described in [15.2 Game Modification](#), the number, type, and distribution of SCORING ELEMENTS may be adjusted for the *FIRST* Championship and *FIRST* Premier Events. For the *FIRST* Championship, any game modifications will be published on or before the last regularly scheduled Team Update as described in section [1.8 Team Updates](#). For *FIRST* Premier Events, game modifications will be posted by the event organizers prior to the event.

### 10.3.2 DRIVE TEAMS

DRIVE TEAMS prepare for a MATCH by staging in the ALLIANCE AREA after the DRIVE TEAM from the previous MATCH has left. DRIVE TEAM starting conditions are listed below, and a DRIVE TEAM obstructing or delaying any of the conditions is at risk of violating [G301](#).

- A. only DRIVE TEAM members assigned to the upcoming MATCH are present.
- B. only DRIVE TEAM members whose ROBOTS have passed initial, complete Inspection are present.
- C. DRIVE TEAM members are staged in their designated ALLIANCE AREA. If members of the ALLIANCE cannot agree where their DRIVE TEAM members will be staged, the team listed on the MATCH schedule as “Red 1” or “Blue 1” will stage closest to the audience.
- D. DRIVE TEAM members clearly display their designated DRIVE TEAM badges above their waists.
- E. if a Playoff MATCH, the ALLIANCE CAPTAIN clearly displays their designated ALLIANCE CAPTAIN identifier (e.g., hat or armband).

### 10.3.3 OPERATOR CONSOLES

DRIVE TEAMS set up their OPERATOR CONSOLES as soon as they are staged in their ALLIANCE AREA. OPERATOR CONSOLES must be compliant with all relevant rules, specifically those in section [12.9 OPERATOR CONSOLE](#). A DRIVE TEAM obstructing or delaying OPERATOR CONSOLE set up is at risk of violating [G301](#).

- A. DRIVE TEAMS intending to run an OpMode during AUTO must select an OpMode within their DRIVER STATION app with the 30 second timer enabled.
- B. Otherwise, DRIVE TEAMS must select a TELEOP OpMode within the DRIVER STATION app.
- C. The selected OpMode must be initialized by pressing the “INIT” button on the DRIVER STATION app.

### 10.3.4 ROBOTS

DRIVE TEAMS stage their ROBOT in accordance with [G304](#). A DRIVE TEAM obstructing or delaying ROBOT setup requirements is at risk of violating [G301](#).

If order of placement matters to either or both ALLIANCES, the ALLIANCE notifies the Head REFEREE or their designee before setting up for that MATCH, and the Head REFEREE instructs ALLIANCES to alternate placement of ROBOTS. REFEREE instructions are that ROBOTS are placed in the following order:

1. first red ROBOT
2. first blue ROBOT
3. second red ROBOT
4. second blue ROBOT

In Qualification MATCHES the ROBOT assigned to Red 1 or Blue 1 places first within their ALLIANCE. In Playoff MATCHES the ALLIANCE lead decides which ROBOT places first within their ALLIANCE.

## 10.4 MATCH Periods

The first period of each MATCH is 30 seconds (0:30) long and called the Autonomous Period (AUTO). During AUTO, ROBOTS operate without any DRIVER control or input. There is an 8-second delay between AUTO and TELEOP for scoring purposes as described in Section [10.5 Scoring](#).

The second period of each MATCH is 2 minutes (2:00) long and called the teleoperated period (TELEOP). During TELEOP, DRIVERS remotely operate ROBOTS to score points. See Table 9-1 for detailed MATCH timing.

## 10.5 Scoring

ALLIANCES are rewarded for accomplishing various actions throughout a MATCH, including LEAVING their LAUNCH LINE, scoring CLASSIFIED or OVERFLOW ARTIFACTS, scoring ARTIFACTS in the DEPOT, achieving a PATTERN of ARTIFACTS, returning to their BASE, and winning or tying MATCHES.

ALLIANCES are rewarded for their performance during MATCHES via MATCH points and RANKING POINTS (RP), which increase the measure used to rank teams per section [13.6.3 Qualification Ranking](#).

All achievements are updated by FIELD STAFF throughout the MATCH. Scoring achievements are assessed as follows:

- A. Assessment of ARTIFACTS as either CLASSIFIED or OVERFLOW occurs throughout the MATCH and continues until all ARTIFACTS have come to rest following the conclusion of the MATCH. ARTIFACTS scored after the end of AUTO are assessed as part of TELEOP.
- B. Assessment of AUTO PATTERN scoring occurs at the end of AUTO.
- C. Assessment of TELEOP PATTERN scoring occurs when all ROBOTS and ARTIFACTS have come to rest following the conclusion of the MATCH.
- D. Assessment of DEPOT scoring occurs at the end of TELEOP when all ROBOTS and ARTIFACTS have come to rest following the conclusion of the MATCH.
- E. Assessment of LEAVE scoring occurs at the end of AUTO.
- F. Assessment of BASE scoring occurs at the end of the TELEOP.

LEAVING the LAUNCH LINE, ARTIFACT scoring, and return to BASE points are all evaluated and scored by human volunteers. Teams are encouraged to make sure that it is obvious and unambiguous that the criteria are met.

Achievements scored before the MATCH starts, during the AUTO-to-TELEOP transition, and after the MATCH ends at 0:00 are subject to penalties.

### 10.5.1 ARTIFACT Scoring Criteria

To qualify for CLASSIFIED or OVERFLOW points, an ARTIFACT must enter the GOAL through the open top, exit under the archway, and pass through the diverting SQUARE. The determination of whether an ARTIFACT is CLASSIFIED or OVERFLOW is made as the ARTIFACT passes through the diverting SQUARE as follows:

- An ARTIFACT that passes through the SQUARE and transitions directly to the RAMP is considered CLASSIFIED.
- An ARTIFACT that passes through the SQUARE but does not meet CLASSIFIED criteria is considered OVERFLOW.

ARTIFACTS that do not meet all the criteria for ARTIFACT scoring (e.g., did not enter the GOAL through the open top, did not exit under the archway, or did not

pass through the diverting SQUARE) do not score as either CLASSIFIED or OVERFLOW.

ARTIFACTS that are CLASSIFIED move directly to the RAMP, meaning they:

- do not roll over or otherwise bypass any ARTIFACTS on the RAMP.

ARTIFACTS that are OVERFLOW:

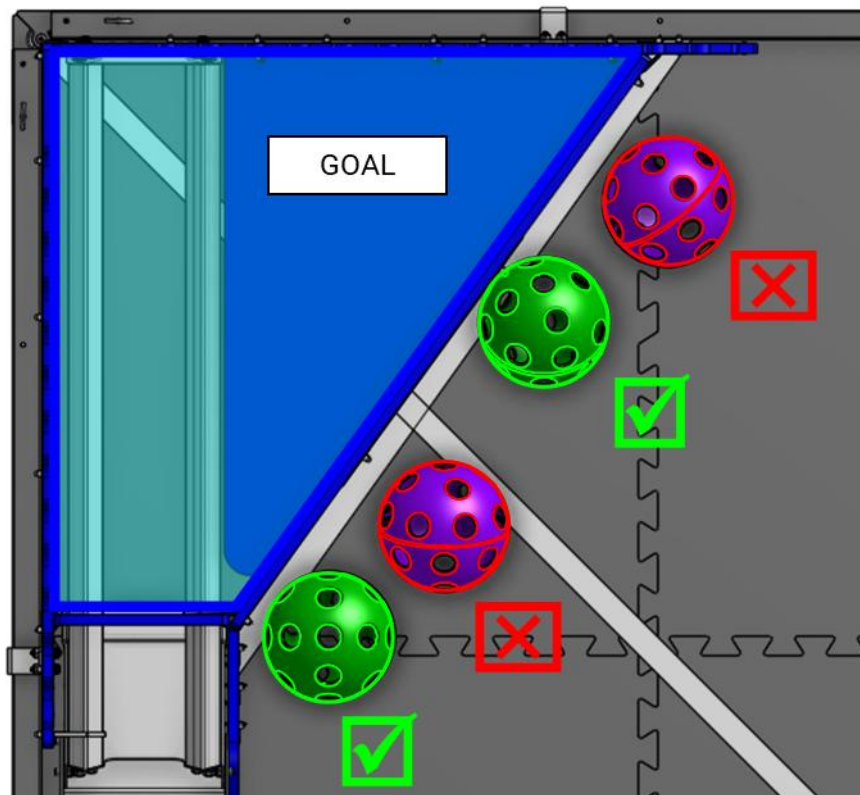
- pass through the SQUARE and may roll over one or more ARTIFACTS that are on the RAMP.

To qualify for DEPOT points, ARTIFACTS must be over the DEPOT.

- DEPOTS are ALLIANCE specific and are tied to the GOAL they are adjacent to.
- DEPOT points are assessed after the MATCH without regard to which ALLIANCE placed the ARTIFACTS in the DEPOT.
- DEPOTS are not protected zones, and either ALLIANCE can remove ARTIFACTS from either DEPOT during the MATCH.

An ARTIFACT over a DEPOT that is in contact with or in CONTROL of a ROBOT from either ALLIANCE will still qualify for DEPOT points for the ALLIANCE that owns the DEPOT.

*Figure 10-3: Example DEPOT scoring*







## 10.5.2 PATTERN Scoring Criteria

At the end of AUTO and TELEOP, ARTIFACTS that are directly on the RAMP score for PATTERN points if the color of the ARTIFACT in order matches the MOTIF color for that index, and the ARTIFACTS are retained by the GATE.

The randomization of the OBELISK prior to the start of the MATCH selects the MOTIF which is repeated 3 times to define the PATTERN colors for each of the 9 indices on the RAMP (Figure 10-4). PATTERN points are scored based on the color of the ARTIFACT on the RAMP matching the individual index color defined by the MOTIF (Figure 10-5).

Figure 10-4: MOTIFS as defined by the OBELISK

OBELISK	RAMP										
	Index	1	2	3	4	5	6	7	8		9
<div><div>G P P</div><div>(ID 21)</div></div>	GATE	G	P	P	G	P	P	G	P	P	SQUARE
<div><div>P G P</div><div>(ID 22)</div></div>	GATE	P	G	P	P	G	P	P	G	P	SQUARE
<div><div>P P G</div><div>(ID 23)</div></div>	GATE	P	P	G	P	P	G	P	P	G	SQUARE
MOTIF											

Figure 10-5: Example PATTERN scoring with GPP scoring

PATTERN Scored	✗	✗	✓	✓	✓	✓	✗	✓	✗	
ARTIFACTS	○	○	○	○	○	○	○	○	-	
Index	1	2	3	4	5	6	7	8	9	
GATE	G	P	P	G	P	P	G	P	P	SQUARE
MOTIF (GPP)										



### 10.5.3 ROBOT Scoring Criteria

To qualify for LEAVE points, a ROBOT must move such that it is no longer over any LAUNCH LINE at the end of AUTO.

To qualify for BASE points, a ROBOT must be either fully returned or partially returned by meeting the following conditions:

- A ROBOT fully returned to BASE must only be supported, either directly or transitively, by the TILE in the BASE ZONE.
- A ROBOT partially returned to BASE must be partially supported, either directly or transitively, by the TILE in the BASE ZONE.

The TILE in the BASE ZONE is the flooring surface bounded by the outside edge of the tape defining the BASE ZONE.

Support comes, either directly or transitively through other items on the FIELD (e.g., SCORING ELEMENTS, another ROBOT), through the TILE in the BASE ZONE.

If all of the support of the ROBOT in the BASE ZONE is from the TILE in the BASE ZONE, the ROBOT is fully returned to BASE.

If some of the support of the ROBOT in the BASE ZONE is from the TILE in the BASE ZONE and some is from TILES outside the BASE ZONE, the ROBOT is partially returned to BASE.

If none of the support of the ROBOT in the BASE ZONE is from the TILE in the BASE ZONE, the ROBOT is not considered returned to BASE.

## 10.5.4 Point Values

Table 10-2: DECODE point values

		MATCH points		RANKING POINTS
		AUTO	TELEOP	
LEAVE		3		
ARTIFACT	CLASSIFIED	3	3	
	OVERFLOW	1	1	
	DEPOT		1	
PATTERN	ARTIFACT matches MOTIF	2	2	
BASE	Partially returned to BASE		5	
	Fully returned to BASE		10	
	Additional Bonus: 2 ROBOTS fully returned to BASE.		10	
MOVEMENT RP – Combined LEAVE + BASE points earned at or above threshold				1
GOAL RP – The number of ARTIFACTS scored through the SQUARE at or above threshold				1
PATTERN RP – PATTERN points earned at or above threshold				1
WIN	Completing a MATCH with more MATCH points than your opponent			3
TIE	Completing a MATCH with the same MATCH points as your opponent			1

Table 10-3: DECODE RP thresholds

RP Type	FIRST Championship	Regional Championships	All Other Events*
MOVEMENT RP	TBA	21	16
GOAL RP	TBA	TBA	36
PATTERN RP	TBA	TBA	18

RP thresholds for Regional Championships and FIRST Championship will be announced in Team Updates.

\*Premier Events will be able to set their own thresholds to best reflect the experience they want to provide teams.

## 10.6 Violations

FIRST Tech Challenge uses 3 words in the context of how durations and actions are assessed with regards to evaluation of rules and assignment of violations. These words provide general guidance to describe benchmarks. It is not the intent for REFEREES to provide a count during the time periods.

- MOMENTARY describes durations that are fewer than approximately 3 seconds.
- CONTINUOUS describes durations that are more than approximately 10 seconds.
- REPEATED describes actions that happen more than once within a MATCH.

Unless otherwise noted, all penalties are assigned for each instance of a rule violation, and a single action may violate multiple rules. A description of the penalties is listed in Table 10-4. All rules throughout the Game Rules section are called as perceived by a REFEREE.

Table 10-4: Rule violations

Penalty	Description
<b>MINOR FOUL</b>	a credit of 5 points towards the opponent's MATCH point total
<b>MAJOR FOUL</b>	a credit of 15 points towards the opponent's MATCH point total
<b>YELLOW CARD</b>	a warning issued by the Head REFEREE for egregious ROBOT or team member behavior or rule violations. A subsequent YELLOW CARD within the same tournament phase results in a RED CARD
<b>RED CARD</b>	a penalty issued by the Head REFEREE for egregious ROBOT or team member behavior or rule violations which results in a team being DISQUALIFIED for the MATCH.
<b>DISABLED</b>	The REFEREE instructs the team to stop the ROBOT which will deactivate all outputs, rendering the ROBOT inoperable for the remainder of the MATCH.
<b>DISQUALIFIED</b>	the state of a team in which they receive 0 MATCH points and 0 RANKING POINTS in a Qualification MATCH or causes their ALLIANCE to receive 0 MATCH points in a Playoff MATCH.
<b>VERBAL WARNING</b>	a warning issued by event staff or the Head REFEREE
<b>ALLIANCE is ineligible for RP</b>	An ALLIANCE is ineligible for the specified RP for that MATCH. This overrides any RP awarded through normal MATCH play or other rule violations.

### 10.6.1 YELLOW and RED CARDS

In addition to rule violations explicitly listed throughout this document, YELLOW CARDS and RED CARDS are used in FIRST Tech Challenge to address team and ROBOT behavior that does not align with the mission, values, and culture of FIRST.

The Head REFEREE may assign a YELLOW CARD as a warning, or a RED CARD for egregious behavior deemed inappropriate at a FIRST Tech Challenge event. A team that has received either a YELLOW or a RED CARD

carries a YELLOW CARD into subsequent MATCHES, except as noted below. A RED CARD results in MATCH DISQUALIFICATION.

A YELLOW or RED CARD is indicated by the Head REFEREE holding a YELLOW and/or RED CARD in the air while a member of the FIELD STAFF describes the violation to the audience.

YELLOW CARDS are additive, meaning that a second YELLOW CARD is automatically converted to a RED CARD. A team is issued a RED CARD for any subsequent incident in which they receive an additional YELLOW CARD, including earning a second YELLOW CARD during a single MATCH. A second YELLOW CARD is indicated by the Head REFEREE holding a YELLOW CARD and RED CARD in the air simultaneously after the completion of the MATCH. A team that has received either a YELLOW CARD or a RED CARD carries a YELLOW CARD into subsequent MATCHES, except as noted below. In the event MATCHES are played out-of-order, a subsequent MATCH is any chronologically later MATCH play, regardless of the originally scheduled time or the numbering of the MATCH.

Once a team receives a YELLOW or RED CARD, its team number is presented with a yellow background on the audience screen during all subsequent MATCHES, including any replays, as a reminder to the team, the REFEREES, and the audience that they carry a YELLOW CARD.

Egregious behavior by a team, which cannot be resolved locally by the Head REFEREE or Event Director working directly with the STUDENT and adult team members, will be escalated to FIRST Headquarters. In consultation with FIRST Headquarters the team may be DISQUALIFIED from all subsequent MATCHES and removed from awards consideration.

Figure 10-6: Example audience screen graphic showing YELLOW CARD indicators



All YELLOW CARDS are cleared at the conclusion of Practice, Qualification, and division Playoff MATCHES. VERBAL WARNINGS issued by the Head REFEREE are cleared after Practice MATCHES and persist from Qualification MATCHES through subsequent tournament phases, except when stated otherwise.

### 10.6.2 YELLOW and RED CARD application

YELLOW and RED CARDS are applied based on the following:

Table 10-5: YELLOW and RED CARD application

Time YELLOW or RED CARDS earned:	MATCH to which CARD is applied:
<b>Prior to Qualification MATCHES</b>	REFEREES may or may not be present at the FIELD before the start of Qualification MATCHES. With input from event staff, the Head REFEREE may opt to perpetuate a VERBAL WARNING or YELLOW CARD earned prior to Qualification MATCHES to

Time YELLOW or RED CARDS earned:	MATCH to which CARD is applied:
	the first Qualification MATCH for particularly egregious behavior.
during the Qualification MATCHES	team's current (or just completed) MATCH in which they are not a SURROGATE. For SURROGATE MATCHES the card is applied to the team's previous Qualification MATCH.
between the end of Qualification MATCHES and the start of Playoff MATCHES	ALLIANCE'S first Playoff MATCH
during the Playoff MATCHES	ALLIANCE'S current (or just completed) MATCH

A MATCH is no longer the current MATCH once the results of the MATCH have been posted or the Head REFEREE or their designee has indicated that teams can collect their ROBOTS, whichever is later.

Please see examples of the application of YELLOW and RED CARDS as shown in section [10.6.4 Violation Details](#).

### 10.6.3 YELLOW and RED CARDS during Playoff MATCHES

During Playoff MATCHES, YELLOW and RED CARDS are assigned to the violating team's entire ALLIANCE instead of to only the violating team. If an ALLIANCE receives 2 YELLOW CARDS, the entire ALLIANCE is issued a RED CARD which results in DISQUALIFICATION for the associated MATCH.

### 10.6.4 Violation Details

There are several styles of violation wording used in this manual. Below are some example violations and a clarification of the way the violation would be assessed. The examples shown do not represent all possible violations, but rather a representative set of combinations.

Table 10-6: Violation examples

Example Violation	Expanded Interpretation
<b>MINOR FOUL</b>	Upon violation, a MINOR FOUL is assessed against the violating ALLIANCE.
<b>MAJOR FOUL and YELLOW CARD</b>	Upon violation, a MAJOR FOUL is assessed against the violating ALLIANCE. After the MATCH, the Head REFEREE presents the violating team with a YELLOW CARD.
<b>MINOR FOUL per SCORING ELEMENT over the limit.</b>	Upon violation, a number of MINOR FOULS are assessed against the violating ALLIANCE equal to the number of additional SCORING ELEMENTS beyond the permitted quantity.

Example Violation	Expanded Interpretation
<b>MINOR FOUL. MAJOR FOUL if REPEATED.</b>	Upon initial violation in a MATCH, a MINOR FOUL is assessed against the violating ALLIANCE. If the condition in the second statement is met: the ROBOT repeats the infraction in the MATCH, then a MAJOR FOUL is assessed against the violating ALLIANCE. Assuming no additional infractions of that rule by that ROBOT in that MATCH, the ROBOT is assessed a MINOR FOUL and a MAJOR FOUL for their ALLIANCE.
<b>MINOR FOUL and an additional MINOR FOUL for every 3 seconds in which the situation is not corrected</b>	Upon violation, a MINOR FOUL is assessed against the violating ALLIANCE and the REFEREE begins to count. Their count continues until the criteria to discontinue the count are met, and for each 3 seconds within that time, an additional MINOR FOUL is assessed against the violating ALLIANCE. A ROBOT in violation of this type of rule for 15 seconds is assessed a total of 6 MINOR FOULS (assuming no other rules were being simultaneously violated).
<b>MAJOR FOUL and the opposing ALLIANCE is awarded the PATTERN RP.</b>	Upon violation, a MAJOR FOUL is assessed against the violating ALLIANCE and the opposing ALLIANCE is awarded the PATTERN RP, regardless of the status of the scoring achievements during the MATCH.
<b>MAJOR FOUL plus YELLOW CARD if REPEATED.</b>	Upon violation, a MAJOR FOUL is assessed against the violating team. If the condition "if REPEATED" (e.g., a subsequent violation by the same team in the same MATCH) is met, then the violating team is issued another MAJOR FOUL. If these are the only violations during the MATCH: after the MATCH, the Head REFEREE presents the violating team with a YELLOW CARD for the second violation of this rule. In total, 2 MAJOR FOULS and a YELLOW CARD were assessed during the MATCH.
<b>VERBAL WARNING. YELLOW CARD if subsequent violations occur during the event.</b>	Upon violation, a VERBAL WARNING is issued to the violating team. If an additional violation of the same rule occurs later in the event, including during the same MATCH, a later MATCH during the same event phase, or during a later event phase, then following the subsequent violations: after the MATCH, the Head REFEREE presents the violating team with a YELLOW CARD.

Example Violation	Expanded Interpretation
<b>MAJOR FOUL and YELLOW CARD.</b> <b>MAJOR FOUL and RED CARD if opponent ROBOT is unable to drive.</b>	<p>Upon a general violation of this rule, a MAJOR FOUL is assessed against the violating ALLIANCE. After the MATCH, the Head REFEREE presents the violating team with a YELLOW CARD.</p> <p>However, if the opponent ROBOT is unable to drive, then upon violation, a MAJOR FOUL is assessed against the violating ALLIANCE. After the MATCH, the Head REFEREE presents the violating team with a RED CARD.</p> <p>Only 1 MAJOR FOUL is earned for a single violation.</p>

## 10.7 Head REFEREE

The Head REFEREE has the ultimate authority in the ARENA during the event but may receive input from additional sources, e.g., FIRST personnel, FTA, Event Director, or other event staff. The Head REFEREE rulings are final. No event staff, including the Head REFEREE, will review video, photos, artistic renderings, etc. of any MATCH, from any source, under any circumstances.

## 10.8 Other Logistics

SCORING ELEMENTS that leave the FIELD will be returned to the closest ARTIFACT tray or available DRIVER or HUMAN PLAYER at the earliest safe opportunity by FIELD STAFF. Reintroduction of SCORING ELEMENTS must follow rule [G433](#).

An ARENA FAULT (an error in ARENA operation described in section [13.3 MATCH Replays](#)) is not called for MATCHES that accidentally begin with damaged SCORING ELEMENTS, the incorrect number of SCORING ELEMENTS, or incorrectly placed SCORING ELEMENTS. Damaged SCORING ELEMENTS are not replaced until the next MATCH reset. DRIVE TEAMS should alert the FIELD STAFF to any missing, incorrectly placed, or damaged SCORING ELEMENTS prior to the start of the MATCH.

Once the MATCH is over and the Head REFEREE or their designee determines that the FIELD and FIELD STAFF are ready, they will signal for DRIVE TEAMS to stop their ROBOTS, and to initiate FIELD reset and DRIVE TEAMS to retrieve their ROBOTS.

During MATCH reset, the FIELD is cleared of ROBOTS and OPERATOR CONSOLES from the MATCH that just ended, ROBOTS and OPERATOR CONSOLES for the subsequent MATCH are loaded into the FIELD by DRIVE TEAMS, and FIELD STAFF reset ARENA elements.

