

# FIRST® AGE™

PRESENTED BY

Qualcomm

# Meet the Field

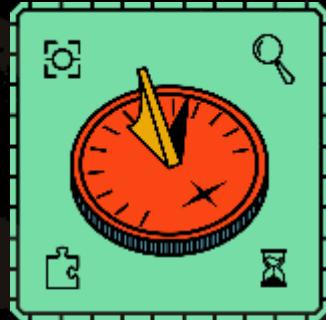
## AZ FTC Head Refs:

Rich Gomez

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**DECODE**

PRESENTED BY  
 RTX

**A KEY TO SUCCESS:  
READ THE COMPETITION  
MANUAL!**

# Safety & GP CULTURE

## **Safety is always a top priority**

We all have a responsibility to promote a culture of respect and safety throughout the season. This is a core pillar of FIRST Robotics.

If ANYONE - Volunteer, Coach, Team Member, Spectator  
– raises a Safety Issue, then please take it to heart and  
help correct the situation respectfully.

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# Definitions

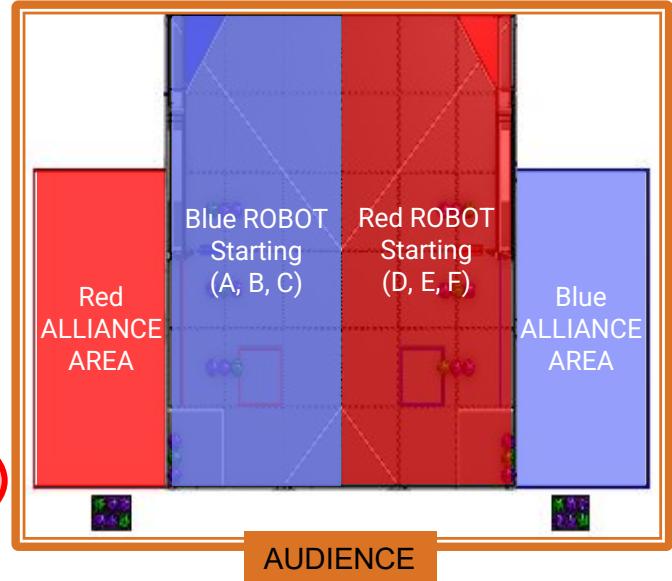
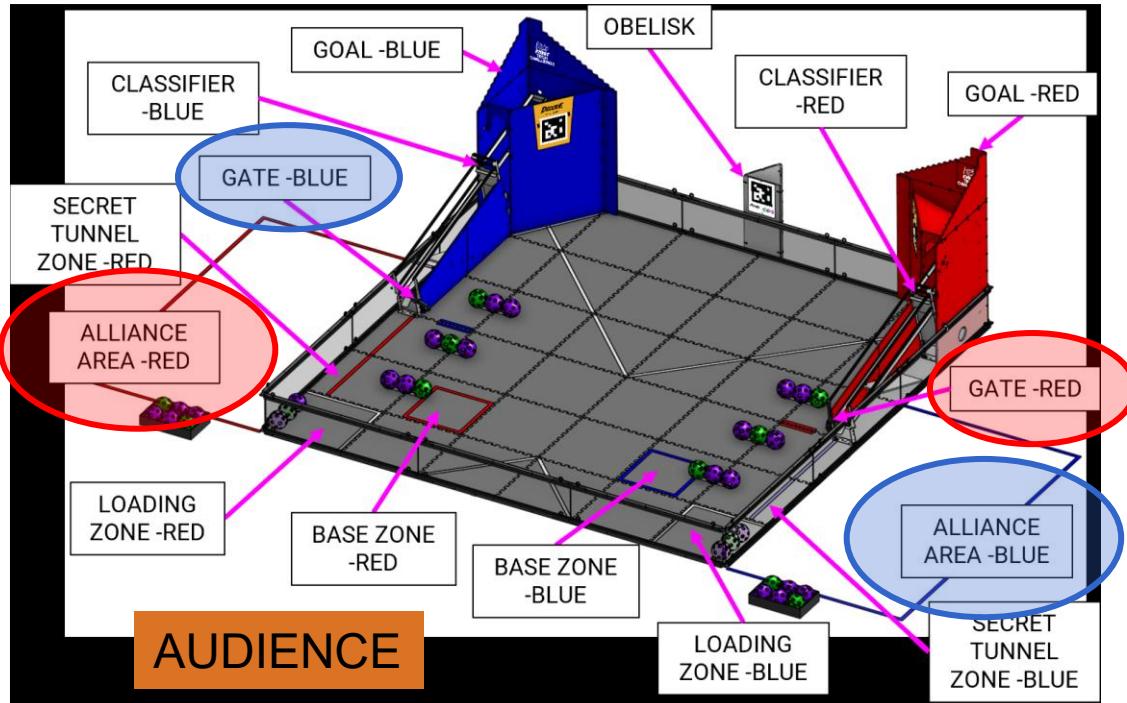
Review the Advancement Point Calculations – and Qualification Phase Performance in the Competition Manual!

**INTRODUCING: RANKING POINT SYSTEM (Movement, Goal & Pattern RPs)**

Ensure you understand how various aspects in the game are defined...

- Artifacts, Motif & Patterns???
- What are the Launch Zones and Lines and where are they located? How are they Important?
- What are the other ZONES and **WHERE** are they located? – NOTE – Lots of crossing the field – Big change from Last Season!
- What are the components of the **Classifier** and how is gameplay critical to this component???

# Field



Note:  
Alliance Driver Area is on Opposite side  
of field from Field Starting / Auto Area



#### 10.5.4 Point Values

Table 10-2: DECODE point values

		MATCH points	RANKING POINTS
	AUTO	TELEOP	
LEAVE	CLASSIFIED	3	
ARTIFACT	OVERFLOW	1	1
	DEPOT		1
PATTERN	CLASSIFIED 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 Championships 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.

NEW

# SCORING Highlights

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.

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.



## 10.5.2 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 during AUTO 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
GPP (ID 21)	G	P	P	G	P	P	G	P	P
PGP (ID 22)	P	G	P	P	G	P	P	G	P
PPG (ID 23)	P	P	G	P	P	G	P	P	G

Figure 10-5: Example PATTERN scoring with GPP scoring

PATTERN Scored	<input checked="" type="checkbox"/>								
CLASSIFIED ARTIFACTS	O	O	O	O	O	O	O	O	-
Index	1	2	3	4	5	6	7	8	9
GATE	G	P	P	G	P	P	G	P	P

# SCORING Patterns

Classified Artifacts are  
SCORED AT END OF PERIOD (Auto and  
End of Match)

1. The MOTIF on the Oblisk sets the pattern
2. If a Classified Artifacts color matches with the color in the pattern, it scores 2 points
3. In the Example (Fig 10-5) we have 5 Artifacts that Match in the Pattern, therefore 10 Points are scored

# Highlights for Pre-Match

- In addition to the normal Queuing procedures like POWER turned ON, Selecting the Correct PROGRAM, CABLES properly CONNECTED, and TUCKED into the Bot... make sure you have the proper "TEAM SIGN"
- Field Artifact Set-up – Note that arrangement on each alliance Spike Marks is relative to the centerline of the field
- When you are called to set the field - the following are game specific highlights:

Set area is OPPOSITE OF ALLIANCE AREA! (Recall FIELD SLIDE)

Robot Placement order is still optional – Field Crew assumes you will place as you want, but let us know if you want to follow the set process

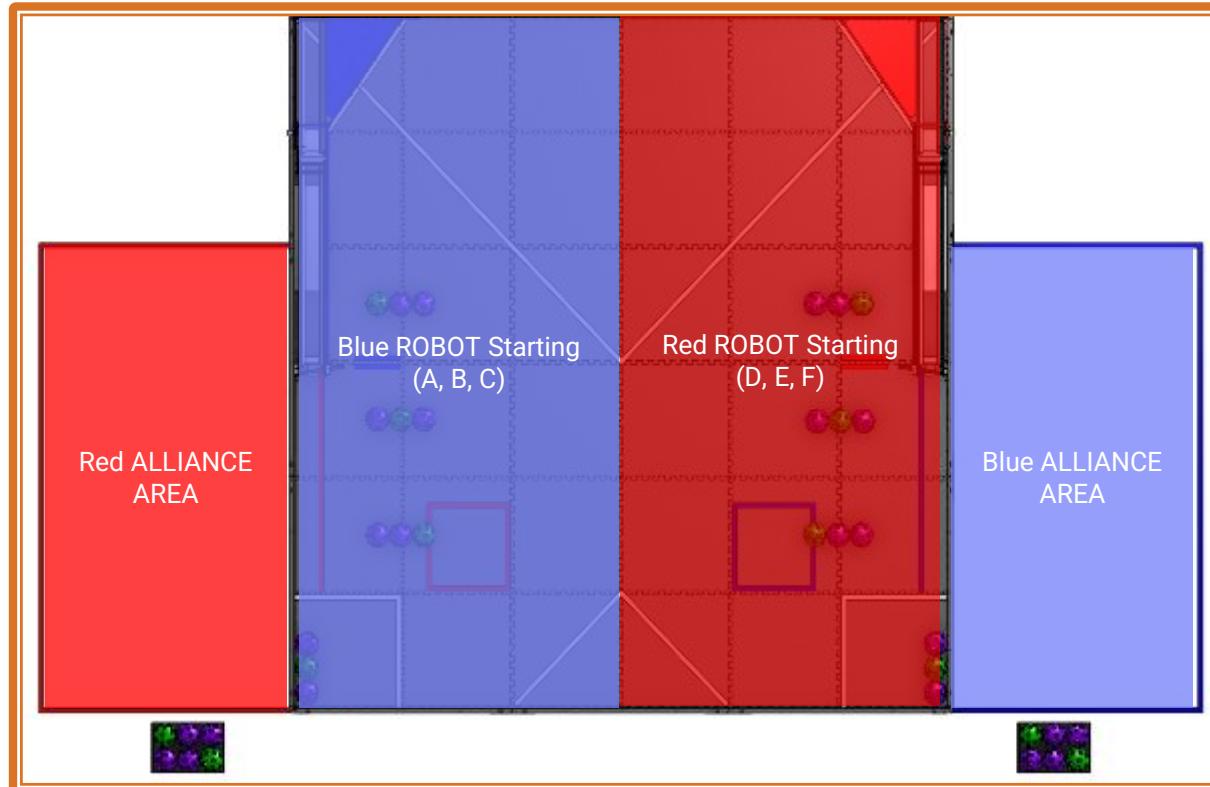
Remember the 18 inch cube size rule!

Understand your Robot Placement options! – (**G304 and Fig 11-1 are key**)

Pre-loading Artifacts is OPTIONAL – Ask field crew if you need assistance, but do not rely on Field Personnel to prompt you to pre-load

Remember to select an OpMode and Initialize (INIT) even if not running AUTO Routine

## Highlights for Pre-Match



# DRIVE TEAM Changes



Table 10-1: DRIVE TEAM roles

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

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.

- Up to **8 total DRIVE TEAM** members per ALLIANCE (up to 4 per team) per MATCH.
- Each team may have one or more HUMAN PLAYERS per MATCH, allowing more STUDENTS to participate at the FIELD.
- DRIVE COACH has different restrictions (e.g., cannot contact ARTIFACTS – G430, cannot handle gamepads – G429) than other DRIVE TEAM members.

# Highlights for Autonomous Period

Teams do not have to run Autonomous, but if they do, they need to start on time but **can stop the robot prior to the end of Auto Period.**

Random Gameplay is back for this game!!!!

Note the rule (**G402**) regarding the Field and your Alliance Half for Autonomous... Specifically disrupting ARTIFACTS

# Highlights for Teleop Period

- ❖ Know what Motionless Means – See the Orange Box in rule **G403** –  
Twitching is a MAJOR Foul.
- ❖ Pay Close Attention if you are a HP! AND  
Drivers pay attention to the HP!
- ❖ In your Robot Design keep in mind Rule G408 – Artifact control limits...  
Artifacts will be launched and bouncing around!
- ❖ Pay Close Attention to the GATE ZONES & TUNNELS (**G424 & G425**)
- ❖ Read closely about Drive Team and Loading Zone rules (**G430 – G434**)

Note – Drive Team can load Artifact into the Robot – BE SAFE

# HUMAN PLAYER

- HUMAN PLAYERS may load SCORING ELEMENTS into their ROBOTS.
  - Each team optionally contributes a HUMAN PLAYER for loading their ROBOT
- A HUMAN PLAYER may be in the LOADING ZONE at the same time as a ROBOT.
  - This allows teams with basic ROBOTS to focus on scoring and contribute to the MATCH score (e.g., ROBOT does not have intake to collect SCORING ELEMENTS on the FIELD on their own)
- There are rules for HUMAN PLAYERS while loading ROBOTS.
  - e.g., no transitive ROBOT-SCORING ELEMENT-human contact or direct ROBOT-human contact is allowed per G431.

Make sure to **review the Competition Manual**, specifically section 11.4.6 for complete HUMAN PLAYER and loading rules.

# Other Important Info

NO WIFI in competition area!

More issues last season - We will be using snooping software!

## Use of Practice Pits

Remember that Robots must have fully passed inspection to use the fields

TEAM SIGNS – See section 12.4 (R401, R402, R403) & **G411**

Size, Color, Contrast Matter

Signs need to be **STRONG ("ROBUST")** to withstand the gameplay

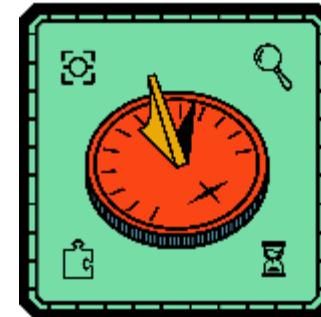
Plan your Robot Expansion attachments carefully... (R105) – there are strict limits on horizontal and vertical extensions.

Stay Current with TEAM UPDATES!

- ❖ Limited time for Q&A
- ❖ Any question that can be answered by reading the Manual will be deferred
- ❖ Feel free to ask clarifying questions from the game video
- ❖ Feel free to contact US



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## DECODE

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