



# Team Update 01

# **General**

N/A

# **Competition Manual**

## 9.3 Areas, Zones, & Markings

BASE ZONE: an 18 in. +/- 0.125 in. (45.70 cm +/- 0.30 cm) wide by 18 in. +/- 0.125 in. (45.70 cm +/- 0.30 cm) deep infinitely tall volume bounded by ALLIANCE colored tape. The BASE ZONE is an ALLIANCE specific zone belonging to the matching color ALLIANCE. The BASE ZONE includes the tape lines (Figure 9-3).

# 10.5.2 PATTERN Scoring Criteria

The randomization of the OBELISK during AUTO 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).

#### 11.4.4 ROBOT

- **G418** ROBOTS may not contact meddle with ARTIFACTS on RAMPS. ROBOTS may not contact, either directly or transitively through a SCORING ELEMENT CONTROLLED by the ROBOT, ARTIFACTS on a RAMP, including their own RAMP. Exceptions are granted for inconsequential and inadvertent contact while operating a GATE. Additionally, ROBOTS may not:
  - A. descore an ARTIFACT from their own RAMP, or
  - B. descore an ARTIFACT from the opponent's RAMP.

Violation: MAJOR FOUL per ARTIFACT, and the ALLIANCE is ineligible for the PATTERN RP if G418.A, or the opposing ALLIANCE is awarded the PATTERN RP if G418.B.

Exceptions are granted for inconsequential and inadvertent contact made by a ROBOT while operating a GATE.

Example 1: A red ROBOT that contacts an ARTIFACT on the blue RAMP is in violation of this rule and is assessed 1 MAJOR FOUL under G418.

Example 2: A red ROBOT that LAUNCHES an ARTIFACT at an ARTIFACT on the red RAMP, removing it from the RAMP is in violation of this rule. The red ALLIANCE is assessed 1 MAJOR FOUL and is ineligible for the PATTERN RP under G418.A.

- G419 ROBOTS only score LAUNCH into the their own GOAL. ROBOTS may not:
  - A. intentionally place or LAUNCH ARTIFACTS directly onto the their own RAMP, or
  - B. place or LAUNCH ARTIFACTS into the opponent's GOAL or onto the opponent's RAMP.

Violation: MAJOR FOUL and the opposing ALLIANCE is awarded the PATTERN RP if G419.B.

The game intent is for ROBOTS to score by LAUNCHING into the open top of the their own GOAL. Attempts to intentionally score points with actions that enter the





ARTIFACT further down on the RAMP are considered violations of this rule.

Attempts to score points for the opponent either through the opponent GOAL or with actions that enter an ARTIFACT further down on the opponent RAMP are also considered violations of this rule.

There is no violation for scoring in an opponent's DEPOT.

**G425** Keep out of opponent's SECRET TUNNEL A ROBOT in the opponent's SECRET TUNNEL ZONE may not contact, directly or transitively though a SCORING ELEMENT, an opponent ROBOT while in the opponent's SECRET TUNNEL ZONE, regardless of who initiates contact.

# 12.1 General ROBOT Design

- **There are expansion limits.** After the MATCH has started, ROBOTS may expand beyond the STARTING CONFIGURATION but are still subject to sizing constraints relative to the ROBOT, based on the initial STARTING CONFIGURATION. ROBOTS must be physically constrained to fit within these limits without the use of software. The sizing constraints are:
  - A. After the start of the MATCH, ROBOTS may expand horizontally but must remain within a fixed 18 in. (45.70 cm) by 18 in. (45.70 cm) when fully expanded per G414.
  - B. After the start of the MATCH, ROBOTS may expand vertically up to 18 in. (45.70 cm).
  - C. Within the limitations per 6415, ROBOTS may expand vertically up to 38 in. (96.50 cm).

Any extension beyond the maximum expansion limit during ROBOT operation is considered a violation of this rule. This includes flexible extensions (e.g., surgical tubing flappers, star intakes) that cause the ROBOT to exceed the expansion limit.

Teams should be prepared to show compliance with this rule and demonstrate their ROBOT expansions during the inspection process. During inspection, each team will be asked to show the ROBOT'S STARTING CONFIGURATIONS and additionally its configurations at maximum mechanical extension. Software limits are not sufficient to demonstrate maximum extensions.

At maximum extension, a ROBOT in compliance will not exceed the maximum allowable vertical extension of 38 in. (96.50 cm) in one direction while maintaining the horizontal expansion requirements of 18 in. (45.70 cm) length and width perpendicular to the vertical height.

Teams are responsible for maintaining compliance with expansion limits and subject to penalties listed in <a href="G414">G414</a> and <a href="G415">G415</a> for any violations during the MATCH.





# Team Update 00

#### General

Team Update 00 is provided as a quick reference of evergreen rule changes from last season, and updates from the V0 Preview Release.

The approach taken in this Team Update is to describe changes to content only. Editorial changes to verbiage, rule and section references, game specific examples that relate to evergreen content, and formatting changes are not described. As always, it's important to read the whole Competition Manual at least once and become an expert on sections of the manual that directly relate to your role and responsibilities on your team.

Teams are welcome to view existing questions and answers and to ask thoughtful and informed questions through the <u>official Q&A system</u> opening September 22, 2025, 12:00p.m. ET. Before asking a question, please review section 1.9 in the Competition Manual for information on what types of questions should be asked.

# **Notable Changes from Last Season:**

#### Advancement

• New points-based advancement model in Competition Manual section 4 – Advancement. See the Advancement & FIRST Championship blog for details

#### **Awards**

- The Formal or Presentation Interview has been renamed to the Structured Interview. The format of the interview has not changed.
- The Motivate Award has been retired. It is replaced by the Reach Award and the Sustain Award.
- PORTFOLIOS for this season may only include content from January 1, 2025 or later.
- A204-C Allows for "show and tell" demonstration items which may include the team's ROBOT
- Updated descriptions and criteria for other awards

#### **Robot Construction Rules**

- Maximum number of allowed servos reduced to 10
- Expansion limits are back. See details in R105, G414, and G415.

# **Changes from V0 Preview:**

## **Section 4 Advancement**

- Changed "Qualification Round" Terminology to "Qualification Phase" for clarification
- Corrected references to "ALLIANCE lead"
- Corrected references to "structured interview"





# **6.2 Team Judged Award Rules**

\*Teams cannot win the Inspire Award at multiple Qualifying or League Tournaments. Teams are only eligible to win 1<sup>st</sup> place Inspire Award once per season from any Qualifying or League Tournament.

Teams who have won 1<sup>st</sup> place Inspire may not be considered for 1<sup>st</sup>, 2<sup>nd</sup>, or 3<sup>rd</sup> place Inspire at subsequent Qualifying or League Tournaments.

Teams who have won 1<sup>st</sup> Place Inspire are eligible to win 2<sup>nd</sup> or 3<sup>rd</sup> place Inspire Award at subsequent Qualifying or League Tournaments.

## 12.1 General ROBOT Design

Details about DECODE expansion limits have been added. Additional expansion rules G414 and G415 are located in section 11 Game Rules (G).

- R105 There are expansion limits. After the MATCH has started, ROBOTS may expand beyond the STARTING CONFIGURATION but are still subject to sizing constraints relative to the ROBOT, based on the initial STARTING CONFIGURATION. The sizing constraints are:
  - A. After the start of the MATCH, ROBOTS may expand horizontally but must remain within a fixed 18 in. (45.70 cm) by 18 in. (45.70 cm) when fully expanded per G414.
  - B. After the start of the MATCH, ROBOTS may expand vertically up to 18 in. (45.70 cm).
  - C. Within the limitations per G415, ROBOTS may expand vertically up to 38 in. (96.50 cm).

Any extension beyond the maximum expansion limit during ROBOT operation is considered a violation of this rule. This includes flexible extensions (e.g., surgical tubing flappers, star intakes) that cause the ROBOT to exceed the expansion limit.

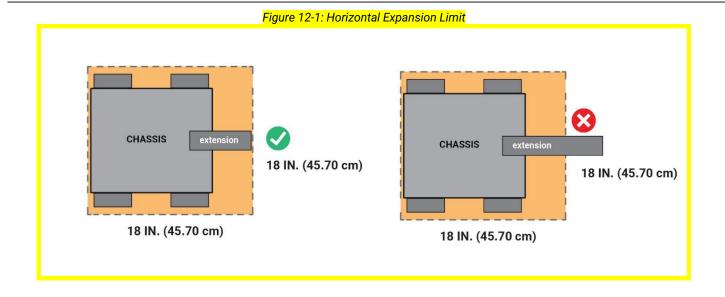
Teams should be prepared to show compliance with this rule and demonstrate their ROBOT expansions during the inspection process. During inspection, each team will be asked to show the ROBOT'S STARTING CONFIGURATIONS and additionally its configurations at maximum extensions.

At maximum extension, a ROBOT in compliance will not exceed the maximum allowable vertical extension of 38 in. (96.50 cm) in one direction while maintaining the horizontal expansion requirements of 18 in. (45.70 cm) length and width perpendicular to the vertical height.

Teams are responsible for maintaining compliance with expansion limits and subject to penalties listed in <u>6414</u> and <u>6415</u> for any violations during the MATCH.







CHASSIS

CHASSIS

Vertical extension

38 IN. (96.50 cm)

38 IN. (96.50 cm)

18 IN. (45.70 cm)

Figure 12-2: Vertical Expansion Limit Examples

# 12.5 Motors & Actuators

18 IN. (45.70 cm)

**G501** \*Allowable motors.

Table 12 1: Motor allowances

18 IN. (45.70 cm)

Motor Name	Part Numbers Available	Notes
NFR Products Yuksel 12V DC	NFR-600-100-000	
SWYFT Robotics SWYFT Spike Motor	SR-MOTOR-DC-01	





### 12.6 Power Distribution

**R601** \*Battery limit – everyone has the same main ROBOT power.

Table 0-1: Legal ROBOT Main Power Battery Packs

Battery Pack	Part Number	Notes
WATTOS 12V Battery	WT-NMH1230	

# **R609** \*Connect the ROBOT battery though the Main Power Switch.

Table 0-2: Legal Power Switches

Power Switch	Part Number
goBILDA Floodgate Power Switch	3103-0005-0001
WATTOS Power Switch Kit	WTS-SW1220

## R615 \*Use appropriately sized wire.

In order to show compliance with these rules, teams should use wire with clearly labeled sizes if possible. If unlabeled wiring is used, teams should be prepared to demonstrate that the wire used meets the requirements of this rule (e.g., wire samples and evidence that they are the required size).

Combining multiple smaller wires in parallel cannot be used to create an equivalent larger wire which meets minimum wire cross section requirements.