

8 GAME RULES: HUMANS

FIRST is committed to [Equity, Diversity, and Inclusion](#) and as such, FIRST makes reasonable accommodations for persons with disabilities that request accommodation. If a participant needs an accommodation for an event, please talk to a volunteer at the event or contact local leadership before the event so they can help ensure the accommodation is provided.

Accommodations are adjustments that allow all people with disabilities to access the building and participate in the game. Accommodations are determined reasonable given they do not create an undue hardship or cause safety concerns.

8.1 General

H101 *Be a good person. All teams must be civil toward everyone and respectful of team and event equipment while at a FIRST Robotics Competition event.

Violation: Behavior will be discussed with team or individual. Violations of this rule are likely to escalate to YELLOW or RED CARDS rapidly (i.e. the threshold for egregious violations is relatively low.)

Examples of inappropriate behavior include, but are not limited to:

- a. use of offensive language or other uncivil conduct,
- b. more than MOMENTARY blockage of an opponent HUMAN PLAYER from the TERMINAL or their CARGO, and
- c. use of CARGO as a projectile in an attempt to inhibit an opponent ROBOT.

Examples of particularly contemptible behavior that is likely to result in ARENA ejection include, but are not limited to, the following:

- d. assault, e.g. throwing something that hits another person (even if unintended),
- e. threat, e.g. saying something like “if you don’t reverse that call, I’ll make you regret it,”
- f. harassment, e.g. badgering someone with no new information after a decision’s been made or a question’s been answered,
- g. bullying, e.g. using body or verbal language to cause another person to feel inadequate,
- h. insulting, e.g. telling someone they don’t deserve to be on a DRIVE TEAM,
- i. swearing at another person (versus swearing under one’s breath or at oneself), and
- j. yelling at another person(s) in anger or frustration.

H102 *Enter only 1 ROBOT. Each registered FIRST Robotics Competition team may enter only 1 ROBOT (or “robot,” a ROBOT -like assembly equipped with most of its drive base, i.e. its MAJOR MECHANISM that enables it to move around a FIELD) into a 2022 FIRST Robotics Competition Event.

“Entering” a ROBOT (or robot) into a FIRST Robotics Competition means bringing it to or using it at the event such that it’s an aid to your team (e.g. for spare parts, judging material, or for practice).

While “most of its drive base” is a subjective assessment, for the purposes of this rule, an assembly whose drive base is missing all wheels/treads, gearboxes,

and belts/chains is not considered a “robot.” If any of those COMPONENTS are incorporated, the assembly is now considered a “robot.”

This rule does not prohibit teams from bringing in robots from other *FIRST* programs for the purposes of awards presentations or pit displays.

Violation: Verbal warning. Egregious or subsequent violations at any point during the event will be addressed by the Head REFEREE, the Lead ROBOT INSPECTOR (LRI), and/or Event Management.

- H103 *Humans, stay off the FIELD until green.** Team members may only enter the FIELD if the DRIVER STATION LED strings are green, unless explicitly instructed by a REFEREE or an FTA.

Violation: Verbal warning. If subsequent violations at any point during the event, YELLOW CARD.

Egregious violations of this rule to which H201 may apply include, but are not limited to:

- a. pushing past the FIELD reset person blocking an open gate to get on the FIELD,
- b. ignoring a warning to not go on the FIELD,
- c. walking on to the FIELD during a MATCH, and
- d. reaching into the FIELD and grabbing a ROBOT during a MATCH.

Violations of this rule apply to the entire team, not specifically to any 1 individual. For example, a member of Team 9999 enters the FIELD prior to lights going green after MATCH 3, and a different member enters the FIELD prior to lights going green after MATCH 25. The team receives a verbal warning for the first violation and a YELLOW CARD for the second.

- H104 *Never step over the guardrail.** Team members may only enter or exit the FIELD through open gates.

Violation: Verbal warning. If subsequent violations at any point during the event, YELLOW CARD.

Teams are encouraged to ensure that all members of their DRIVE TEAM are aware of this rule. It’s easy to violate, particularly when teams are doing their best to move on and off the FIELD quickly. The violations of this rule are intended to avoid nuisance penalties, but still enforce safety requirements around the FIELD. There is the potential for injury when stepping over the guardrail.

Violations of this rule apply to the entire team, not specifically to any 1 individual. For example, a member of Team 9999 steps over the guardrail prior to MATCH 3, and a different member steps over the guardrail prior to MATCH 25. The team receives a verbal warning for the first violation and a YELLOW CARD for the second.

- H105 *Asking other teams to throw a MATCH – not cool.** A team may not encourage an ALLIANCE, of which it is not a member, to play beneath its ability.

NOTE: This rule is not intended to prevent an ALLIANCE from planning and/or executing its own strategy in a specific MATCH in which all the teams are members of the ALLIANCE.

Violation: Behavior will be discussed with team or individual. Violations of this rule are likely to escalate rapidly to YELLOW or RED CARDS and may lead to dismissal from the event (i.e. the threshold for egregious violations is relatively low.)

Example 1: A MATCH is being played by Teams A, B, and C, in which Team C is encouraged by Team D to not engage with the HANGAR at the end of the

MATCH, resulting in Teams A, B, and C not earning a Ranking Point. Team D's motivation for this behavior is to prevent Team A from rising in the Tournament rankings and negatively affecting Team D's ranking. Team D has violated this rule.

Example 2: A MATCH is being played by Teams A, B, and C, in which Team A is assigned to participate as a SURROGATE. Team D encourages Team A to not participate in the MATCH so that Team D gains ranking position over Teams B and C. Team D has violated this rule.

FIRST considers the action of a team influencing another team to throw a MATCH, to deliberately miss Ranking Points, etc. incompatible with FIRST values and not a strategy any team should employ.

H106 *Letting someone coerce you in to throwing a MATCH – also not cool. A team, as the result of encouragement by a team not on their ALLIANCE, may not play beneath its ability.

NOTE: This rule is not intended to prevent an ALLIANCE from planning and/or executing its own strategy in a specific MATCH in which all the ALLIANCE members are participants.

Violation: Behavior will be discussed with team or individual. Violations of this rule are likely to escalate rapidly to YELLOW or RED CARDS and may lead to dismissal from the event (i.e. the threshold for egregious violations is relatively low.)

Example 1: A MATCH is being played by Teams A, B, and C. Team D requests Team C ignore the HANGAR at the end of the MATCH, resulting in Teams A, B, and C not being able to earn HANGAR BONUS. Team C accepts this request from Team D. Team D's motivation for this behavior is to prevent Team A from rising in the Tournament rankings negatively affecting Team D's ranking. Team C has violated this rule.

Example 2: A MATCH is being played by Teams A, B, and C, in which Team A is assigned to participate as a SURROGATE. Team A accepts Team D's request to not participate in the MATCH so that Team D gains ranking position over Teams B and C. Team A has violated this rule.

FIRST considers the action of a team influencing another team to throw a MATCH, to deliberately miss Ranking Points, etc. incompatible with FIRST values and not a strategy any team should employ.

H107 *Don't abuse ARENA access. Team members (except DRIVERS, HUMAN PLAYERS, and COACHES) granted access to restricted areas in and around the ARENA (e.g. via TECHNICIAN button, event issued Media badges, etc.) may not assist or use signaling devices during the MATCH. Exceptions will be granted for inconsequential infractions and in cases concerning safety.

Violation: YELLOW CARD.

The TECHNICIAN'S role is to help the team prepare the ROBOT so it can perform at its full potential during a MATCH. The TECHNICIAN, except as described at the end of [Section 6.6 DRIVE TEAM](#), is not an additional COACH, DRIVER, or HUMAN PLAYER.

Team members in open-access spectator seating areas are not considered to be in a restricted area and are not prevented from assisting or using signaling devices. See [E102](#) for related details.

H108 ***Be careful what you interact with.** Team members are prohibited from the following actions with regards to interaction with ARENA elements.

- A. climbing on or inside,
- B. hanging from,
- C. deforming, and
- D. damaging.

Violation: Verbal warning. If subsequent violations at any point during the event, YELLOW CARD.

8.2 REFEREE Interaction

H201 ***Egregious or exceptional violations.** Egregious behavior beyond what is listed in the rules or subsequent violations of any rule or procedure during the event is prohibited.

In addition to rule violations explicitly listed in this manual and witnessed by a REFEREE, the Head REFEREE may assign a YELLOW or RED CARD for egregious ROBOT actions or team member behavior at any time during the event. This includes violations of the event rules found on the [FIRST® Robotics Competition District & Regional Events page](#).

Please see [Section 11.2.1 YELLOW and RED CARDS](#) for additional detail.

Violation: The Head REFEREE may assign a YELLOW or a RED CARD.

The intent of this rule is to provide the Head REFEREES the flexibility necessary to keep the event running smoothly, as well as keep the safety of all the participants as the highest priority. There are certain behaviors that automatically result in a YELLOW or RED CARD because we believe this behavior puts our community at risk. Those behaviors include, but are not limited to the list below:

- a. inappropriate behavior as outlined in the blue box of H101,
- b. jumping over the guardrail,
- c. behaviors listed in the blue box in H103,
- d. PINNING in excess of 15 seconds,
- e. climbing on the HUB, and
- f. exploiting the 5-second scoring assessment period after a MATCH to avoid rule violations (e.g. triggering an over-extension that enables HANGAR points or using a ROBOT'S residual energy to impact an opponent ROBOT on their HANGAR).

The Head REFEREE may assign a YELLOW or RED CARD for a single instance of a rule violation such as the examples given in items a-e above, or for multiple instances of any single rule violation. Teams should be aware that any rule in this manual could escalate to a YELLOW or RED CARD. The Head REFEREE has final authority on all rules and violations at an event.

H202 ***1 STUDENT, 1 Head Referee.** A team may only send 1 STUDENT from its DRIVE TEAM to address the Head REFEREE.

Violation: The Head REFEREE will not address additional, non-compliant team members or peripheral conversations.

Please see [REFEREE Interaction](#) for more information about process and expectations.

8.3 Before/After the MATCH

H301 *Be prompt/safe when coming to and going from the FIELD. DRIVE TEAMS may not cause significant or multiple delays during the event to the start of a MATCH, the FIELD reset after a MATCH, or continuation of MATCHES after a TIMEOUT.

Violation: If prior to the MATCH, the offending DRIVE TEAM'S ROBOT will be DISABLED. If after the MATCH, YELLOW CARD.

DRIVE TEAMS are expected to stage their ROBOTS for a MATCH, and remove it from the FIELD afterwards, safely and swiftly. Examples of violations include, but are not limited to:

- a. late arrival to the FIELD (including across different MATCHES and after a FIELD or ALLIANCE TIMEOUT),
- b. failing to exit the FIELD once a MATCH is ready to begin (indicated by the green LEDs having turned off),
- c. installing BUMPERS, charging pneumatic systems, or any other ROBOT maintenance once on the FIELD,
- d. time-consuming use of alignment devices that are external to the ROBOT (e.g. a DRIVE TEAM could bring and use a measuring tape, as long as there is no delay to the MATCH by doing so), and
- e. failing to remove OPERATOR CONSOLES from the DRIVER STATIONS in a timely manner.

At the conclusion of a TIMEOUT, ROBOTS are expected to be staged on the FIELD prior to the timer displaying 0 and ready for the MATCH to start.

There are no rules that prohibit use of hand tools (including battery operated tools) while setting up and/or removing ROBOTS from the FIELD provided they do not cause significant delay or cause safety concerns.

H302 *Teams may not enable their ROBOTS on the FIELD. Teams may not tether to the ROBOT while on the FIELD except in special circumstances (e.g. during TIMEOUTS, after Opening Ceremonies, before an immediate MATCH replay, etc.) and with the express permission from the FTA or a REFEREE.

Violation: YELLOW CARD

Teams are encouraged to consider this rule when developing their ROBOTS.

FMS will not enable ROBOTS after the conclusion of the MATCH.

Tethering includes any wired or wireless connection used to electrically energize and/or control elements on the ROBOT. The safety of teams and volunteers in close proximity to ROBOTS and ARENA elements on the FIELD is of the utmost importance, therefore ROBOTS or ROBOT COMPONENTS may not be enabled in any way on the FIELD once the MATCH has concluded.

ROBOTS need to be safely transported off the FIELD and back to the pits after the MATCH, and there may be bystanders, doorways, or height restrictions along the route.

H303 *You can't bring/use anything you want. The only equipment that may be brought to the ARENA and used by DRIVE TEAMS during a MATCH is listed below. Regardless of if equipment fits criteria below, it may not be employed in a way that breaks any other rules, introduces a safety

hazard, blocks visibility for FIELD STAFF or audience members, or jams or interferes with the remote sensing capabilities of another team or the FIELD.

- A. the OPERATOR CONSOLE,
- B. non-powered signaling devices,
- C. reasonable decorative items,
- D. special clothing and/or equipment required due to a disability,
- E. devices used solely for planning or tracking strategy,
- F. devices used solely to record gameplay, and
- G. non-powered Personal Protective Equipment (examples include, but aren't limited to, gloves, eye protection, and hearing protection)

Items brought to the ARENA under allowances B-G must meet all following conditions:

- I. do not connect or attach to the OPERATOR CONSOLE, FIELD, or ARENA,
- II. do not connect or attach to another ALLIANCE member (other than items in category G),
- III. do not communicate with anything or anyone outside of the ARENA,
- IV. do not communicate with the TECHNICIAN,
- V. do not include any form of enabled wireless electronic communication, and
- VI. do not in any way affect the outcome of a MATCH, other than by allowing the drive team to
 - a. plan or track strategy for the purposes of communication of that strategy to other ALLIANCE members or
 - b. use items allowed per B to communicate with the ROBOT.

Violation: MATCH will not start until situation remedied. If discovered or used inappropriately during a MATCH, YELLOW CARD.

Examples of equipment that may be considered a safety hazard in the confined space of the ALLIANCE AREA include, but are not limited to, a step stool or a large signaling device.

Examples of remote sensing capabilities include, but are not limited to, vision systems, acoustic range finders, sonars, and infrared proximity sensors.

Use of imagery that, to a reasonably astute observer, mimics the Vision Targets employed on the FIELD is a violation of this rule.

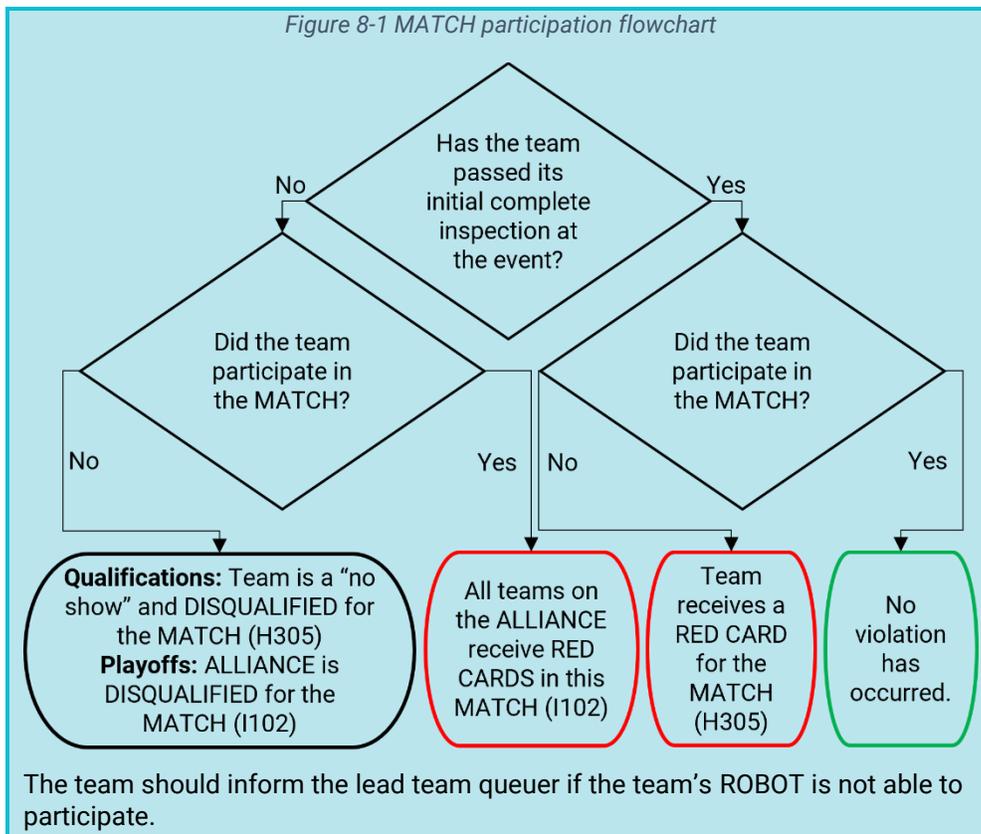
Examples of wireless communication include, but are not limited to, radios, walkie-talkies, cell phones, Bluetooth communications, and Wi-Fi.

H304 ***By invitation only.** Only DRIVE TEAMS for the current MATCH are allowed in their respective ALLIANCE AREAS or TERMINAL AREAS.

Violation: MATCH won't start until the situation is corrected.

H305 ***Show up to your MATCHES.** Upon each team's ROBOT passing initial, complete inspection, the team must send at least 1 member of its DRIVE TEAM to the ARENA and participate in each of the team's assigned Qualification and Playoff MATCHES.

Violation: RED CARD.



H306 *Identify yourself. DRIVE TEAMS must wear proper identification while in the ARENA. Proper identification consists of:

- A. all DRIVE TEAM members wearing their designated buttons above the waist in a clear visible location at all times while in the ARENA
- B. the COACH wearing the "COACH" button
- C. the DRIVERS and HUMAN PLAYERS each wearing a "DRIVE TEAM" button
- D. the TECHNICIAN wearing the "TECHNICIAN" button
- E. each HUMAN PLAYER in a TERMINAL AREA wearing their ALLIANCE color apron around their waist

Teams are invited to customize the aprons included in their [Kickoff Kit](#), provided the pocket and bottom 2 in. aren't modified. A team may borrow a FIELD apron if they don't have theirs or a REFEREE determines the apron unfit for a MATCH.

- F. during a Playoff MATCH, the ALLIANCE CAPTAIN clearly displaying the designated ALLIANCE CAPTAIN identifier (e.g. hat or armband)

Violation: MATCH won't start until the situation is corrected. Those not displaying identification must leave the ARENA.

H307 *Plug in to/be in your DRIVER STATION. The OPERATOR CONSOLE must be used in the DRIVER STATION to which the team is assigned, as indicated on the team sign.

Violation: MATCH won't start until the situation is corrected. If during a MATCH, DISABLED.

An intent of this rule is to prevent unsafe situations where long tethers to OPERATOR CONSOLE devices increase tripping hazards as the operator moves about the ALLIANCE AREA. In the interest of avoiding nuisance penalties

associated with a DRIVE TEAM member stepping outside of a prescribed area, we prefer to offer a general guideline as to what it means to use the OPERATOR CONSOLE in the ALLIANCE AREA. Provided the DRIVE TEAM member is within close proximity of their DRIVER STATION, there will be no repercussions. However, a DRIVE TEAM member located more than approximately half a DRIVER STATION width away from their own DRIVER STATION while using their OPERATOR CONSOLE is likely violating this rule.

H308 *Don't bang on the glass. Team members may never strike or hit the DRIVER STATION plastic windows.

Violation: Verbal warning. If subsequent violations in more than 1 MATCH, YELLOW CARD.

H309 Know your ROBOT setup. When placed on the FIELD for a MATCH, each ROBOT must be:

- A. in compliance with all ROBOT rules, i.e. has passed inspection (for exceptions regarding Practice MATCHES, see [Section 10 Inspection & Eligibility Rules](#)),
- B. the only team-provided item left on the FIELD by the DRIVE TEAM,
- C. confined to its STARTING CONFIGURATION (reference R102 and R104),
- D. positioned such that it is fully contained in 1 of the ALLIANCE'S 2 TARMACS, and
- E. fully and solely supporting not more than 1 CARGO (as described in [Section 6.1 Setup](#)).

Violation: If fix is a quick remedy, the MATCH won't start until all requirements are met. If it is not a quick remedy, the offending ROBOT will be DISABLED and, at the discretion of the Head REFEREE, must be re-inspected.

If a ROBOT is BYPASSED prior to the start of the MATCH, the DRIVE TEAM may not remove the ROBOT from the FIELD without permission from the Head REFEREE or the FTA.

H310 Know your DRIVE TEAM positions. Prior to the start of the MATCH, DRIVE TEAM members must be positioned as follows:

- A. DRIVERS: inside their ALLIANCE AREA and behind the STARTING LINE,
- B. COACHES: inside their ALLIANCE AREA and behind the STARTING LINE, and
- C. HUMAN PLAYERS:
 - a. 1 HUMAN PLAYER per ALLIANCE deployed to each TERMINAL AREA, and the HUMAN PLAYER in the TERMINAL AREA furthest from their ALLIANCE AREA behind the TERMINAL STARTING LINE,
 - b. any remaining HUMAN PLAYERS: inside their ALLIANCE AREA and behind the STARTING LINE, and
- D. TECHNICIANS: in the event-designated area near the FIELD.

Violation: MATCH won't start until the situation is corrected.

H311 Leave the CARGO alone. Prior to the start of the MATCH, HUMAN PLAYERS may not remove the CARGO from the TERMINAL.

Violation: MATCH won't start until the situation is corrected.

H312 No CARGO shots after the MATCH. After the end of the MATCH (i.e. when the timer displays 0 seconds following TELEOP) and for the following 10 seconds, DRIVE TEAMS may not enter CARGO into the FIELD.

Violation: FOUL and any CARGO scored as a result of a violation of this rule is negated.

8.4 During the MATCH: AUTO

- H401** ***Behind the lines.** During AUTO, DRIVE TEAM members staged behind a STARTING LINE or TERMINAL STARTING LINE may not contact anything in front of those lines, unless for personal or equipment safety or granted permission by a Head REFEREE or FTA.

Violation: FOUL per item contacted.

Pointing, gesturing, or otherwise extending across the STARTING LINE such that contact is not made with carpet or other ARENA elements is not a violation of this rule.

An example of an exception for equipment safety is if an OPERATOR CONSOLE starts to fall from, or has already fallen off of, the DRIVER STATION shelf. In that circumstance, DRIVE TEAM members may step forward to catch it or pick it up off the ground and return it to the shelf.

- H402** ***Disconnect or set down controllers.** Prior to the start of the MATCH, any control devices worn or held by HUMAN PLAYERS and/or DRIVERS must be disconnected from the OPERATOR CONSOLE.

Violation: MATCH won't start until the situation is corrected.

For the purposes of FIRST Robotics Competition, any device connected to the OPERATOR CONSOLE is considered a control device because REFEREES are not expected to differentiate between devices that can or cannot control the ROBOT.

- H403** ***Let the ROBOT do its thing.** During AUTO, DRIVE TEAMS may not directly or indirectly interact with ROBOTS or OPERATOR CONSOLES unless for personal safety, OPERATOR CONSOLE safety, or pressing an E-Stop. A HUMAN PLAYER feeding CARGO to their ROBOT is an exception to this rule.

Violation: FOUL and YELLOW CARD

- H404** **AUTO CARGO delivery.** During AUTO, CARGO may only be introduced to the FIELD by a HUMAN PLAYER in a TERMINAL AREA.

Violation: FOUL per CARGO.

8.5 During the MATCH

- H501** ***COACHES and other teams: hands off the controls.** A ROBOT shall be operated only by the DRIVERS and/or HUMAN PLAYERS of that team.

Violation: DISABLED.

Exceptions may be made before a MATCH for major conflicts, e.g. religious holidays, major testing, transportations issues, etc.

- H502** **No wandering.** DRIVERS, COACHES, and HUMAN PLAYERS may not contact anything outside the area in which they started the MATCH (i.e. the ALLIANCE AREA or the TERMINAL AREA). TECHNICIANS may not contact anything outside their designated area. Exceptions are granted in cases concerning safety and for actions that are inadvertent, MOMENTARY, and inconsequential.

Violation: FOUL.

- H503** ***COACHES, CARGO is off limits.** COACHES may not touch CARGO, unless for safety purposes.

Violation: FOUL per CARGO.

- H504 TELEOP CARGO delivery.** During TELEOP, CARGO may only be introduced to the FIELD
- A. by a HUMAN PLAYER and
 - B. through the GUARD.

Violation: FOUL per CARGO.

- H505 Opponent CARGO is off limits.** During a MATCH, HUMAN PLAYERS may not contact opponent CARGO. Inconsequential and MOMENTARY contact, and/or contact that, as perceived by a REFEREE, is intended to be helpful, are exceptions to this rule.

Violation: FOUL per CARGO.

Inconsequential touching, such as shifting an opponent CARGO out of the way within the TERMINAL to retrieve your own, is not a violation of this rule.

- H506 Only feed your ALLIANCE ROBOTS.** HUMAN PLAYERS may not deliver their CARGO to opponent ROBOTS.

Violation: FOUL per CARGO.

- H507 DRIVE TEAMS, watch your reach.** DRIVE TEAM members may not reach beyond the PURPLE PLANE.

Violation: FOUL.

