

Team Update 07

General

n/a

Game Manual

Section 7.1 Personal Safety

G104 *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. after Opening Ceremonies, before an immediate MATCH replay, etc.) and with the express permission from the FTA or a REFEREE.

Violation: Verbal warning, plus YELLOW CARD if subsequent violations during the event.

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

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

Tethering **For the purposes of this rule, 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 before or after the MATCH.

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.

Depluralization

There are many rules in the 2024 Game Manual where plural nouns are used arbitrarily. In some instances, the plural noun makes the rule or the assignment of the violation ambiguous (e.g. if a rule says HIGH NOTES cannot be entered into the FIELD before the final 20 seconds of a MATCH, and a violation results in a FOUL, does that mean it's a FOUL per HIGH NOTE entered prematurely, or a FOUL for entering any number of HIGH NOTES prematurely?) The edits below bring the language of each rule into parity with the intended violation assignment and the language at the start of Section 6.6. Violations ("Upon any instance of a rule violation, unless otherwise noted, 1 or more of the penalties listed in Table 6-3 are assessed.") These edits are considered "housekeeping," and don't change the original intent of any of the rules or their violations.

G101 *Humans, stay off the FIELD until green. ~~Team members~~ **A team member** may only enter the FIELD if FIELD lighting (SUBWOOFER and FIELD facing side of the team signs and timers) is green, unless explicitly instructed by a REFEREE or an FTA.

Violation: Verbal warning, plus YELLOW CARD if subsequent violations during the event.

G102 *Never step over the guardrail. ~~Team members~~ **A team member** may only enter or exit the FIELD through open gates.

Violation: Verbal warning, plus YELLOW CARD if subsequent violations during the event.

G103 *Be careful what you interact with. Team members are **A team member is** prohibited from the following actions with regards to interaction with ARENA elements.

- A. climbing on or inside,
- B. hanging from,
- C. manipulating such that it doesn't return to its original shape without human intervention, and
- D. damaging.

Violation: Verbal warning, plus YELLOW CARD if subsequent violations during the event.

G202 *Don't bang on the glass. Team members **A team member** may never strike or hit the DRIVER STATION plastic windows.

Violation: Verbal warning, plus YELLOW CARD if subsequent violations during the event.

G207 *Don't abuse ARENA access. Team members **A team member** (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.

G210 *Keep it together. ROBOTS **A ROBOT** may not intentionally detach or leave parts **a part** on the FIELD.

Violation: RED CARD.

G211 *Don't expect to gain by doing others harm. Strategies **A strategy** clearly aimed at forcing the opponent ALLIANCE to violate a rule **are is** not in the spirit of FIRST Robotics Competition and not allowed. Rule violations forced in this manner will not result in an assignment of a penalty to the targeted ALLIANCE.

Violation: FOUL, plus TECH FOUL if REPEATED.

G301 *Be prompt. DRIVE TEAMS **A DRIVE TEAM member** may not cause significant delays to the start of their MATCH. Causing a significant delay requires both of the following to be true:

- A. The expected MATCH start time has passed, and
- B. The DRIVE TEAM has access to the FIELD and is neither MATCH ready nor making a good faith effort, as perceived by the Head REFEREE, to quickly become MATCH ready.

Violation: Verbal warning, or if a subsequent violation within the tournament phase (i.e. Qualifications or Playoffs), TECH FOUL applied to their upcoming MATCH. If the DRIVE TEAM is not MATCH ready within 2 minutes of the verbal warning/TECH FOUL and the Head REFEREE perceives no good faith effort by the DRIVE TEAM to quickly become MATCH ready, DISABLED.

G401 *Behind the lines. In AUTO, DRIVE TEAM members **a DRIVE TEAM member** staged behind a STARTING LINE may not contact anything in front of that STARTING LINE, unless for personal or equipment safety, to press the E-Stop or A-Stop, or granted permission by a Head REFEREE or FTA.

*Violation: FOUL **regardless of the number of items contacted.***

G402 *Let the ROBOT do its thing. In AUTO, DRIVE TEAMS **a DRIVE TEAM member** may not directly or indirectly interact with ROBOTS **a ROBOT** or OPERATOR CONSOLES **an OPERATOR CONSOLE** unless for personal safety, OPERATOR CONSOLE safety, or pressing an E-Stop or A-Stop.

Violation: FOUL and YELLOW CARD

G403 **1 NOTE at a time.** In AUTO, ROBOTS **a ROBOT** may not CONTROL more than 1 NOTE at a time, either directly or transitively through other objects.

A ROBOT is in CONTROL of a NOTE if:

- A. the NOTE is fully supported by the ROBOT or
- B. it intentionally pushes a NOTE to a desired location or in a preferred direction (i.e. herding).

Violation: TECH FOUL per additional NOTE.

G405 **Limited AUTO opponent interaction.** In AUTO, a ROBOT whose BUMPERS have completely crossed the CENTER LINE (i.e. to the opposite side of the CENTER LINE from its ROBOT STARTING ZONE) may contact neither an opponent ROBOT nor NOTES **a NOTE** staged in the opponent's WING.

Violation: TECH FOUL.

G406 ***ROBOTS: use GAME PIECES as directed.** ROBOTS **A ROBOT** may not deliberately use GAME PIECES **a GAME PIECE** in an attempt to ease or amplify challenges **a challenge** associated with FIELD elements **a FIELD element**.

Violation: TECH FOUL per NOTE

G407 ***Keep NOTES in bounds.** ROBOTS **A ROBOT** may not intentionally eject NOTES **a NOTE** from the FIELD (either directly or by bouncing off a FIELD element or other ROBOT) other than through their SPEAKER or AMP.

Violation: TECH FOUL per NOTE

G408 **ROBOTS, no HIGH NOTES.** ROBOTS **A ROBOT** may not cause HIGH NOTES **a HIGH NOTE** to leave the FIELD (including through an AMP or SPEAKER), score on a MICROPHONE, or enter a TRAP.

Violation: TECH FOUL per HIGH NOTE. If a ROBOT scores a HIGH NOTE on a MICROPHONE, its ALLIANCE is ineligible for the ENSEMBLE RP.

G410 **Don't abuse GAME PIECES.** **Neither a** ROBOTS **and nor a** HUMAN PLAYERS **may not damage a** GAME PIECES.

Violation: Verbal warning, plus TECH FOUL if REPEATED. If via a ROBOT and the Head REFEREE determines that further damage is likely to occur, DISABLED. Corrective action (such as eliminating sharp edges, removing the damaging MECHANISM, and/or re-inspection) may be required before the ROBOT may compete in subsequent MATCHES.

G411 ***ROBOTS must be safe.** A ROBOT may not pose **an** undue hazards to humans **a human**, ARENA elements **an ARENA element**, or other ROBOTS **another ROBOT** in the following ways:

- A. the ROBOT or anything it CONTROLS, e.g. a NOTE, contacts anything outside the FIELD except for either of the following:
 - a. MOMENTARY contact inside the CHUTE and
 - b. contact with a surface inside the AMP via a NOTE
- B. its BUMPERS fail such that a segment completely detaches,
- C. a corner (as defined in [R401](#)) of its FRAME PERIMETER is exposed,
- D. its team number or ALLIANCE color are indeterminate,
- E. its BUMPERS leave the BUMPER ZONE REPEATEDLY or for more than a MOMENTARY amount of time, or
- F. its operation or design is dangerous or unsafe.

Violation: DISABLED.

G414 **No full-court shots.** A ROBOT with any part of its BUMPERS in their opponent's WING may not cause NOTES a NOTE to travel into or through their WING.

Violation: FOUL, plus TECH FOUL for subsequent violations in the MATCH.

G415 **Watch your ARENA interaction.** A ROBOT may not damage an ARENA element. ROBOTS are A ROBOT is prohibited from the following interactions with ARENA elements an ARENA element, except chain (see G416) and GAME PIECES a GAME PIECE (see Section 7.4.2 GAME PIECES).

- A. grabbing,
- B. grasping,
- C. attaching to (including the use of a vacuum or hook fastener to anchor to the FIELD carpet),
- D. becoming entangled with, and
- E. suspending from.

Violation: TECH FOUL, plus YELLOW CARD if REPEATED or longer than MOMENTARY. If the Head REFEREE infers that damage is likely, DISABLED. Corrective action (such as eliminating sharp edges, removing the damaging MECHANISM, and/or re-inspection) may be required before the ROBOT will be allowed to compete in subsequent MATCHES.

G420 ***There's a 5-count on PINS.** ROBOTS A ROBOT may not PIN an opponent's ROBOT for more than 5 seconds. A ROBOT is PINNING if it is preventing the movement of an opponent ROBOT by contact, either direct or transitive (such as against a FIELD element). A PIN count ends once any of the following criteria below are met:

- A. the ROBOTS have separated by at least 6 ft. (~183 cm) from each other for more than 5 seconds,
- B. either ROBOT has moved 6 ft. from where the PIN initiated for more than 5 seconds, or
- C. the PINNING ROBOT gets PINNED.

For criteria A and B, the PIN count pauses once ROBOTS are separated by 6 ft. until either the PIN ends or the PINNING ROBOT moves back within 6 ft., at which point the PIN count is resumed.

Violation: FOUL, plus an additional TECH FOUL for every 5 seconds in which the situation is not corrected.

G425 ***No wandering.** DRIVE TEAMS A DRIVE TEAM member must remain in their designated areas area as follows:

- A. DRIVERS a DRIVER may not contact anything outside the area in which they started the MATCH (i.e. the ALLIANCE AREA or SOURCE AREA),
- B. DRIVERS a DRIVER must use the OPERATOR CONSOLE in the DRIVER STATION to which they are assigned, as indicated on the team sign,
- C. HUMAN PLAYERS a HUMAN PLAYER may not contact anything outside the area in which they started the MATCH (i.e. the ALLIANCE AREA or SOURCE AREA),
- D. COACHES a COACH may not contact anything outside the ALLIANCE AREA or in front of their COACH LINE, and
- E. TECHNICIANS a TECHNICIAN 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

G427 ***DRIVE TEAMS, watch your reach.** DRIVE TEAM members A DRIVE TEAM member may not extend into the CHUTE.

Violation: FOUL.

G428 ***Humans: use GAME PIECES as directed.** ~~DRIVE TEAM members~~ **A DRIVE TEAM member** may not deliberately use ~~GAME PIECES~~ **a GAME PIECE** in an attempt to ease or amplify ~~challenges~~ **a challenge** associated with ~~FIELD elements~~ **a FIELD element**.

Violation: TECH FOUL per GAME PIECE.

G429 ***NOTE delivery.** ~~NOTES~~ **A NOTE** may only be introduced to the FIELD through the SOURCE.

Violation: TECH FOUL per NOTE

G430 **HIGH NOTE delivery.** ~~HIGH NOTES~~ **A HIGH NOTE** may only be entered on to the FIELD during the last 20 seconds of the MATCH by a HUMAN PLAYER in front of the COACH LINE.

Violation: FOUL.

G501 ***Leave promptly.** ~~DRIVE TEAMS~~ **A DRIVE TEAM member** may not cause significant or multiple delays to the start of a subsequent MATCH, scheduled break content, or other FIELD activities.

Violation: Verbal warning plus YELLOW CARD if subsequent violations at any point during the event.