



7 Game Rules

7.1 Before the MATCH

G01. 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 9 Inspection & Eligibility Rules](#)),
- B. the only item left on the FIELD by the DRIVE TEAM,
- C. confined to its STARTING CONFIGURATION,
- D. set on the carpet,
- E. in contact with its ALLIANCE WALL diamond plate,
- F. not in contact with the EXCHANGE wall,
- G. not breaking the plane of the EXCHANGE ZONE, and
- H. supporting not more than one (1) POWER CUBE (as described in [Section 4.1.2 MATCH 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 *FIRST*[®] Technical Advisor (FTA).

G02. Be prompt/safe when coming to and going from the FIELD. DRIVE TEAMS may not cause significant or repeated delays to the start of a MATCH and/or to the FIELD reset after the MATCH.

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 include, but are not limited to:

A. late arrival to the FIELD

- B. failing to exit the FIELD once the LED strings have turned off (indicating MATCH ready)
- C. installing BUMPERS, charging pneumatic systems, or any other ROBOT maintenance, once on the FIELD
- D. 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)
- E. failing to remove OPERATING CONSOLES from the PLAYER STATIONS in a timely manner



G03. Know your DRIVE TEAM positions. Prior to the start of the MATCH, DRIVE TEAMS must be positioned as follows:

- A. DRIVERS and COACHES must be in their ALLIANCE STATION and behind the STARTING LINE
- B. HUMAN PLAYERS must be behind the STARTING LINE and either in their ALLIANCE STATION or one of their ALLIANCE PORTALS
- C. TECHNICIANS must be in their designated area outside the ALLIANCE STATION and PORTALS.

Violation: MATCH will not start until the situation is corrected.

The specific location for the TECHNICIAN to stand during a MATCH may vary by event due to space restrictions around the FIELD. In general, TECHNICIANS are located with their Team's ROBOT cart and within close proximity to the FIELD.

G04. Leave the POWER CUBES alone. Prior to the start of the MATCH, DRIVE TEAMS may not rearrange the POWER CUBES within a PORTAL, staged on the FIELD (that are not staged inside a ROBOT), or transfer POWER CUBES from one PORTAL to another.

Violation: MATCH will not start until the situation is corrected.

7.2 ROBOT Restrictions

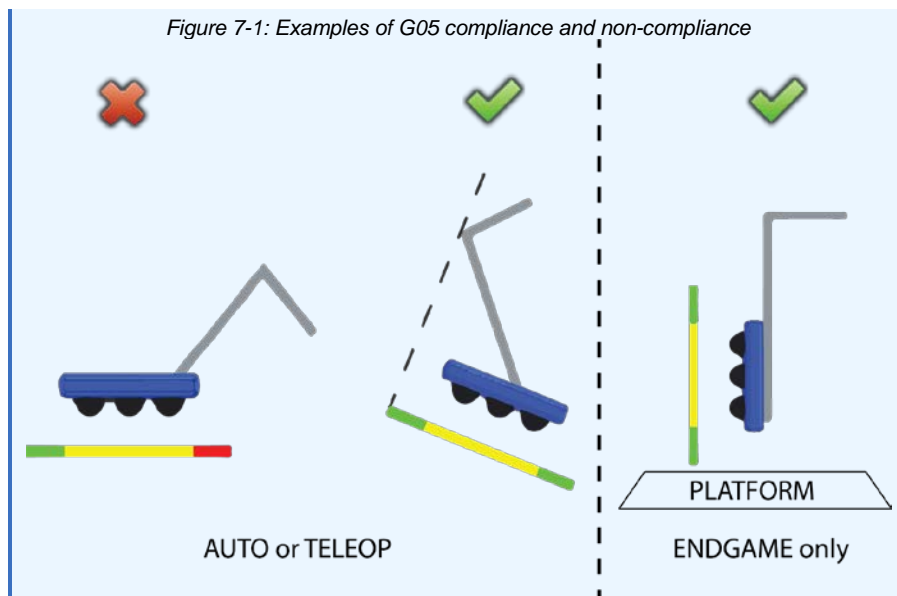
G05. Don't overextend yourself. ROBOTS may not extend more than 16 in (41 cm). beyond their FRAME PERIMETER (see Figure 8-1). This rule doesn't apply to a ROBOT fully within its PLATFORM ZONE during the ENDGAME.

Violation: FOUL. If strategic, (e.g. expansion results in scoring a POWER CUBE), RED CARD.

Teams should be cognizant of venue height, camera poles, lighting trusses etc. when designing their ROBOT.

Examples of compliance and non-compliance of G05 are shown in Figure 7-1.

Yellow bars represent the limits of the FRAME PERIMETER and are drawn in the same orientation of the ROBOT'S FRAME PERIMETER. Green bars represent a measured extension from the FRAME PERIMETER that has not been exceeded. Red bars represent a measured extension from the FRAME PERIMETER that has exceeded the limit in G05). ROBOT A violates G05, whereas ROBOT B and C do not.



- G06. Keep it together.** ROBOTS may not intentionally detach or leave parts on the FIELD.

Violation: RED CARD

This rule is not intended to penalize ROBOTS that encounter accidental breakage (e.g. a failed MECHANISM that falls off), as those actions are not intentional.

- G07. Keep your BUMPERS together.** ROBOTS must be in compliance with BUMPER rules throughout the MATCH.

Violation: FOUL. DISABLED if any BUMPER segment becomes completely detached, any side of a ROBOT is completely exposed (without BUMPER), or the Team number or ALLIANCE color becomes indeterminate.

- G08. ROBOTS must be removed from the FIELD by hand (i.e. no enabling, power, etc.).** ROBOTS will not be re-enabled after the conclusion of the MATCH, nor will Teams be permitted to tether to the ROBOT 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.

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 ARCADE elements on the FIELD is of the utmost importance, therefore ROBOTS or ROBOT COMPONENTS may not be energized or powered in any way on the FIELD once the MATCH has concluded.

Keep in mind that 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.

- G09. Launching POWER CUBES is okay, but keep it short.** A ROBOT is not permitted to launch POWER CUBES except:

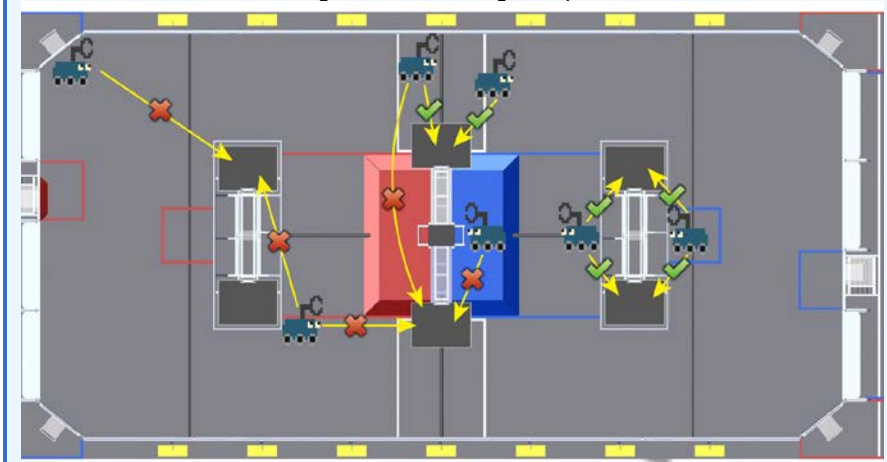
- A. When any part of its BUMPERS are inside its ALLIANCE'S NULL TERRITORY, and it's attempting to place a POWER CUBE on the SCALE PLATE in its ALLIANCE'S NULL TERRITORY, or
- B. when any part of its BUMPERS are contacting a FENCE or any part of the ROBOT is intersecting the vertical planes defined by the SWITCH FENCE, and it's attempting to place a POWER CUBE on the nearest PLATE of that FENCE'S SWITCH, or
- C. when any part of its BUMPERS are inside its ALLIANCE'S EXCHANGE ZONE, and it's attempting to place a POWER CUBE in its ALLIANCE'S EXCHANGE tunnel.

Violation: TECH FOUL per POWER CUBE. Repeated violations of this rule are likely to escalate rapidly to YELLOW or RED CARDS

Because gameplay is evaluated by human REFEREES, teams are encouraged to make compliance with G09 (e.g. if any part of the ROBOT is intersecting the vertical planes defined by the SWITCH FENCE) obvious and unambiguous.

A ROBOT in contact with a FENCE and straddling the midpoint (i.e. BUMPERS in both halves of the FIELD) may launch towards either of the corresponding SWITCH'S PLATES.

Figure 7-2: Launching examples



7.3 ROBOT to ROBOT Interaction

- G10. Don't tear others down to lift yourself up.** Strategies aimed at the destruction or inhibition of ROBOTS via attachment, damage, tipping, or entanglements are not allowed.

Violation: FOUL and YELLOW CARD. If harm or incapacitation occurs as a result of the strategy, YELLOW CARD is elevated to a RED CARD

For example, use of a wedge-like MECHANISM to tip ROBOTS is a violation of G10.

MECHANISMS outside the FRAME PERIMETER are particularly susceptible to causing such damage, drawing this penalty, and/or drawing penalties associated with violations of G11.

Teams are encouraged to be cautious in their use of such MECHANISMS when engaging in ROBOT to ROBOT MATCH play.



- G11. Stay out of other ROBOTS.** Initiating deliberate or damaging contact with an opponent ROBOT on or inside the vertical extension of its FRAME PERIMETER, including transitively through a POWER CUBE, is not allowed.

Violation: FOUL and YELLOW CARD.

High speed accidental collisions may occur during the MATCH and are expected. Generally, ROBOTS extend elements outside of the FRAME PERIMETER at their own risk.

A ROBOT with an element outside its FRAME PERIMETER may be penalized under G11 if it appears they are using that element to purposefully contact another ROBOT inside its FRAME PERIMETER.

- G12. Don't collude with your partners to shut down major parts of game play.** Two or more ROBOTS may not isolate or close off any major component of MATCH play, e.g. blocking the EXCHANGE, blocking both PORTALS simultaneously, shutting down all access to POWER CUBES, quarantining all opponents to a small area of the FIELD, etc.

Violation: YELLOW CARD for the ALLIANCE.

A single ROBOT blocking access to a particular area of the FIELD is not a violation of G12.

Two ROBOTS independently playing defense on two opposing ROBOTS is not a violation of this rule.

- G13. If an opponent's down, back off.** Fallen (i.e. tipped over) ROBOTS attempting to right themselves (either by themselves or with assistance from a partner ROBOT) have one ten (10) second grace period in which they may not be contacted by an opponent ROBOT. This protection lasts for either ten (10) seconds or until the protected ROBOT has completed the righting operation, whichever comes first.

Violation: FOUL. If intentional, YELLOW CARD.


- G14. There's a 5-count on pins.** ROBOTS may not pin an opponent's ROBOT for more than five (5) seconds. A ROBOT will be considered pinned until the ROBOTS have separated by at least six (6) feet. The pinning ROBOT(s) must then wait for at least three (3) seconds before attempting to pin the same ROBOT again. Pinning is transitive through other objects. If the pinned ROBOT chases the pinning ROBOT upon retreat, the pinning ROBOT will not be penalized, and the pin will be considered complete.

Violation: FOUL, plus an additional FOUL for every five (5) seconds in which the situation is not corrected. If extended, RED CARD.

There is no *FIRST*[®] Robotics Competition specific definition of pin, so a general definition applies; "to prevent or stop something from moving." As a result, contact is not required for pinning to occur. For example, a ROBOT parked right behind an opponent that is against its PORTAL wall could be considered pinning because the wall and the parked ROBOT prevent the opponent from moving.

Generally, pins that exceed fifteen (15) seconds are considered extended, regardless of a pinning ROBOT's mobility.

- G15. Opponent's EXCHANGE ZONE: no camping.** A ROBOT may not block their opponent's EXCHANGE ZONE for more than five (5) seconds. A ROBOT is considered "blocking" if any part of their ROBOT is breaking the plane of the EXCHANGE ZONE, and will continue to be



considered blocking until the ROBOT has moved at least six (6) feet from the EXCHANGE ZONE. If an opposing ROBOT attempts to stop the blocking ROBOT from moving the required distance to clear the block, the blocking ROBOT will not be penalized, and the block will be considered complete.

A ROBOT that is being pinned is exempt from G15. Once the pin is over, the 5-second count begins for this rule.

Violation: FOUL, plus an additional FOUL for every five (5) seconds in which the situation is not corrected. If extended and egregious, YELLOW CARD.

Generally, blocking that exceeds fifteen (15) seconds is considered extended and egregious, regardless of a blocking ROBOT's mobility, however circumstances vary and the assessment is open to REFEREE discretion.

- G16. The NULL TERRITORY is safe.** A ROBOT whose BUMPERS are breaking the plane of or completely contained by its NULL TERRITORY and not breaking the plane of the opponent's PLATFORM ZONE may not be contacted by an opposing ROBOT either directly or transitively through a POWER CUBE, regardless of who initiates the contact. A ROBOT forced into breaking the plane of an opponent's NULL TERRITORY resulting in it being wedged underneath the SCALE is not a violation of this rule.

Violation: TECH FOUL

TEAMS should note that they are putting themselves at great risk of TECH FOULS near their opponent's NULL TERRITORY.

- G17. Don't climb on each other until the end.** Unless during the ENDGAME, or attempting to right a fallen (i.e. tipped over) ALLIANCE partner, ROBOTS may neither fully nor partially strategically support the weight of partner ROBOTS.

Violation: TECH FOUL.

- G18. Don't mess with opponents in their PLATFORM ZONE.** During the ENDGAME ROBOTS may not contact an opponent ALLIANCE ROBOT completely contained within their ALLIANCE'S PLATFORM ZONE, either directly or transitively through a POWER CUBE, regardless of who initiates the contact.

Violation: The contacted opponent ROBOT, and all partner ROBOTS it's fully supporting, are considered to have CLIMBED at the end of the MATCH.

Teams are encouraged to consider rule [C07](#) when developing their strategies, such as attempting to draw violations of this rule.

7.4 FIELD Interaction

- G19. Be careful about what you interact with.** DRIVE TEAMS, ROBOTS, and OPERATOR CONSOLES are prohibited from the following actions with regards to interaction with ARCADE elements.

Items A and B exclude DRIVE TEAM interaction with FIELD elements in their areas.

Item C excludes use of the PLAYER STATION hook-and-loop tape, plugging in to the provided power outlet, and plugging the provided Ethernet cable in to the OPERATOR CONSOLE.

Items A-D exclude RUNGS and POWER CUBES.

- A. Grabbing



- B. Grasping
- C. Attaching to (including the use of hook-and-loop tape against the FIELD carpet)
- D. Hanging
- E. Deforming
- F. Becoming entangled
- G. Damaging

Violation: If prior to MATCH, and situation can be corrected quickly, it must be remedied before the MATCH will start. If during a MATCH, FOUL. If during a MATCH and extended or repeated, YELLOW CARD. If offense is via a ROBOT and the Head REFEREE determines that further damage is likely to occur, offending ROBOT will be 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.

POWER CUBES are expected to undergo a reasonable amount of wear and tear as they are handled by ROBOTS, such as scratching, marking, or small cracks. Gouging, tearing off pieces, routinely marking POWER CUBES, or causing large cracks that weaken rigidity are violations of this rule. Humans causing POWER CUBE wear and tear, e.g. slicing a POWER CUBE, are subject to a CARD per C01.

- G20. POWER CUBES: use as directed.** With the exception of placing a POWER CUBES on PLATES, ROBOTS may not deliberately use POWER CUBES in an attempt to ease or amplify the challenge associated with FIELD elements.

Violation: TECH FOUL per POWER CUBE. Repeated or egregious violations of this rule are likely to escalate rapidly to YELLOW or RED CARDS.

Examples include, but are not limited to:

- A. stacking POWER CUBES underneath a PLATE
- B. climbing on POWER CUBES
- C. using POWER CUBES to explicitly impede opponent mobility
- D. Placing a POWER CUBE on the top of the SCALE to block the opponent ALLIANCE RUNGS is an egregious violation of G20.

- G21. Keep POWER CUBES in bounds.** With the exception of feeding POWER CUBES through the lower opening of the EXCHANGE, ROBOTS may not intentionally eject POWER CUBES from the FIELD.

Violation: FOUL per POWER CUBE. Repeated violations of this rule are likely to escalate rapidly to YELLOW or RED CARDS.

- G22. One POWER CUBE per ROBOT.** ROBOTS may not control more than one (1) POWER CUBE at a time.

Violation: FOUL per additional POWER CUBE. Repeated violations of this rule are likely to escalate rapidly to YELLOW or RED CARDS



Moving or positioning a POWER CUBE to gain advantage is considered “control.” Examples include, but are not limited to:

- A. “carrying” (holding a POWER CUBE inside a ROBOT)
- B. “herding” (intentionally pushing a POWER CUBE to a desired location or direction)
- C. “trapping” (holding a POWER CUBE against a FIELD element in an attempt to shield or guard it)
- D. “launching” (shooting POWER CUBES into the air, kicking across the floor, or throwing in a forceful way)

Examples of interaction with POWER CUBES that are not “control” include, but are not limited to:

- E. “bulldozing” (inadvertent contact with POWER CUBES while in the path of the ROBOT moving about the FIELD)
- F. “deflecting” (being hit by a POWER CUBE that bounces into or off of a ROBOT)
- G. “plowing” (brief contact with a large quantity of POWER CUBES while attempting to break up a pile, or gain access to an area of the FIELD. Sustained contact or contact after the brief plowing action will be subject to “herding”)
- H. “nudging” (contact with a POWER CUBE that is on a PLATE while attempting to place additional POWER CUBES on that PLATE)

If a POWER CUBE becomes lodged in or on a ROBOT, it will be considered controlled by the ROBOT. It is important to design your ROBOT so that it is impossible to inadvertently or unintentionally control more than the allowed maximum.

- G23. POWER CUBES in opponent’s POWER CUBE ZONE – off limits.** ROBOTS may not remove POWER CUBES, or cause POWER CUBES to be removed, from the opponent’s POWER CUBE ZONE. A POWER CUBE has been removed from the POWER CUBE ZONE when it starts fully contained by the POWER CUBE ZONE, and ends completely outside of the POWER CUBE ZONE. A POWER CUBE removed through transitive contact with another POWER CUBE and/or an opponent ROBOT is a violation of this rule.

Violation: FOUL per POWER CUBE removed

- G24. POWER CUBES stay on PLATES.** Strategies aimed at removing POWER CUBES from PLATES are prohibited.

Violation: TECH FOUL per POWER CUBE removed

Examples of actions that violate this rule include, but are not limited to:

- using an arm to sweep POWER CUBES off a PLATE.
- launching a POWER CUBE at a stack on an opponent’s PLATE, causing the stack to topple.

- G25. PLATES are moved by POWER CUBES, not ROBOTS.** Except via the weight of placed POWER CUBES, ROBOTS may not directly or transitively cause or prevent the movement of PLATES. Movement, or prevention of movement, of PLATES because of momentary ROBOT action resulting in minimal PLATE displacement is not a violation of this rule. A ROBOT forced to

affect the position of a PLATE because of contact by an opponent ROBOT either directly or transitively through a POWER CUBE or other ROBOT (e.g. a ROBOT wedged underneath the SCALE by the opposing ALLIANCE either intentionally or accidentally) is not a violation of this rule.

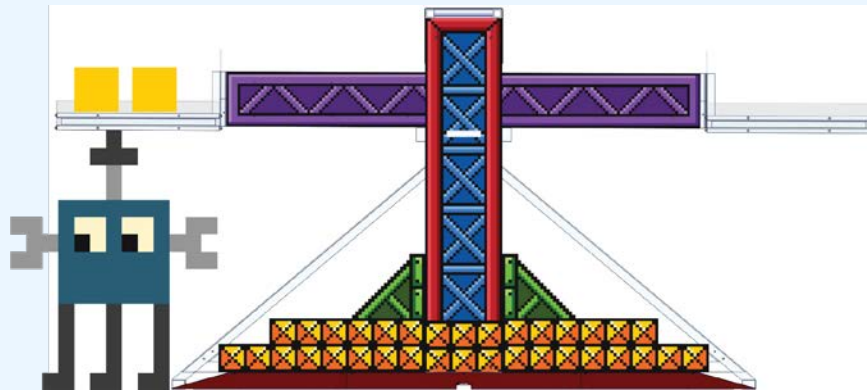
Violation: FOUL per instance plus an additional TECH FOUL for every five (5) seconds in which the situation is not corrected. Repeated or extended violations of this rule are likely to escalate rapidly to YELLOW or RED CARDS.

The intent of G25 is to make it clear that PLATES are to move solely because of POWER CUBE weight and not because of a ROBOT deliberately trying to move PLATES (either by using its own manipulator, or a POWER CUBE as an extension of the ROBOT, to push or hold a PLATE).

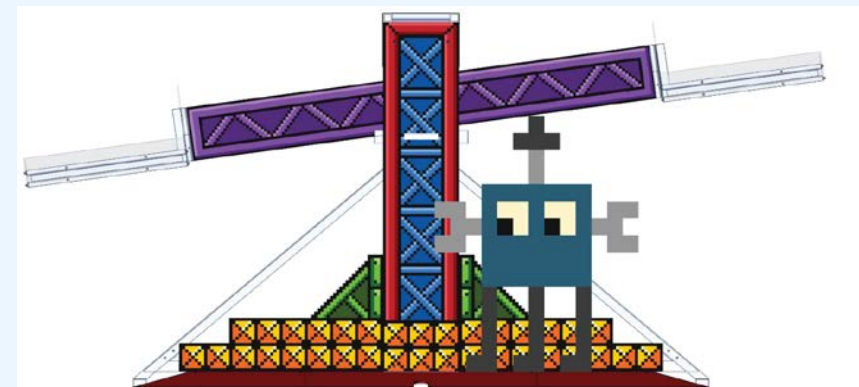
The “momentary” and “minimal” language in G25 is subjective but necessary because ROBOTS may cause PLATE movement (or prevent PLATE movement) as they place POWER CUBES and bump PLATES, get hit, etc.

Generally, “momentary” means near instantaneous, or in other words, contact for less than approximately one (1) second and “minimal” means a displacement of fewer than approximately three (3) in. However, REFEREES are not expected to measure, and be accountable to, real-time PLATE displacement or precise timing from their vantage points.

Example 1: A ROBOT may not hold the SCALE PLATE in a “balanced” state.



Example 2: A ROBOT may not hold a plate up.



7.5 AUTO Period Rules

- A01. Behind the lines.** During AUTO, DRIVE TEAM members in ALLIANCE STATIONS and PORTALS may not contact anything in front of the STARTING LINES, unless for personal or equipment safety.

Violation: FOUL per item contacted.

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

One example of an exception for equipment safety is if an OPERATOR CONSOLE starts to slide from, or has already fallen off of, the PLAYER 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.

- A02. During AUTO, 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 for ROBOT safety.

Violation: FOUL and YELLOW CARD.

Making an adjustment to the OPERATOR CONSOLE or interacting with the ROBOT after the assignment of PLATE colors is a violation of this rule. Teams can use the information from the FMS to determine PLATE color assignments using preprogrammed instructions (see Section 3.10).

- A03. Disconnect or set down controllers.** During AUTO, any control devices worn or held by the DRIVERS and/or HUMAN PLAYERS must be disconnected from the OPERATOR CONSOLE.

Violation: FOUL.

For the purposes of the *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.

- A04. Stay out of your opponent's side of the FIELD.** During AUTO, no part of a ROBOT'S BUMPERS may pass from the NULL TERRITORY to the opponent's side of the FIELD.

Violation: FOUL. If contact is made with an opponent ROBOT in their side of the FIELD (either direct contact or transitive contact through a POWER CUBE), TECH FOUL. Violations of this rule are likely to escalate rapidly to YELLOW or RED CARDS.

- A05. POWER CUBES are off-limits.** During AUTO, DRIVE TEAMS may not contact any POWER CUBES, unless for personal safety.

Violation: FOUL per POWER CUBE.

7.6 Human Action Rules

- H01. COACHES and other Teams: hands off the controls.** A ROBOT shall be operated solely by the DRIVERS and/or HUMAN PLAYERS of that Team.

Violation: Offending ROBOT will be DISABLED.

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



H02. Wireless devices not allowed. During a MATCH, DRIVE TEAMS may not use electronic devices which have the capability of receiving communications from persons outside of the ARCADE (e.g. cell phones or wearable technology).

Violation: YELLOW CARD.

H03. Don't trick the sensors. Teams may not interfere with any automated scoring hardware.

Violation: RED CARD for the ALLIANCE.

A POWER CUBE must rest on any of its six (6) faces when placed within a column of the VAULT. Failure to do so may result in a violation of H03.

H04. By invitation only. Only DRIVE TEAMS for the current MATCH are allowed in their respective ALLIANCE STATIONS or PORTALS.

Violation: MATCH will not start until the situation is corrected.

H05. Identify yourself. DRIVE TEAMS must wear proper identification while in the ARCADE. Proper identification consists of:

- A. All DRIVE TEAM members wearing their designated buttons above the waist in a clearly visible location at all times while in the ARCADE.
 - i. The COACH wearing the "Coach" labeled DRIVE TEAM button
 - ii. The DRIVERS and HUMAN PLAYERS each wearing a DRIVE TEAM button
 - iii. The TECHNICIAN wearing the "Technician" labeled DRIVE TEAM button
- B. During a Playoff MATCH, the ALLIANCE CAPTAIN clearly displaying the designated ALLIANCE CAPTAIN identifier (e.g. hat or armband).

Violation: MATCH will not start until the situation is corrected. Those not displaying identification must leave the ARCADE.

H06. No wandering. DRIVE TEAM members may not contact anything outside the zone in which they started the MATCH (e.g. the ALLIANCE STATION, PORTAL, designated area for the TECHNICIAN) during the MATCH. Exceptions will be granted for inadvertent, momentary, and inconsequential infractions and in cases concerning safety.

Violation: FOUL. If strategic, RED CARD.

H07. You can't bring/use anything you want. The only equipment that may be brought to the ARCADE and used by DRIVE TEAMS during a MATCH is listed below. Regardless if equipment fits criteria below, it may not be employed in a way that breaks any other rules, introduces a safety hazard (e.g. a step stool or large signaling device in the confined space of the PORTAL are safety concerns), blocks visibility for FIELD STAFF or audience members, or jams or interferes with the remote sensing capabilities of another Team, or the FIELD, including vision systems, acoustic range finders, sonars, infrared proximity detectors, etc. (e.g. including imagery that, to a reasonably astute observer, mimics the Vision Targets used on 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,



- G. non-powered Personal Protective Equipment (examples include, but aren't limited to, gloves, eye protection, and hearing protection)

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

- i. do not connect or attach to the OPERATOR CONSOLE
- ii. do not connect or attach to the FIELD or ARCADE
- iii. do not connect or attach to another ALLIANCE member (other than items in category G)
- iv. do not communicate with anything or anyone outside of the ARCADE.
- v. do not communicate with the TECHNICIAN
- vi. do not include any form of enabled wireless electronic communication (e.g. radios, walkie-talkies, cell phones, Bluetooth communications, Wi-Fi, etc.)
- vii. 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 part B to communicate with the ROBOT (provided A02 is not violated).

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

- H08. **Don't abuse ARCADE access.** Team members (except DRIVERS, HUMAN PLAYERS, and COACHES) who are granted access to restricted areas in and around the ARCADE (e.g. via TECHNICIAN button, event issued Media badges, etc.) may not coach 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 help the team prepare the ROBOT so it can perform at its full potential during a MATCH. The TECHNICIAN is not an additional COACH, DRIVER or HUMAN PLAYER.

- H09. **Don't mess with the POWER CUBES.** Teams may not modify POWER CUBES in any way.

Violation: RED CARD.

Opening the zipper pockets on a POWER CUBE to add additional weight, or cracking / bending a POWER CUBE, are examples of violations.

- H10. **It doesn't support you.** Teams may not sit or stand on POWER CUBES.

Violation: Behavior will be discussed with Team or individual. Violations of this rule are likely to escalate rapidly to YELLOW or RED CARDS.

- H11. **COACHES, no POWER CUBES.** During a MATCH, COACHES may not touch POWER CUBES unless for safety purposes.

Violation: TECH FOUL per instance.

- H12. **COACHES, stay clear of the VAULT.** During a MATCH, COACHES may not touch any component of the VAULT (including the buttons) unless for safety purposes.



Violation: TECH FOUL per instance

H13. POWER CUBES only enter the FIELD as designated. DRIVE TEAMS may only deliberately cause POWER CUBES to leave an ALLIANCE STATION or PORTAL

- A. during TELEOP,
- B. by a HUMAN PLAYER or DRIVER, and
- C. through a PORTAL wall or the RETURN

Violation: FOUL per POWER CUBE. If strategic, RED CARD.

An example of a strategic violation of this rule would be transferring a POWER CUBE from an ALLIANCE'S PORTAL to the opponent's ALLIANCE STATION in order for it to be used in the opponent's VAULT.

Note that H13 prohibits returning a POWER CUBE to the FIELD through the lower opening on the EXCHANGE wall, only the upper (RETURN) opening.

H14. POWER CUBES stay in the VAULT. POWER CUBES may not be removed from the VAULT.

Violation: FOUL. If strategic (i.e. re-used in a different column within the VAULT or introduced to the FIELD), RED CARD.

A POWER CUBE is considered in the VAULT when the LEDs in the corresponding column indicate its presence.

