

# Team Update 04

## GENERAL

- **Control System Update:** An optional NI Update Suite update (2019.1.0) has been released. This update:
  - contains a new roboRIO image (v13) that repairs an issue in interfacing with the Analog Devices IMU and Gyro boards in all languages (so, updating to this new image is needed for teams working with these sensors)
  - fixes a Driver Station issue with launching Smartdashboard and Shuffleboard automatically.
- **Q&A Updates:** [Q101](#) and [Q146](#) have been revised to reflect the revision to G4 described below. Please accept our apologies for any confusion.

## MANUAL

### SECTION 5.4

Table 5.2 DESTINATION: DEEP SPACE rule violations

Penalty	Description
<b>FOUL</b>	a credit of three (3) points towards the opponent's total score
<b>TECH FOUL</b>	a credit of ten (10) points toward the opponent's total score
<b>YELLOW CARD</b>	a warning issued by the Head REFEREE for egregious ROBOT or team member behavior or rule violations. A subsequent YELLOW CARD within the same tournament phase will lead to a RED CARD.
<b>RED CARD</b>	a penalty assessed for egregious ROBOT or team member behavior or rule violations which results in a team being DISQUALIFIED for the MATCH.
<b>DISABLED</b>	ROBOT is commanded to deactivate all outputs, rendering the ROBOT inoperable for the remainder of the MATCH.
<b>DISQUALIFIED</b>	the state of a team in which they receive zero (0) MATCH points and zero (0) Ranking Points in a Qualification MATCH or causes their ALLIANCE to receive zero (0) MATCH points in a Playoff MATCH

### SECTION 8.2.2

- G4. One GAME PIECE at a time.** ROBOTS may not have extended or repeated control, i.e. exercise extended or repeated influence, of more than one (1) GAME PIECE at a time, either directly or transitively through other objects. A GAME PIECE that is at least partially supported by a ROCKET or CARGO SHIP is not considered controlled by the ROBOT.

*Violation: FOUL per additional GAME PIECE. If greater than two (2) at a time, YELLOW CARD. If ROBOT releases all GAME PIECES, YELLOW CARD. If strategic, YELLOW CARD.*

If a GAME PIECE becomes lodged in or on a ROBOT, it is 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.

For Example, 1: if a ROBOT controls three (3) two (2) GAME PIECES and then releases them all in a way that both GAME PIECES are in scoring position, the team is issued two (2) FOULS (per part 1 of the violation), a YELLOW CARD for controlling more than two (2) GAME PIECES (per part 2 of the violation), and a second YELLOW CARD for releasing them all during the MATCH (per part 3 of the violation), thus earning a RED YELLOW CARD.

Example 2: If a CARGO is stuck on a ROBOT and that ROBOT picks up a HATCH PANEL, they are issued a FOUL per G4. If they place that HATCH PANEL and then pick up another HATCH PANEL, they are issued another FOUL. Continuing game play in this manner (i.e. not taking advantage of carrying more than one (1) GAME PIECE) would generally not be considered a strategic violation.



Example 3: A ROBOT controlling one (1) GAME PIECE that briefly contacts several CARGO in close proximity causing them to scatter would generally not be considered in violation of G4.

## SECTION 10.5

### R31.

- C. use a stacked pair of approximately 2½ in. (nominal) round, petal, or hex “pool noodles” (solid or hollow) as the BUMPER cushion material (see Figure 10-6). All pool noodles used in a BUMPER set (e.g. Red set of BUMPERS) may not be modified (with the exception of cutting to length or beveling ends) or deformed and must be the same diameter, cross-section, and density (e.g. all round hollow or all hex solid). Cushion material may extend up to 2½ in. (~63 mm) beyond the end of the plywood (see Figure 10-7). To assist in applying the fabric covering, soft fasteners may be used to attach the pool noodles to the wood backing, so long as the cross section in Figure 10-6 is not significantly altered (e.g. tape compressing the pool noodles).

