

GENERAL

- General copyright release has been added to the end of each Admin and Game Manual Section:

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- A recommended update to the C++ and Java Eclipse plugins has been released. This update fixes a number of WPILib, Eclipse Plugin, and RobotBuilder bugs discovered by teams after Kickoff which may cause program crashes. For complete details, see the [changelog page here](#). For instructions on updating the plugins, see the steps near the bottom of [this article](#).

ADMIN MANUAL

No changes beyond the added copyright release described above.

GAME MANUAL

Field Drawings

- GE-16030: Removed additional instance of this drawing from the package
- GE-16045_REV_A: Updated the drawing to specify part numbers for the springs in the Drawbridge Assembly
- GE-16155: Added drawing to package
- GE-16226_REV_A: Updated the material note from polycarbonate to Aluminum
- GE-16227_REV_A: Updated the material note from polycarbonate to Aluminum
- GE-16228_REV_A: Updated the material note from polycarbonate to Aluminum
- GE-16229: Added drawing to package
- GE-16230: Added drawing to package
- TE-16045_REV_B: Updated the drawing to specify part numbers for the springs in the Drawbridge Assembly

Section 1, Figure 1-1

- Images 1-1 has been updated to represent the Flag Flipper as depicted in Drawing GE-16215.

Section 2 (throughout)

- Images 2-1, 2, 3, 4, 22, 23, 24, and 36 have been updated to represent the Flag Flipper as depicted in Drawing GE-16215.

Section 2.1 Zones and Marking

- OUTER WORKS: an infinitely tall volume bordered by, but not including, the GUARDRAIL, the SECRET PASSAGE, and the bottom edges of its PLATFORM Ramps ~~COURTYARD and the NEUTRAL ZONE~~. The OUTER WORKS is positioned 7 ft. 2 in. from the MIDLINE.

Section 2.2.2 OUTER WORKS

- The OUTER WORKS is an infinitely tall volume bordered by, but not including, the GUARDRAIL, the SECRET PASSAGE, and the COURTYARD and the NEUTRAL ZONE bottom edges of its PLATFORM Ramps. The OUTER WORKS is positioned 7ft. 2 in. from the MIDLINE. It hosts ~~consists of~~ a series of five (5) DEFENSES, five (5) PLATFORMS, and five (5) Shields arranged in a line across the FIELD and is designed to impede the passage of ROBOTS and BOULDERS in to the COURTYARD.

Section 2.3 BOULDERS

- Single balls and ~~A~~ six (6) packs of rainbow colored balls may be purchased at gophersport.com (6-pack Item Number: 47-121, Single ball Item Number: 99-634).

Section 3.4.5 ROBOT Rules

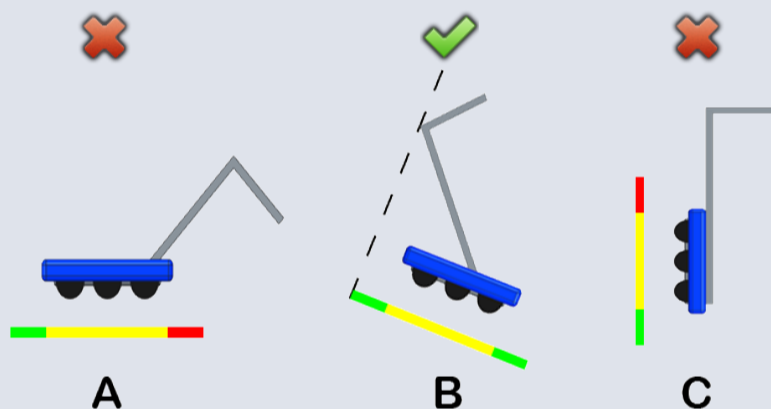
- **G18** ROBOTS may not extend more than 15 in. beyond their FRAME PERIMETER.

Violation: FOUL. If repeated, offending ROBOT will be DISABLED.

Examples of compliance and non-compliance of G18 are shown in Figure 3-2.

Yellow bars represent the measurement 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 been exceeded (violating G18). ROBOTS A and C violate G18, whereas ROBOT B does not.

Figure 3-2: Examples of G18 compliance and non-compliance.



Section 3.4.7 ROBOT Gameplay

- **G25** D. blocking more than one of the opponent's HUMAN PLAYER STATION openings while not contacting the carpet in the opponent's SECRET PASSAGE
- **G28** During the final twenty (20) seconds of TELEOP, ROBOTS in their COURTYARD may not contact an opponent ROBOT, regardless of who initiates the contact.

Section 3.4.9 BOULDER Rules

- **G40-1** A ROBOT may not hold a Low Bar flap open for the purpose of allowing a DRIVE TEAM member to transfer BOULDERS into their opponent's COURTYARD.

Violation: TECH FOUL per BOULDER

Section 3.4.8 Human Actions

- **G34** No more than six (6) BOULDERS may remain in a CASTLE ~~at any time~~ during TELEOP. If the BOULDER count ever exceeds six (6), excess BOULDERS must be introduced to the FIELD immediately.

Section 4.9 Power Distribution

- **R52 A. v.** Talon SRX Motor Controller (P/N: 217-8080, am-2854, 14-838288),
- **R52 A. viii.** Victor SP Motor Controller (P/N: 217-9090, am-2855, 14-868380)

Section 4.11 Pneumatic System

- **R77 J.** Pneumatic cylinders, pneumatic linear actuators, and rotary actuators,

Section 5.5.9 Special Equipment Rules

- The language was assigned a “T” number as it’s actually a rule, **T26-1**, and edited to include Items B, C, E and F also apply to the DRIVE TEAM Member in the SPY BOX.

Violation: MATCH will not start until situation remedied.

Section 6 Glossary

- OUTER WORKS: an infinitely tall volume bordered by, but not including, the GUARDRAIL, the SECRET PASSAGE, and the bottom edges of its PLATFORM Ramps. ~~2 in. white gaffers tape (The OUTER WORKS includes the white gaffers tape, but does not include the GUARDRAIL or SECRET PASSAGE).~~ It hosts consists of a series of five (5) DEFENSES, five (5) PLATFORMS, and five (5) Shields arranged in a line across the FIELD and is designed to impeded the passage of ROBOTS and BOULDERS in to the COURTYARDS.