

Team Update 02

GENERAL

- Drawing Updates:
 - The Field Drawings – season specific drawing package has been updated with the following changes:
 - GE-20150 has been updated to correct the referenced manufacturer part number.
- The Kit Of Parts Checklist for the Black Tote has been updated:
 - Color Swatch for Control Panel is now available from TurnOne Graphics: www.turnonegraphics.com
- In addition to formatting and aesthetic edits to the Playing Field, content has been updated as follows:
 - [SOLIDWORKS' Visualize tool](#) now includes a link to a walkthrough video (and the 4k hotspot video has been deleted)
 - Added content to [SOLIDWORKS' SimInsights tool](#) describing how to import your robot in to the VR experience

EVENT MANUAL

We renumbered the rules in the Event Manual, as follows, because there were several references to these rule numbers in other documentation:

- E15 was changed to E14-A.
- All rules after E15 are now 1 less (e.g. E16 is now E15).

E16. No wireless communication. Teams may not set up their own 802.11a/b/g/n/ac/ax (2.4GHz or 5GHz) wireless communication (e.g access points or ad-hoc networks) in the venue

A wireless hot spot created by a cellular device, camera, smart TV, etc. is considered an access point.

Some smart TVs have access points enabled by factory default. Please make sure that functionality is disabled for any TVs brought to the event.

GAME AND SEASON MANUAL

Section 4.4.3 CONTROL PANEL Scoring

CONTROL PANELS ACTIVATE SHIELD GENERATOR stages two (2) and three (3) as described in CONTROL PANEL. CONTROL PANEL requirements (i.e. ROTATION CONTROL and POSITION CONTROL) are not evaluated until the respective stage is at CAPACITY. A stage may be ACTIVATED once it reaches CAPACITY, and a stage must be ACTIVATED before the next stage can begin charging.

Section 7.2.4 ROBOT Restrictions

G16. Keep your bumpers low. BUMPERS must be in the BUMPER ZONE (see R18) during the MATCH, unless during the **ENDGAME** and

- A. a ROBOT's BUMPERS are intersecting its RENDEZVOUS POINT or
- B. a ROBOT is supported by a partner ROBOT whose BUMPERS are intersecting its RENDEZVOUS POINT.

Violation: FOUL. If strategic, RED CARD.

An example of a strategic violation of G16 includes, but is not limited to, hitting other ROBOTS with the ROBOT frame.

9.6 Motor & Actuator

R28. The integral mechanical and electrical system of any motor must not be modified. Motors, servos, and electric solenoids used on the ROBOT shall not be modified in any way, except as follows:

- A. The mounting brackets and/or output shaft/interface may be modified to facilitate the physical connection of the motor to the ROBOT and actuated part.
- B. The electrical input leads may be trimmed to length as necessary and connectors or splices to additional wiring may be added.
- C. The locking pins on the window motors (P/N:262100-3030 and 262100-3040) may be removed.
- D. The connector housings on the KOP Automotive motors listed in Table 9-1 may be modified to facilitate lead connections.
- E. Servos may be modified as specified by the manufacturer (e.g re-programming or modification for continuous rotation).
- F. The wiring harness of the Nidec Dynamo BLDC Motor may be modified as document by FIRST in the "Nidec Dynamo BLDC Motor with Controller" article.
- G. Minimal labeling applied to indicate device purpose, connectivity, functional performance, etc.
- H. Any number of #10-32 plug screws may be removed from the Falcon 500.

The intent of this rule is to allow teams to modify mounting tabs and the like, not to gain a weight reduction by potentially compromising the structural integrity of any motor.

Section 10 Inspection and Eligibility Rules

I1. It's your team's ROBOT. The ROBOT and its MAJOR MECHANISMS must be built by the FIRST Robotics Competition team.

A MAJOR MECHANISM is a group of COMPONENTS and/or MECHANISMS assembled together to address at least one (1) game challenge: robot movement, game piece control, field element manipulation, or performance of a scorable task without the assistance of another ROBOT.

Section 12 Glossary

MAJOR MECHANISM

a group of COMPONENTS and/or MECHANISMS assembled together to address at least one (1) game challenge: robot movement game piece control, field element manipulation, or performance of a scorable task without the assistance of another ROBOT.