

Team Update 05

GENERAL

No updates.

GAME MANUAL

Section 5.9.2 AprilTags

All markers are from the 16h5 tag family, IDs 1-8. AprilTags are mounted to and centered on a 10½ in. (~27 cm) square piece of polycarbonate. The 8 in. (~20 cm) tag is centered on the polycarbonate panel, such that the bottom of the central black square region is 2¼ in. (~6 cm) from the bottom of the panel, and the bottom of the 8 in. (~20 cm.) tag is located 1 ¼ in. (~3 cm) from the bottom of the panel as shown in Figure 5-32. Each marker has an identifying text label.

AprilTags are likely to experience wear and marking during MATCHES and are repaired with gaffers tape.

Section 8.3 Before/After the MATCH

H303 *You can't bring/use anything you want. The only equipment that may be brought to the ARENA and used by DRIVE TEAMS during a MATCH is listed below. Regardless of if equipment fits criteria below, it may not be employed in a way that breaks any other rules, introduces a safety hazard, blocks visibility for FIELD STAFF or audience members, or jams or interferes with the remote sensing capabilities of another team or 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, and communicating strategy within the same designated area (e.g. ALLIANCE AREA),
- F. devices used solely to record gameplay, and
- G. non-powered Personal Protective Equipment (examples include, but aren't limited to, gloves, eye protection, and hearing protection)

Section 9.4 BUMPER Rules

Please accept our apologies for the edit to the blue box in R408 rolled out via [Team Update 04](#). The change had unintended consequences which we regret. This edit reverses the change and errs toward a more permissive interpretation of cloth/fabric (which includes pleather).

R408 *BUMPER construction. BUMPERS must be constructed as follows (see Figure 9-7):

- D. be covered with a rugged, smooth cloth with no additional coating applied by the team except for BUMPER markings permitted per [R405](#) (multiple layers of cloth and seams are permitted if needed to accommodate [R405](#) and/or [R406](#), provided the cross section in Figure 9-7 is not significantly altered).

Silk and bedding are not considered rugged cloths, however 1000D Cordura is. Tape (e.g. gaffer's tape) matching the BUMPER color is allowed to patch small holes on a temporary basis.

It is expected that there may be multiple layers of cloth as fabric is folded to accommodate the corners and seams of BUMPERS.

~~Fabrics laminated with plastic (e.g. pleather) are not compliant with this rule.~~

The cloth must completely enclose all exterior surfaces of the wood and pool noodle material when the BUMPER is installed on the ROBOT. The fabric covering the BUMPERS must be solid in color.