

Team Update 21

GENERAL

Last One: Team Update 21 is the final Team Update of the 2022 RAPID REACT presented by The Boeing Company season.

Q&A: The official 2022 Q&A will close at noon (Eastern) on Tuesday, April 19, 2022.

SECTION 7.2 ROBOT TO ROBOT INTERACTION

G202 ***There's a 5-count on PINS.** ROBOTS may not PIN an opponent's ROBOT for more than 5 seconds. A ROBOT is PINNING if it is preventing the movement of an opponent ROBOT by contact, either direct or transitive (such as against a FIELD element). A ROBOT is considered PINNED until the ROBOTS have separated by at least 6 ft. (~183 cm) from each other, either ROBOT has moved 6 ft. from where the PIN initiated, or the PINNING ROBOT gets PINNED, whichever comes first. The PINNING ROBOT(S) must then wait for at least 3 seconds before attempting to PIN the same ROBOT again.

Violation: FOUL, plus an additional TECH FOUL for every 5 seconds in which the situation is not corrected.

A team's desired direction of travel is not a consideration when determining if a ROBOT is PINNED.

If the PINNING ROBOT gets PINNED, the original PIN count terminates.

Otherwise, if a ROBOT re-PINS the same ROBOT before the 3 seconds referenced in the last sentence of this rule, the REFEREE'S count resumes from the initial PIN (versus starting at 0).

SECTION 8.2 REFEREE INTERACTION

H201 ***Egregious or exceptional violations.** Egregious behavior beyond what is listed in the rules or subsequent violations of any rule or procedure during the event is prohibited.

In addition to rule violations explicitly listed in this manual and witnessed by a REFEREE, the Head REFEREE may assign a YELLOW or RED CARD for egregious ROBOT actions or team member behavior at any time during the event. This includes violations of the event rules found on the [FIRST® Robotics Competition District & Regional Events page](#).

Please see [Section 11.2.1 YELLOW and RED CARDS](#) for additional detail.

Violation: The Head REFEREE may assign a YELLOW or a RED CARD.

The intent of this rule is to provide the Head REFEREES the flexibility necessary to keep the event running smoothly, as well as keep the safety of all the participants as the highest priority. There are certain behaviors that automatically result in a YELLOW or RED CARD because we believe this behavior puts our community at risk. Those behaviors include, but are not limited to the list below:

- a. inappropriate behavior as outlined in the blue box of H101,
- b. jumping over the guardrail,
- c. behaviors listed in the blue box in H103,
- d. PINNING in excess of 15 seconds, and
- e. climbing on the HUB, and

- f. exploiting the 5-second scoring assessment period after a MATCH to avoid rule violations (e.g. triggering an over-extension that enables HANGAR points or using a ROBOT'S residual energy to impact an opponent ROBOT on their HANGAR).

The Head REFEREE may assign a YELLOW or RED CARD for a single instance of a rule violation such as the examples given in items a-e above, or for multiple instances of any single rule violation. Teams should be aware that any rule in this manual could escalate to a YELLOW or RED CARD. The Head REFEREE has final authority on all rules and violations at an event.

SECTION 9.6 POWER DISTRIBUTION

R609 *Connect main power safely. The 1 ROBOT battery, a single pair of Anderson Power Products (or APP) 2-pole SB type connectors, the 1 main 120-amp (120A) surface mount circuit breaker (Cooper Bussman P/N CB185-120, CB185F-120, CB285-120, CB285F-120, CB285120F or Optifuse P/N 153120, 253120), and the 1 power distribution device (CTR Electronics Power Distribution Panel, PDP, P/N am-2856, 217-4244, 14-806880 or REV Robotics Power Distribution Hub, PDH, P/N REV-11-1850) shall be connected with 6 AWG (7 SWG or 16 mm²) copper wire or larger, with no additional devices or modifications (with the exception of monitoring circuitry permitted by R625), as shown in Figure 9-10.