

Preparing for Competition

Nov 15, 2019

Thank you to the University of Victoria for hosting the FTC Workshop series!



Today's Plan

- Inspections
 - Wiring
- Matches
- Rules
- Q&A

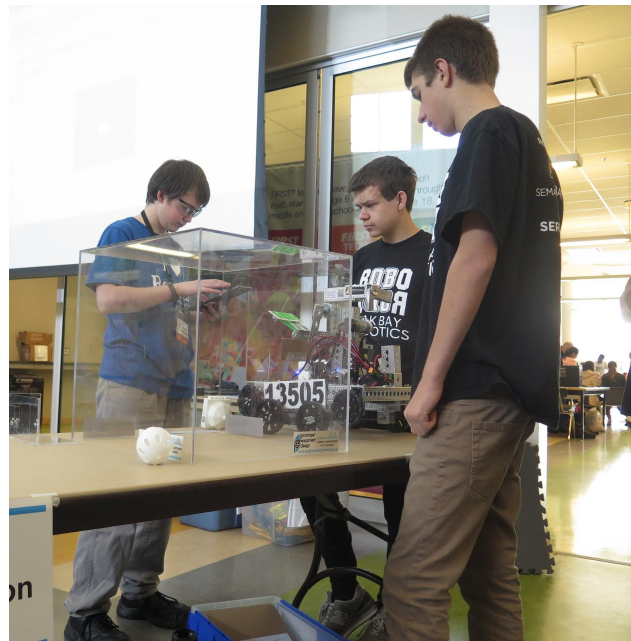
Inspection

Robot Inspection

- Team Robot
- 1-2 team members who know about the robot
- Team Scoring Element - Capstone
- Alliance Markers

Field Inspection

- Team Robot
- Drive Team Members
- Driver Station (phones and gamepads)



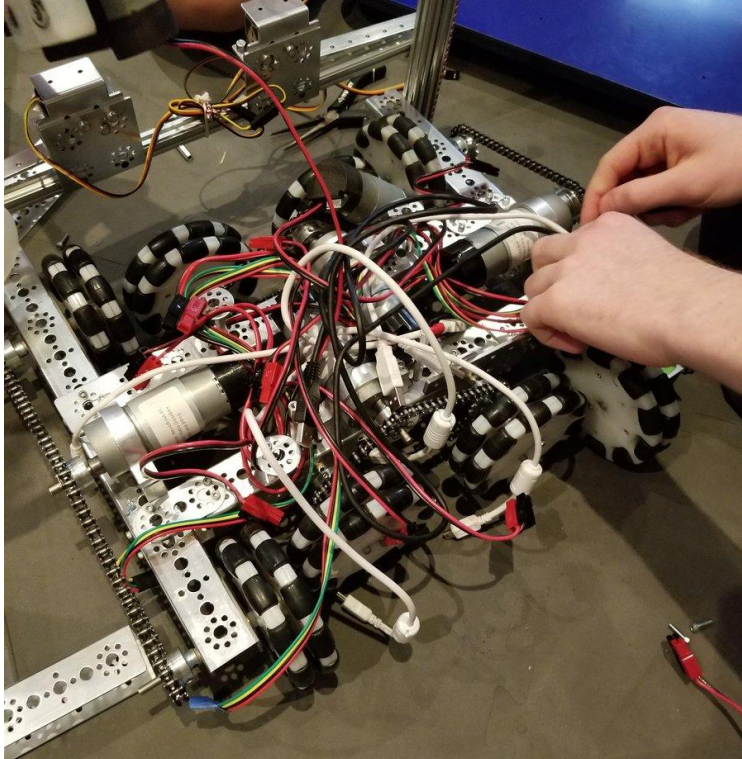
Robot Inspection

Robot Inspection

- Sizing cube - All starting configurations
 - Robot weight
 - Labels
 - Team Numbers (2 sides)
Arial Font, Bold, 250 point
 - Robot Motion Warning Label
 - Power Switch Label
 - Alliance Markers
- https://www.firstinspires.org/sites/default/files/uploads/resource_library/ftc/alliance-marker-template.pdf
- Team Scoring Element



Wiring




Tips and Tricks for Wiring

Intro to Robot Wiring


Power Switch - Modern Robotics

- Must use additional switch (not just switch on Core Power Distribution Module)
- Replace the connectors on tinned wire



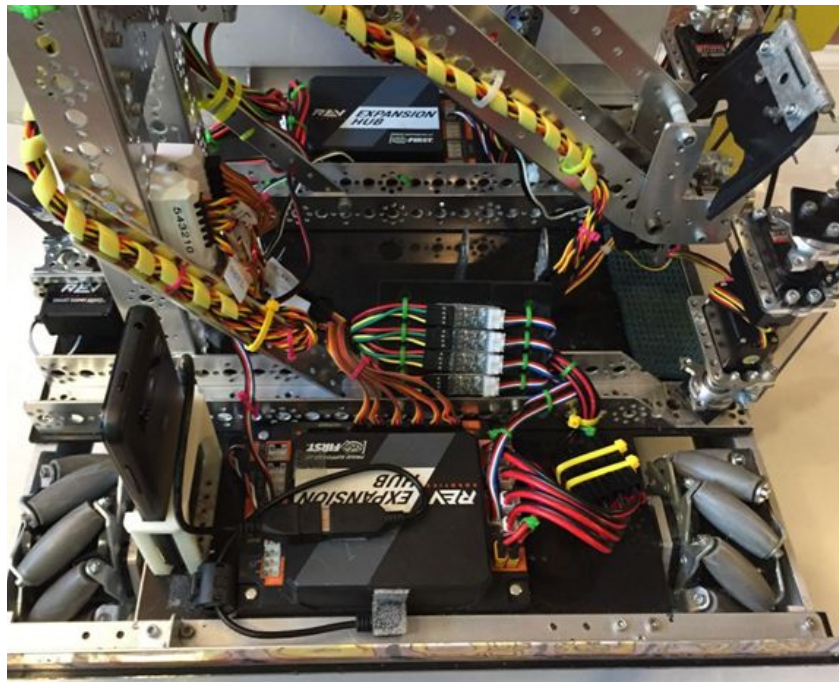
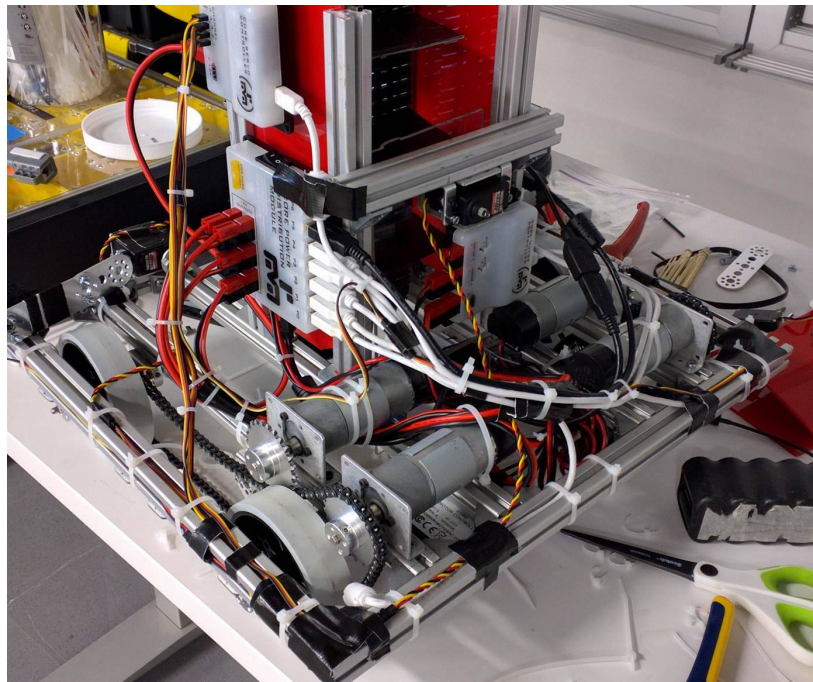
FIRST
TECH
CHALLENGE

FIRST FOR INSPIRATION & INNOVATION IN SCIENCE & TECHNOLOGY



<https://www.youtube.com/watch?v=I3YybRexVGc> 12:50-17:20

Wiring



Field Inspection

Pit-Inspection

- Driver Stations (Android device)
- Use the self inspection
- DS and RC apps must be version 5.2 or higher and they must apps have the same version
- Confirm phones are named with team numbers

Field Inspection

- Match flow
- Robot Operations



Match Routine

- Queuing
- Alliance markers
- Setup quickly
- Randomization - no touching controllers!
- Safety: glasses, no stepping over the bridges, hands out of the field during matches (except human players)
- Review scores with refs, wait for reset to take robots.



Rules

- READ THE GAME RULES!!
- Game Manual Part 1
 - 4.0 The Tournament – Definitions and Rules
 - 7.0 The Robot
 - 8.0 Robot Inspection
- Game Manual Part 2
- Forum Answered Questions



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Game Manual Part 2



<https://www.firstinspires.org/resource-library/ftc/game-and-season-info>

Forum Question 1

October 31 2019 Originally posted by FTC12090

Subject: <GS2> Autonomous Period Interference - Blocking the opposing Alliance's Skybridge

<GS2> says that robots "may not interfere with the opposing Alliance's Scoring attempts."

Question: If an autonomous routine drives across the field through the stones it would effectively block the alliance bridge requiring a robot to drive around or under the center bridge. It seems this would violate GS2 for a 20 point penalty, but that would be a very good point trade against an auto that does more than 20 points. Is there any other penalties that can be incurred by just driving straight across the field and providing very little access to the alliance bridge and potentially hitting the opponent robot?

Forum Answer 1

October 31 2019

Answer: The following rule violations apply to this scenario if the action interferes with the opposing Alliance's Scoring attempts:

- a) for interfering with the opposing Alliance's Scoring attempt via Blocking Access to their Skybridge.
- b) violation if the Stones/Skystones in the opposing Alliance's Quarry are contacted/disrupted.
- c) for intentionally Blocking the opposing Alliance's Robot.
- d) for a flagrant and/or intentional rule violation. See post #8 in the "Game Play - All Match Periods" answer thread for additional details.

Multiple violations of the above rules will occur as appropriate, if the Scoring attempts of both of the opposing Alliance Robots are affected.

Forum Question 2

September 23 2019 Originally posted by FTC6155

Subject: Section 4.5.4 End Game - Putting a Capstone on a Stone before Placing the Stone on a Skyscraper or Foundation

Question: Is it legal to take a preloaded capstone (already on the robot) and the robot loads it onto a stone at end game, before placing that stone on a skyscraper or the foundation?

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Question: Is it legal to take a preloaded capstone (already on the robot) and the robot loads it onto a stone at end game, before placing that stone on a skyscraper or the foundation?

Answer: Yes

Forum Question 3

September 18 2019 Originally posted by FTC10131

Subject: Blocking Access to a Depot - Questions about three Autonomous Period scenarios.

Rule GS6 states in part: "Robots may not be In or Block access to the opposing Alliance's Depot. Inconsequential violations of this rule during the Autonomous Period will be handled per rule G30."

Just to clarify:

Question 1: May a robot travel purposely and repeatedly through their opponent's depot to get skystones and stones during the autonomous period without penalty if they end the autonomous period not in the depot and do not violate other rules (e.g., interfering with opponent scoring, etc.)?

Answer 1: Yes

Forum Question 3

September 18 2019 Originally posted by FTC10131

Question 2: If a robot has unexpected behavior during the autonomous period and ends the autonomous period in the opponent's depot, but immediately leaves the depot when the driver controlled period starts, will they incur a penalty?

Answer 2: No

Question 3: If a robot during the autonomous period accidentally or purposely pushes one or more stones into their opponent's depot, will any penalty be incurred? Note that it is possible that this type of activity could have strategic value (e.g., putting a knocked-over stone in the depot corner if a team knows their opponent's robot cannot pick up stones in a corner or stones that are knocked over, etc.)?

Answer 3: Rule Illegal Usage of Game Elements may come into play at the discretion of the Referee. A single Stone or Skystone In the Depot that is near the taped portion of the Depot area is unlikely to be penalized because it is reasonable to assume that any Robot is capable of moving the Scoring Element out of the way. At the other extreme, several Stones or Skystones pushed against the Playing Field Wall corner of the Depot is more likely to be viewed by the Referee as violating rule.

League Events

Victoria League One - November 23 Oak Bay High Secondary, Victoria

Vancouver League One – November 30 Kwantlen Park Secondary, Surrey

Questions about Preparing for Competition?

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