

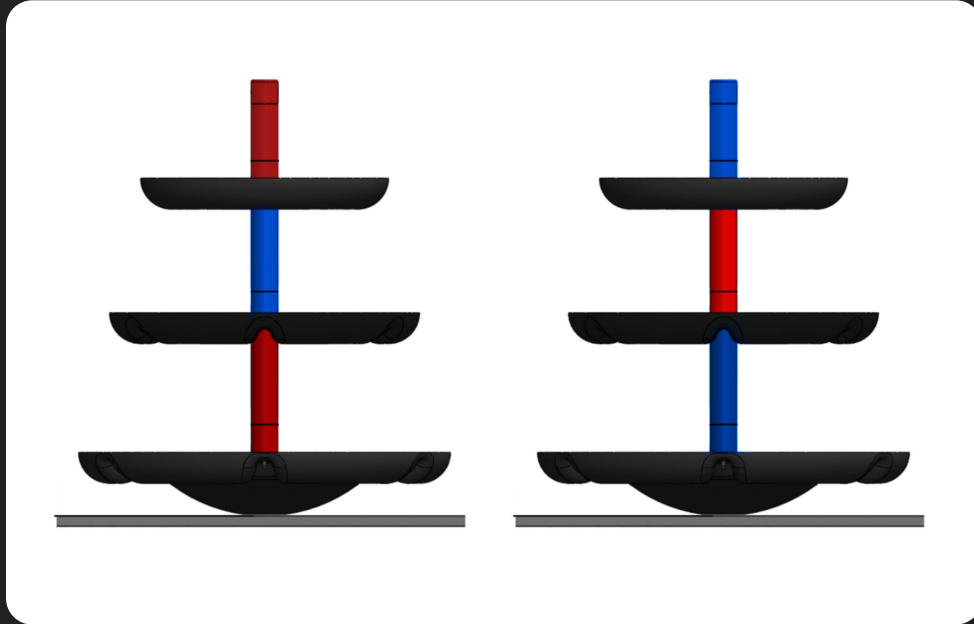
# BTII Rule Changes



# Overview

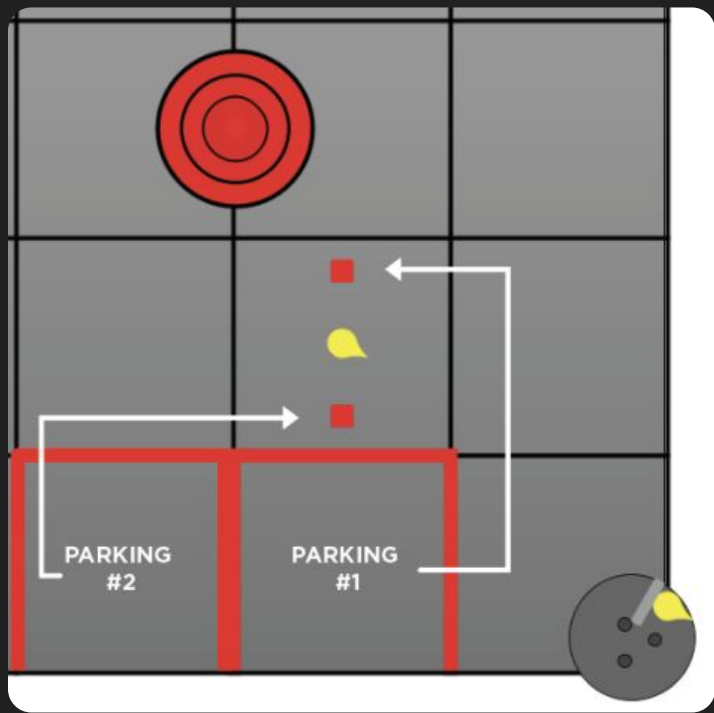
These rule changes are for the upcoming BTI Invitational on August 20th. The goal of these rule changes is to make the game more enjoyable. Major rules with concise descriptions are provided below with the full rules being available below that.

# GC1 - Mid Goals Are Swapped!



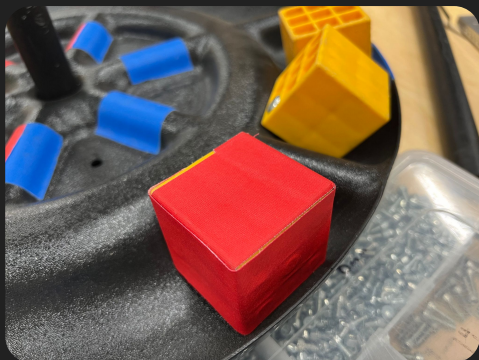
- Level 2 of your opponent's alliance goal counts **5pts** towards your team
- Scoring into Level 2 on your alliance goal scores points for your opponents.
- This encourages teams to use novel strategies, such as cycling on the opponent's side of the field
- Remember: you are allowed to take freight from **either** warehouse, they are not alliance specific.

## GC2 - Additional Auto Parking Challenge



- Level 1 randomization indicates Parking Square 1, and Level 3 indicating Parking Square 2.
- Fully Parking in either square is worth **6pts**
- There will be a dot in the center of each square; the square selected will be the square that the original 18x18in footprint of the robot covers - identifying the correct square is worth **24pts**
- This levels the playing field for alliances that may not have a hyper-optimised warehouse side autonomous.

# GC3 - The Heaviest Block



- Completing Challenge GC2 will result in a block being introduced into the alliance's warehouse during the period between Autonomous and Tele-Op called **The Heaviest Block** (2.5x heavier than heavy freight)
- The Heaviest Block will be wrapped in tape corresponding to its alliance
- Interacting with the opposing alliance's cube will result in a major penalty
- There may be a red and a blue The Heaviest Cube on the field if both alliances complete the GC2 challenge

# GC4 - Modified Shipping Hub

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- The Shared Hub will be modified with 3D printed supports ([Click for Setup Guide](#)). Its movement will be limited to only tip in one axis only
- This allows the shared hub to more easily and accurately change its tip to the heavier side
- Freight is also now much less likely to slide onto the opposing alliance's side of the shared hub

# Full Rule Changes Explanation

- GC1 - Mid goals are swapped
- GC2 - An additional parking challenge in autonomous
- GC2.1 - randomization of Level 2/mid goal is no longer possible.
- GC3 - The Heaviest Block
- GC4 Shared Hub Modifications
- GC5 - Penalties have been relaxed for this event
- GC5.1 - Inspection has been relaxed for this event.
- GC6 - Special matches
- GC7 - Modified alliance selection.
- GC7.1 - Updated rankings system.
- GC8 - Field orientation.
- GC 1.1 - Freight in the storage unit will no longer be scored.

# GC1 - Mid goals are swapped.

Scoring into Level 2 of your alliance goal counts 5 points towards the other alliance (scored as 1x level 2 freight, 4 points, plus 1x storage unit freight, 1 point: 1 extra point than level 2 previously). This also means that level 2 of the opposing alliance hub scores your alliance 5 points. The idea behind this is to encourage teams to consider playing with novel strategies, such as scoring from the warehouse on your opponent's side into the Level 2 of the alliance goal. Remember: you can take freight from either warehouses, they are not alliance specific.



## **GC 1.1 - Freight in the storage unit will no longer be scored.**

Owing to the low percentage of teams utilising the storage unit, and to facilitate easy scoring of GC1, the possibility of scoring into the storage unit has been removed. Sorry!

## GC2 - An additional parking challenge in autonomous.

The storage unit is now Parking Square 1, and an additional square ([shown in the diagram](#)) is Parking Square 2. The correct parking square is indicated by the barcode, with Level 1 randomization (low-goal pre-load) indicating parking in Parking Square 1, and Level 3 randomization (high goal pre-load) indicating Parking Square 2. Identifying the correct square will earn a team 24 extra points, plus The Heaviest Block in tele-op ([see GC3](#)). A team identifies a square by having the original 18x18 footprint over the center of the identified square (this will be marked with tape). The rule is in place to stop teams from identifying 2 squares at once. “Fully parked” is defined as the robot being entirely within the taped lines and will award 6pts (scored from the outside edge of the tape), and “partially parked” is removed. The idea behind this challenge is to level the playing field for alliances that may not have a hyper-optimised warehouse side autonomous.

## **GC2.1 - A randomization of Level 2/mid goal is no longer possible**

This is done to encourage the new autonomous challenge (GC2) and to facilitate simple, speedy scoring of GC1.

## GC3 - The Heaviest Block

For teams that complete the additional parking challenge outlined in [GC2](#), the Heaviest Block will be introduced into the warehouse on the corresponding alliance's side of the field during the period between Autonomous and Tele-Op called. This special, visually distinct box will have extra weights (10 weights in total), making it very useful for tipping the Shared Hub. It will be wrapped in tape corresponding to each alliance that completed GC2. There may be a red and a blue The Heaviest Cube on the field if both alliances complete the GC2 challenge. A major penalty will be given to an alliance that interacts with the other alliance's Heaviest Block.

## GC4 - The Shared Hub Mod

A 3D Printed modification will be added to the bottom of the shared hub which limits its movement to tilting in one axis only, as well as limits how much it can tilt. This allows the shared hub to more easily change tilt as well as makes it much more likely for freight to slide to the opposing alliances side.

Additionally, this makes it easier and clearer to score: which direction the Shared Hub is tilting is now determined by which of the 3D Printed modifications is touching the floor tile.

# **GC5 - Warehouse penalties have been relaxed for this event**

Blocks and balls accidentally rolled out of the warehouse will not be penalised. Intentionally removing or displacing freight from the warehouse will be penalized, including purposefully pushing multiple freight outside of the warehouse, intaking multiple pieces and then leaving the warehouse, etc.. Please don't use this rule to your advantage, the intent is not to legalise any new strategies, simply to make games more enjoyable and less random.

## **GC5.1 - Inspection has been relaxed for this event.**

We'll have some inspectors going around making sure that your robot is safe, ie. it doesn't have sharp edges, etc.. We'll also make sure your code can stop your robot correctly, but we won't be strictly enforcing rules about software, for example, SDK versions and Driver Station versions not matching. Again, this change isn't made with the intention of changing how robots are built or how the game is played, just to make the event easier and more enjoyable.

## GC6 - Special matches.

The intent is fun, and what's more fun than a couple random, completely absurd matches! A team's 3rd match of the day must be driven by at least one (preferably all) mentors, team parents, or other team related adults, but students can be Drive Coach. A team's 4th match of the day will use entirely balls for freight (with the exception of preload). Remember [GC5](#), inadvertent removal of balls from the warehouse won't be penalised, and that will be extra relaxed for these games. Have stuff go rolling across the entire field! Intake freight from near the duck spinner! This match will be pretty crazy, have fun!



# GC7 - Modified alliance selection.

This event will use a snake/serpentine draft. This draft works with first picks running down the seeds, then the second picks running up. This means the highest seeded alliance will pick first pick in the first round, but last during the second round. Additionally, captains are not allowed to pick each other.

## **Here's an example of snake draft for a 4-captain event:**

1st Seed Team - Picks 1st and 8th  
2nd Seed Team - Picks 2nd and 7th  
3rd Seed Team - Picks 3rd and 6th  
4th Seed Team - Picks 4th and 5th

## **GC7.1 - Updated rankings system.**

This event will follow the rankings system that will be used in POWERPLAY as described in the recently-released Game Manual 1. Win/Loss/Tie will determine rankings, TBP1 will be autonomous score, and TBP2 will be Endgame score. This means that you're not trying to get a high score in quals, just get a higher score than your opponents.

## **GC8 - Field orientation.**

The orientation of the field is being changed. The field will be rotated 180 degrees so the warehouses are closer to the audience, and the carousel is farther. The purpose is to give the audience a better view of the action as the carousel required refs to stand in a spot where they obscured part of the field.