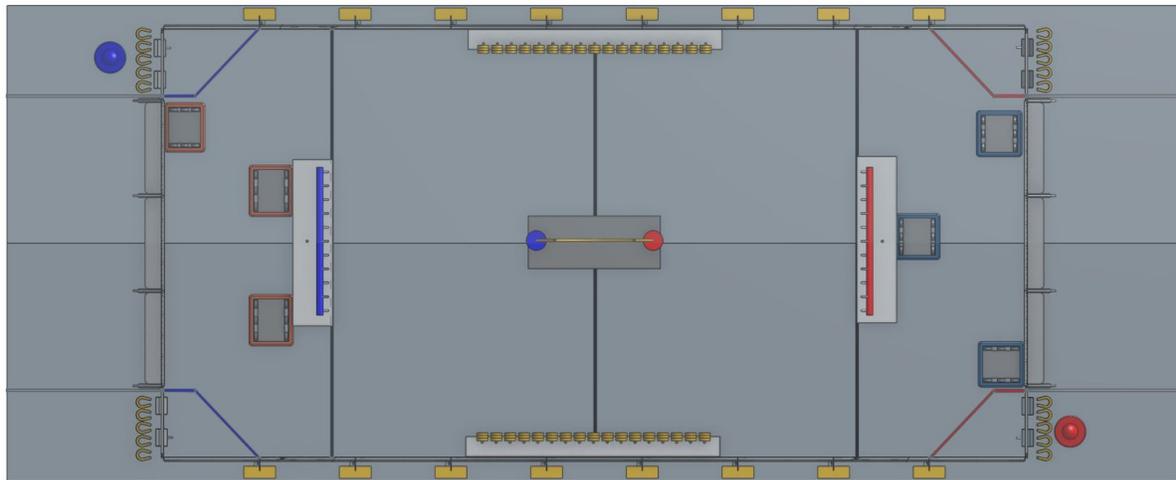
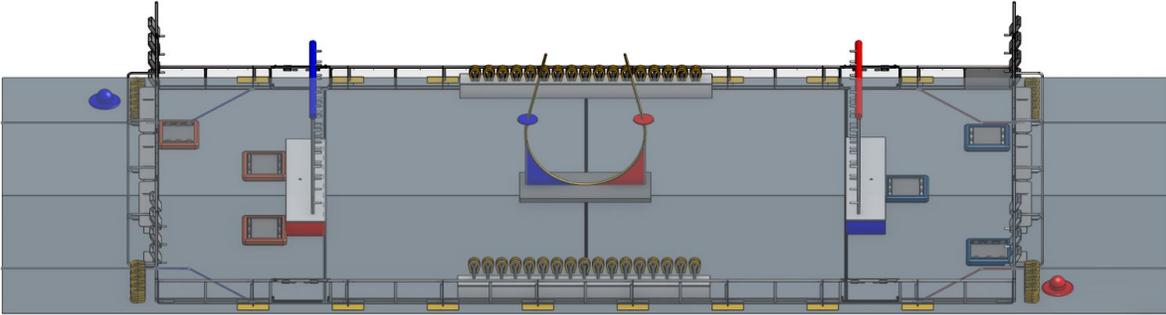
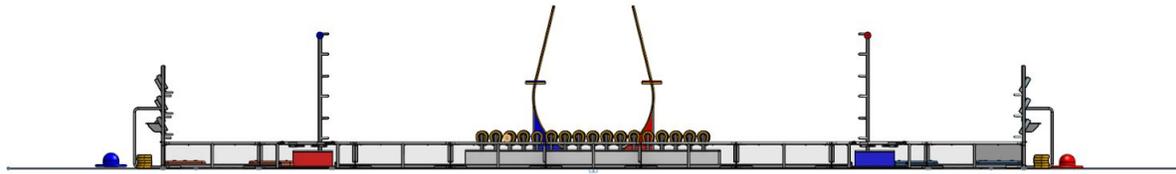
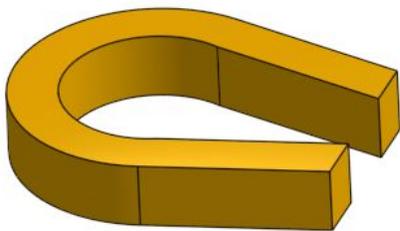


Rapid Restock



Scoring Elements

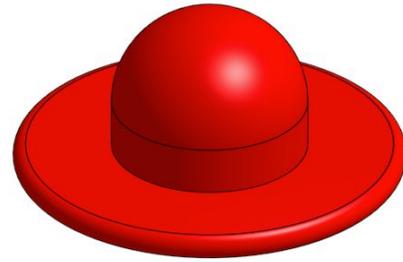


HORSESHOE

The HORSESHOES are team neutral, meaning that either team can use them. There are a total of 202 HORSESHOES in the FORGES and ANVILS, but alliances won't necessarily use the same amount of HORSESHOES. For example, one team may use all 50 from their FORGE and then take 60 from the two ANVILS, meaning that the other team has access to 92 HORSESHOES.

HAT

The HATS aren't team neutral. Each alliance has one HAT located in their FORGE. During the final 30 seconds of the match, the human players will throw the HAT over the top of the FORGE for robots to pick up. The inside of the HAT has a diameter of 9 in.



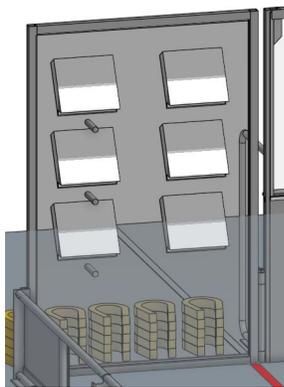
Field Elements

PEG

A PEG is a 6.5 in. long 1.25 in. diameter cylinder. PEGS are the designated location to hang HORSESHOES. No more than 3 HORSESHOES can be on a PEG at one time.



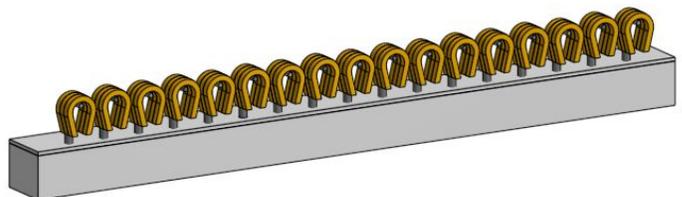
FORGE



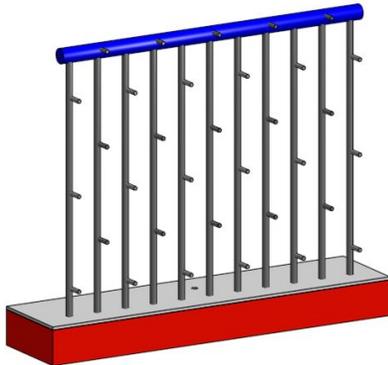
A FORGE is an assigned position on an alliance wall where human players stand. The FORGE has two columns of three slots which HORSESHOES can be dropped through. One of the columns has PEGS under the slots but the other does not. Each alliance has two FORGES located on either side of their driver station. The alliance may choose which of their FORGES have the HAT. The HORSESHOES will drop into an alliance-restricted area. Because of this, alliances won't be able to get HORSESHOES from the other team's FORGE.

ANVIL

The two ANVILS are located on either side of the field and are neutral territory. Each alliance can take HORSESHOES from either ANVIL. Each ANVIL holds 51 HORSESHOES, meaning that there are 102 total HORSESHOES located on the field for robots to use in addition to the 100 HORSESHOES from the FORGES. The PEGS are 24 inches off of the ground and are 10.5 inches away from each other.



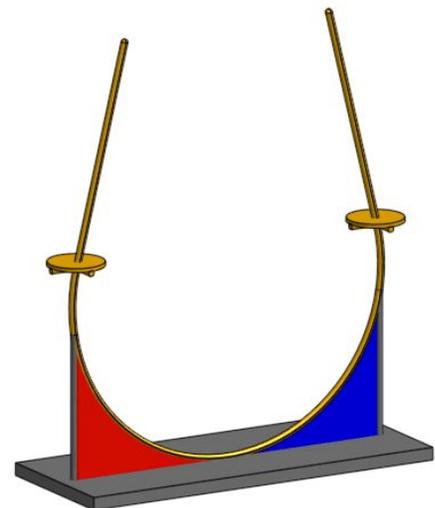
DISPLAY RACK



The two DISPLAY RACKS are differentiated by the color of their base. All HORSESHOES scored on a DISPLAY RACK will give points to the alliance whose color matches the base. The only exception is the top row, which is indicated with the opposite alliance's color. Each DISPLAY RACK is located 8 feet from the opposite alliance wall with the PEGS facing the center of the field. Each post is 8.6 in. away from the front and has 3 PEGS in one of two post orientations. One orientation has PEGS 13 in. off the base, 45 in. off the base, and 77in. off the base. The other has PEGS 29 in. off the base, 61 in. off the base, and 93 in. off the base. The posts alternate with the outside posts having the first orientation.

LUCKY HORSESHOE

The LUCKY HORSESHOE is in the direct center of the field and stands perpendicular to the DISPLAY RACK. The scoring side for each alliance is indicated by the color of a panel that supports the LUCKY HORSESHOE. The color is reversed to that of the DISPLAY RACK, meaning that teams will have to go to the other side of the field to get their multiplier. You can stack a total of 30 HORSESHOES on the LUCKY HORSESHOE. These HORSESHOES will be stacked on a plate attached to the LUCKY HORSESHOE that will support the HORSESHOES being placed. The plate has a diameter of 15 in., which is larger than the 11 in. HORSESHOE. Any HORSESHOES that are placed below the plate won't count for any points and will sit on the base for robots to pick up.



Gameplay

Robot Interactions

Robots will receive a penalty for:

- Crossing the center line in Autonomous
- Holding more than one HORSESHOE
- Throwing a HORSESHOE further than allowed (Triple Penalty)
- Entering the opposing alliance's safe zone (taped area around the FORGE)
- Purposely removing opponents' scored HORSESHOES
- Creating a blockade across the field (Triple Penalty)

A penalty is 10 points given to the opposing alliance and applied after the multiplier

Scoring

	Autonomous	Teleoperated	Multiplier	Ranking Points
Start of Match	-	-	1	-
Crossing Auto Line (per robot)	10 points	-	-	-
DISPLAY RACK - Row 1 (bottom)	4 points	2 points	-	-
DISPLAY RACK - Row 2	4 points	2 points	-	-
DISPLAY RACK - Row 3	6 points	3 points	-	-
DISPLAY RACK - Row 4	6 points	3 points	-	-
DISPLAY RACK - Row 5	10 points	5 points	-	-
DISPLAY RACK - Row 6 (top)	-	10 points	-	-
LUCKY HORSESHOE	-	-	+ 0.1	-
WIN	-	-	-	2
TIE	-	-	-	1
HAT	-	-	-	1
FULL DISPLAY RACK	-	-	-	1

- DISPLAY RACK and LUCKY HORSESHOE scoring is per HORSESHOE placed.
- A maximum of 30 HORSESHOES will count on the LUCKY HORSESHOE
- A FULL DISPLAY RACK is defined as at least one HORSESHOE on every PEG not counting Row 6
- All points are rounded down to the nearest whole number

Robot Rules

- In the STARTING CONFIGURATION (the physical configuration in which a ROBOT starts a MATCH), no robot may exceed a frame perimeter of 120 in. and may not be more than 54 in. tall.
- Robots may not exceed their frame perimeter by 8 in. at any point in the match. There is no height limit after leaving STARTING CONFIGURATION.
- Robots will start by the opposing alliance wall and can be placed anywhere in the area as long as it touches either the wall or the base of the DISPLAY RACK.
- Robots can only throw a HORSESHOE 6 in. horizontally and vertically.