

STEMley 2022 – Rule Changes

rev: Sept 23, 2022

1. **Draft order:** 1-8, 8-1. There will be two basic drive bases available as emergency back-ups. If called into use, these back-ups will be operated by the team whose robot is unable to participate in the match. Back-ups should only be used until the team is able to repair their robot to a drivable state at which time the borrowed back-up will be returned to the back-up pool.
2. **Double Elimination Playoff Structure (tentative):** rather than the traditional best of three quarterfinals/semifinals/finals structure, playoffs may follow the double elimination structure *FIRST* plans to use in the 2023 season. Details can be found [here](#).
3. **Tie-breaker in finals:** if the match score of each alliance is equal, the match will be replayed.
4. **STEMley Air Freight:** two special STEMley AIR FREIGHT CARGO will be in play at the STEMley Cup Championship. The AIR FREIGHT CARGO will be designated by a coloured elastic band wrapped around the CARGO.



Prior to each MATCH, one AIR FREIGHT CARGO is placed in each of the TERMINALS.

One AIR FREIGHT CARGO per ALLIANCE may be entered into the playing field by the ALLIANCE's HUMAN PLAYER through the TERMINAL at the opposite end of the field to the ALLIANCE's driver station in the last thirty (30) seconds of the MATCH. AIR FREIGHT may be introduced to the field by the HUMAN PLAYER through the CHUTE or over the CHUTE GUARD. If introduced early (prior to 30 seconds left in the MATCH) as determined by the REFEREES, a FOUL will apply and that AIR FREIGHT CARGO will not be eligible for any BONUS scoring.

The BONUS scoring condition for the AIR FREIGHT CARGO is:

- a. at the end of the match (plus 5 seconds), every robot completely supporting an AIR FREIGHT CARGO will add BONUS points for the lowest climb-score robot on their

ALLIANCE based on the RUNG achieved by the AIR FREIGHT supporting robot, up to a maximum of an additional fifteen (15) points per ALLIANCE. The ALLIANCE's climb RP is not affected by the BONUS points.

- b. AIR FREIGHT CARGO are not intended to be scored in the HUB. Scoring the AIR FREIGHT CARGO in the UPPER or LOWER HUB may or may not be automatically scored by the colour sensor. Whether the colour sensor counts the AIR FREIGHT CARGO as red or blue is not predictable. No adjustment to TELEOP CARGO points will be made by the referee or scorekeeper due to AIR FREIGHT being scored in the HUB.

example 1: a **red** ALLIANCE robot climbs to the TRAVERSAL RUNG and is supporting one AIR FREIGHT CARGO at the end of the match (plus 5 seconds). No other **red** robot has earned HANGAR points. One of the non-climbing robots on the **red** ALLIANCE receives a BONUS to their score of 15 points ($15 - 0 = 15$ points).

example 2: a **blue** ALLIANCE robot climbs to the MID RUNG and is supporting one AIR FREIGHT CARGO at the end of the match (plus 5 seconds). The second **blue** robot has climbed to the HIGH RUNG. The third **blue** robot has climbed to the LOW RUNG. The lowest climb-point robot on the **blue** ALLIANCE receives a BONUS to their score of 2 points ($6 - 4 = 2$ points).

example 3: two **red** ALLIANCE robots climb to the TRAVERSAL RUNG and are each supporting an individual AIR FREIGHT CARGO at the end of the match (plus 5 seconds). The third **red** robot has climbed to the HIGH RUNG. The **red** ALLIANCE receives a BONUS to their score of 5 points ($15 - 10 = 5$ points).

example 4: a **blue** ALLIANCE robot is contacted by a defender in the last 30 seconds of the match when their BUMPERS are partially in their HANGAR ZONE. At the end of the match (plus 5 seconds), the same **blue** robot is supporting one AIR FREIGHT CARGO. The other two **blue** ALLIANCE robots have climbed to the MID RUNG. Due to rule G208 the contacted **blue** robot is granted a TRAVERSAL climb (15 points). Due to the AIR FREIGHT CARGO rule, one of the other **blue** ALLIANCE robots receives a BONUS to their score of 9 points ($15 - 6 = 9$ points).

BONUS points due to AIR FREIGHT CARGO (if any) will be added to the MATCH SCORE under the "ADJUSTMENTS" section of the scoresheet prior to the posting of the official final MATCH SCORES. The ruling of the HEAD REFEREE is final.