A few first words.

The CEB Robot Club, Combat Robot division is an event, run by the CEB Robotics Club, it’s primary focus is team-building exercises, which enable people’s creativity, and technical skills to flourish. The rules for the CEB Robotics Club are here not to dissuade anyone from their design of choice, but to allow members, and audiences to have fun while feeling welcomed, and safe.

**Builder Conduct**

1. Be nice; 2. Don’t be not nice.

**Expectations, and Standards of Conduct**

Disorderly conduct, and Breaking the Law is discouraged.

**Rules**

Are here to protect you, me, we, and them.

**Bot Design Rules**

**Bot Size**

All bots must fit within 750x750x600 mm

**Weight**

|  |  |  |  |
| --- | --- | --- | --- |
| Standard | Non-Traditional Locomotion | “FPV device” Bonus | Maximum weight of bot |
| 1500g | 2250g | 300g | 2500g |

Builders can stack weight bonuses, but the total weight of the bot cannot exceed 1⅔ times the weight limit for bots without bonuses. See the above table for reference.

**Non-Traditional Locomotion Bonus**

Any robot that falls outside the definition of a “Traditional Motion System” qualifies for the Non-Traditional Locomotion Bonus. The CEB Robotics Club classifies Traditional Motion Systems as a robot that relies on rotational motion of a component in contact with the ground as its method of locomotion around the arena. This includes all forms of wheels (round, non-circular, spoked, or offset axis) as well as continuous tread, track or belt driven systems. This also includes any robot that uses unpowered rotating objects (wheels, drums, rollers, ball bearings, etc.) as a means of friction reduction with the ground.

**Weight Exemptions**

Any bots (hydraulic-, pneumatic- or ICE-powered) weapons systems will be weighed “dry” (without fuel).

Pneumatic and ICE systems will have their tanks removed for weigh-in. *Any tanks used must be commercially available tanks.*

Competitors who bring hydraulic systems must declare in advance how much hydraulic fluid is in their system, which will be weighed before, and after the tanks refuel. The fluid weight will be subtracted from the bot’s scale weight. These bots will be subject to random inspections, where the hydraulic fluid will be removed and measured.

**First Person View Weight Bonus**

Any camera equipment used for this weight bonus needs to be pre-approved by the Event Organisers, and footage collected by the recording devices may be used by the Organisers.

**Bot Safety Rules**

**Safety Link**

Bots must have an easily accessible master power cutoff in the form of a removable link, which requires no key or tool to be accessed or removed in any way. The power cutoff must be able to be deactivated in no more than 15 seconds.

**Batteries**

Nominal battery voltage may not exceed 60 volts.

It is understood that a fully charged battery pack will have an initial voltage above its nominal Voltage.

We suggest all Beetleweight bots to not exceed 15V, and if they do so, you must submit the schematics and reasoning to the CEB Robot Club Working Group for review and inspection.

Batteries that have otherwise visible wear and tear, damage, or any imperfections are to be submitted for approval of the Organisers.

**Control Systems**

Robot controls and communication systems must pass a failsafe test in order to compete. In the event of signal loss or transmitter power-down, the bot’s drive system must stop within 30 seconds and weapons must come to a complete stop within 60 seconds.

Autonomously controlled robots are allowed, but they must still retain a radio control module that can remotely activate and deactivate the robot.

**Weapon Locks**

All weapon systems must have a lock that stops their actuation, extension, expansion, rotation, ignition, etc. Weapons that move or rotate must have a lock or be constrained such that movement is restricted in all directions. Weapons that shoot a projectile or gas must have physical means to prevent firing AND block the expulsion of a projectile. Additionally, all means of fuel storage must be designed to default to the closed position if damaged or removed from the robot.

Weapon locks that force the competitor’s fingers to be in the path of the weapon for an extended period of time will not pass bot inspection. Clamps can only be used as weapon locks if they clamp to themselves and not to the bot or any other object.

**Weapons and Weapon Systems**

**Weapons**

All robots must have an active weapon. An active weapon is defined as a weapon or mechanism that operates independently from the robot’s drivetrain or means of locomotion and is clearly designed to influence the opposing robot.

“Meltybrains” (bots that can show controlled movement while spinning at rapid speeds), and “Gyro Walkers” (bots that use spinning masses or weapons to generate inertia to induce translational motion) are exempt from this rule. “Thwackbots,” (robots which use momentum created by the robot’s drivetrain to ‘actuate’ an otherwise unpowered weapon) do not qualify as having an active weapon and are legal to use.

In the case where a Bot’s weapon system is ambiguous with the definition of an active weapon, please submit your design at the earliest possible stage for review. An explanation on how the weapon system will work should include:

* A good-faith explanation of how the weapon is designed to influence an opponent.
* The proportion of bot weight dedicated to the weapon system.

**Disallowed weapon types**
- No liquids
- No foams
- No Entanglement based
- No Fabric or ablative armouring/cloth
- No fuel based
- No Heat based
- No Ignition or combustion based
- No Electrical or Shock based
- No rocket motors or fireworks
- No smoke based
- No purposeful obstruction of vision or controls
- No projectiles
- Weapons which cause any harm to those outside the cage

**Modular Weapon Systems**

Modular weapon systems are defined as mechanisms, subsystems, or subassemblies that are interchangeable between fights. For example, a modular weapon system may allow a competitor to choose between a horizontal spinner and a vertical spinner configuration between fights.

No more than 50% of a robot’s weight may change between configurations. Additionally, all configurations of the robot must qualify for the same weight bonuses.

**Tournament Format**

Depending on the number of participants, the overall format may vary.

Robots will fight one another either in ‘1 vs 1 format’ or a ‘1 vs 1 vs 1’ three-way fight, where the winner will be decided by clear victory, or by a panel of judges’ decision.

Robots who have lost 1 match will be placed onto a “losers' bracket” and will have another chance at redemption, where they will get to climb up the ranks and have a chance at the tournament once more.

**The spirit of the tournament**

We love creative and fun designs that push the boundaries of what can be done in combat robotics. The rules are here to ensure the safety of participants, volunteers, and audience.

**Spares and Batteries**

All spare parts, and modular parts need to adhere to the rules of the Robot Club. A robot will be weighed with its heaviest possible combination of parts, to ensure that any possible combination of spare parts is legal within the terms of the tournament.

**Brackets**

Winners Bracket – Win a match, move to the next stage, until the finals.
Losers Bracket – For those who have only lost once

**Grudge match**

 An unsanctioned match between two robots with no judging, those are always allowed provided the participants are adhering to the safety procedures in place.

**Objective**

Utilize your robot to disable your opponent’s robot by any means allowable by the tournament and design rulesets. The duration of each fight is 3 minutes, if both entrants are still mobile at the end of the 3-minute timer, the winner will be declared by judges’ decision.

**Fight Start**

Robots must start the fight in their assigned corner of the arena and must be oriented such that they fit within the constraints of their classes' respective bounding box size.
The Fight starts when the countdown finishes, usually signified by silence after a decreasing sequence of numbers starting with 3, e.g. 3,2,1…

**False Start**

At the start of the match, all parts of all robots must be completely stationary. Any non-kinetic and internal systems should remain in their unpowered and stationary failsafe states until the fight officially begins.

The only exception to this rule is that ICE systems can be in an “idle” state until the fight begins.

Systems that utilize springs, onboard air compressors, or other potential-energy based systems are permitted to “charge” their system before the match begins, but the charge systems must be inactive at the beginning of the match.
Any bot component that moves out of its unpowered and stationary failsafe state before the fight starts will be deemed to have committed a false start.

If a Participant commits 3 bouts of False Starts without making contact with another Robot, they are eliminated from that match. If there is any contact with an adversary’s robot during a False Start, the Robot is then disqualified from that match immediately.

**Fight Reset**

A fight reset may occur at the Referee, event organizer, or production team’s discretion.
When a fight reset is called, robots must stop fighting immediately. Both robots are then repositioned to their starting corners, and the fight timer is reset.
Resets will likely only be called due to production errors.

**Unstick Attempts**

During the course of a fight, robots may get flipped or stuck in an orientation such that they cannot demonstrate self-propelled motion. In each match, competitors are entitled to one unstick attempt from the Event Organisers, either by the use of a House Bot, or the pizza scraper.

There is no guarantee that an unstick attempt will be successful. Additionally, it is possible that either robot may get damaged or end up in a less favourable position than they started when the unstick attempt was called.

When an unstick attempt is called, the House Bot will drive to the impaired robot and try to right/free/reorient it. The effort will start slowly and deliberately, then gradually become more forceful.

If unable to be unpinned, the Event Organisers may call the participants to stop all motions on their Robots, and leave the controllers to a side, so that they may enter the arena to unpin the Robot(s). If an organiser enters the arena, the timer of the match will be paused until it is safe to continue the match.

**Pins**

A pin occurs when a robot is actively preventing their opponent from moving. This includes, but is not limited to lifting, grappling, blocking, or forcing against a wall. Pins are used by Judges to help score fights.

A pin is counted as a pin when it is held for 5 seconds but it must not last more than 10 seconds. At the end of the pin, the pinning robot must release their opponent by giving them sufficient space to escape.
If the pinning bot does not release the pin within 10 seconds, the Judges will disregard the pin. If the pin results in an entanglement (see below), the Judges will disregard the pin.

**Entanglement**

The CEB Robotics Club disallows for purposeful Entanglement based design, weapons or armour alike. We recognise the possibility of robots being entangled with each other by accident. The Referee determines if bots are entangled.
If a house-bot is able to successfully separate two stuck robots, it will not be ruled a disentanglement, nor will it count for either robot’s unstick attempt.

If entanglement lasts more than 10 seconds and cannot be rectified by the house bot, the match will be paused, and the referee will attempt to separate the robots manually.

If the referee is unable to safely separate the robots, or if either robot is unable to drive at the end of the disentanglement, the match will end, and the winner will be determined by judges’ decision.

**Hazardous Robots**

If the Event Organisers deem a robot to be a hazard to the crowd, volunteers or competitors, or if a robot is inflicting considerable damage to the arena, the Referee may elect to end the fight early. In this case, the winner is determined by judges’ decision.

**Fight Results**

* + **Knockout**

Any robot that is unable to demonstrate motion will receive a 10 second count-down started by the Referee. If the countdown is completed, the robot will be considered knocked out and the fight ends.
If the robot successfully demonstrates any self-propelled motion during the 10 seconds or the robot is directly engaged by their opponent, the count-down ends and the fight continues.
A knockout ends the fight immediately. Any further engagement or attacks may be referred to the Tournament Stewards.

* + **Tap Out**

All competitors have the option to “tap out” of their fight. This immediately ends the fight, giving their opponent the victory. Tap outs are considered as a loss.
Only the driver may choose to tap out of the fight.
To tap out, the driver must tap the siding of the arena 3 consecutive times loud enough for adversaries to hear, and must inform the judges of their decision.
A tap out ends the fight immediately. Any further engagement or attacks may be referred to the Tournament Stewards.

* + **Technical Knockout**

Robots may receive a Technical Knockout if they do not adhere to the False Start rules above. If a bot damages another bot before the start of a match, or if a bot starts a match before the end of the countdown more than two times, without damaging the adversary.

* + **Forfeit**

If a bot refuses to fight its opponent, this is a forfeit. A forfeit is considered a loss.

* + **Fight/Event Stop**

The Referee can stop the fight before the full 3 minutes is over if both bots are stuck together and cannot be easily separated, or there is a safety issue like an arena breach. In this case, the fight will be treated as a Judges’ Decision. The Referee has the final decision on all competitor conduct during a fight.

* + **Judge’s Decision**

Each judge rates the competitors across 3 categories: Damage, Control and Style. A judge allocates 6 points to the competitors for each of Control and Damage, and 5 points for Style. The bot with the most points is that judge’s choice.
All judges’ decisions are final.

* + - * **Damage**
			Damage is the condition of the opponent’s bot at the end of a match compared to how it started. To score points here, a bot needs to hurt its opponent’s critical systems.
			Damage to components which are meant to shield critical components shouldn’t be counted towards overall Damage judging decisions, unless there isn’t any on either Robot.
			* **Control**
			Control is how well a bot dictates the flow of the match. To score points here, a bot will be putting its opponent in a bad spot, like pinning it or getting it stuck.
			* **Style**

Style is the most subjective category to assess. To score points here, judges should look at which robot was the most ‘crowd-pleasing’, exciting to watch and provided the most overall entertainment.

**Arena Rules**

The CEB Robot Club Waiver needs to be checked and signed by all participants before they are able to compete.

**Match Readiness**

All bots are guaranteed a certain amount of repair time between the end of any given fight and the start of the next fight. Beetleweight Bots get 20 minutes.
If a bot is not ready to fight at the end of the 20 minutes, they may choose to fight still, or they may forfeit the match.

**Robot Inspection**

Before a robot’s first fight at the event, it must pass a bot inspection, during which a Bot Inspector will ensure the bot is in compliance with all design and safety rules. Robots must pass bot inspection before they are able to fight. If the bot has not passed bot inspection before it is due to fight, it will receive a disqualification, subsequently being eliminated from the rest of the tournament.

The bot inspection process consists of:

* Weapon lock/weapon cover check.
* Checking that sharp edges are adequately covered when not fighting.
* Radio fail-safe testing for weapon and drive systems.
* Demonstration of general design requirements.
	+ Active weapon and controlled motion.
	+ Switch/removable link operation.
	+ Any other functional, weight or design requirements specific to the robot’s design or weapon type.
* Multibot component check.
* Robot weigh-in (including alternate powered configurations, spare robots and alternate shells).
* Arena fouling material check.
* Camera equipment approval (if needed).

If the Bot Inspector believes the definition of active weapon is not reached or that a multibot is not capable of influencing a fight, they will contact the Tournament Stewards to make a ruling.

Robots will not pass bot inspection if they are overweight.

All powered configurations of a bot must be inspected before the event along with any alternate robot shells. Any powered configurations or shells that have not passed bot inspection before the first fight will not be eligible to fight at the event. Passive configuration changes (like unpowered forks/wedges, fireproof tape, or anti-drone poles do not need a full bot inspection but can be put through bot inspection to confirm they are not considered an entanglement device.

Robots will be weighed between every match.

**Cage Load-in**

Competitors must arrive at the cage (arena doors) with their bot unpowered and with weapon lock installed, their transmitter(s), wristbands and bot badge for the team and their safety link removed.

When cage side, all competitors must follow directions from Referees. Bots cannot use their drive or weapons systems at any time when the doors of the cage are open. Doing so may result in a disqualification from the tournament.

**Battery Charging**

Any time a battery is charging, it must be attended by a builder or team member.
Any lithium-chemistry battery must be charged using balance leads.
If a battery catches fire or presents a safety hazard, make the situation as safe as possible and alert the Event Organisers immediately.

**Hand and Power Tools**

Safety glasses and other appropriate PPE must be worn while working with power tools in the Arena and Makerspace.
Power tools that produce sparks, dust, or shrapnel may only be used in the Makerspace after sufficient training is completed.

Power tools that produce flames or lasers may only be used in the workshop.

**Weapon Locks**A weapon lock is defined as a mechanism or component that will keep your weapon from being dangerous when your robot is not in the cage.
Robots’ weapons must be always be locked, except when placed in the arena. Robots may not be activated, unless in the Arena.

**Testing**
Testing may only be carried in a designated safe environment, such as the Arena or a Test Box.

## Appendix A: Judging Criteria

This criteria covers judging for head-to-head matches for full-combat bots.

Each judge rates the competitors across 3 categories: Aggression, Control and Damage. A judge allocates 6 points to the competitors for each of Control and Damage, and 5 points for Aggression. The bot with the most points is that judge’s choice. If there is a panel of 3 judges, the bot that is chosen by at least two judges wins the match.

When a judges’ decision is required, a recording of the fight will be watched by a panel of 2 judges. If both judges choose the same winner, that bot will win the fight. If the judges choose different winners, a third tiebreaker judge will watch the same recording of the fight and choose the winner.

For the quarterfinals of the single-elimination bracket onwards, a panel of three judges will watch the fight live and each will choose a winner. The bot that is selected as the winner by at least two of the judges will win the fight.

The judging process and number of judges on each panel will only vary from these two scenarios if there are technical issues requiring the activation of contingency plans.

All judges' decisions are final.

For example, consider a match between bots Foo and Bar that goes to a panel of 3 judges:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Judge** | **Damage** | **Control** | **Style** | **Winner** |
| A | Foo 2, Bar 3 | Foo 4, Bar 2 | Foo 1, Bar 5 | **Bar** 10-7 |
| B | Foo 2, Bar 3 | Foo 5, Bar 1 | Foo 2, Bar 4 | **Foo** 9-8 |
| C | Foo 2, Bar 3 | Foo 3, Bar 3 | Foo 2, Bar 4 | **Bar** 10-7 |

The winner of the match would be Bar, by split decision.

### Damage

*Damage is the condition of the opponent’s bot at the end of a match compared to how it started. To score points here, a bot needs to hurt its opponent’s critical systems.*

#### Gaining damage points

Damage is the relative state of the bot at the end of a match, as compared to at the start of the match. The highest damage score is awarded to the complete destruction/disablement of a subsystem, followed by the reduced effectiveness of a subsystem, damage to critical structural components, damage to ablative components, and lastly aesthetic or cosmetic damage.

Self-damage is weighted as being equal to damage from the opponent.

If a bot’s active weapon does not work from the very start of the match, or if its drive is compromised at the very start of the match, this will count as damage.

To score damage points, a bot must alter the state of their opponent’s bot. When scoring damage, consider this chart, where the most damage points is at the top (Class F), and least is at the bottom (Class A). The more damage a bot sustains, the higher its damage class, and the more damage points its opponent will score.

* **Class F**: At least half of the drive system **and** all weapon systems on the bot are disabled.
* **Class E**: At least half of the drive system **or** all weapon systems on the bot are disabled. This includes removing a spinner’s weapon belt so it no longer spins. An articulated weapon, like a hammersaw, must be completely disabled to count here; that is, both the saw and the arm must be disabled.
* **Class D**: Reduced effectiveness of drive or weapon systems. This includes at least one wheel removed or damaged such that the bot's ability to drive in a straight line is significantly compromised, disabled powered stabilization features like internal flywheels, a partially-disabled articulated weapon (disabling either the saw or the arm, but not both), or a cut flamethrower line so that the bot sprays fire on itself.
* **Class C**: Structural damage, like a damaged frame, significant damage to non-ablative armor, removed forks/wedglets, or a wheel damaged in a way that moderately changes a bot’s function. Examples of this would include a wheel being damaged such that the robot is consistently bouncing as the wheel rotates or the robot has some difficulty driving in a straight line, large gouges in a wedge that expose what it was protecting to attack, or wheel guards being removed.
* **Class B**: Most ablative armor removed from at least one side, small gouges/holes in non-ablative armor that doesn’t significantly hinder function, or a wheel or wheels damaged in a way that doesn’t noticeably change a bot’s mobility. Examples of this would include chunks of the wheel being removed or torn but not impairing the ability of the wheel to spin freely or causing noticeable driving issues.
* **Class A**: No more than cosmetic damage, like scratches against paint or some ablative armor removed.

Ablative armor is any non-structural component intended solely to absorb damage by being consumed.

Completely running out of fuel (i.e. flamethrower fuel and ICE fuel) does not count as damage, even though it would disable a weapon. Running out of electrical or pneumatic power does count as damage.

For multibots, average out the difference of damage classes between the multibots, rounding towards a higher damage class.

#### Multibot scoring

For any multibot segments without an active weapon class E damage will be scored as class F damage.

If a multibot segment avoids participating in the fight it will be excluded from the damage calculation.

*Example 1:* If one half of a multibot finished at class C and the other half finished at class F, consider the bot at class E (Class C is the 3rd damage tier, class F is the 6th damage tier. 3+6=9, 9/2=4.5, rounded up that’s 5 and the 5th damage tier is Class E).

*Example 2:* For a 3 part multibot consisting of Segment 1 at class B, Segment 2 at class A, and Segment 3 at class F, consider the bot at class C (A+B+F=9, 9/3=3, making the overall damage class C). The same approach applies for a multibot consisting of any number of segments.

#### Other factors

Bots do not get any damage points for damaging the house bot.

In most cases, any damage done to a bot is considered damage against it, whether it was dealt by its opponent, dealt by a house bot, or self-inflicted. The only exception to this is if a weapon has been stopped through entangled debris in its mechanism from an opponent. In that case, damage is not counted against it.

#### Damage judging matrix

* 6-0:
	+ There are at least 4 classes separating the two bots. For example, one bot is at class F, and the other bot is at class B.
* 5-1:
	+ There are 3 classes separating the two bots. For example, one bot is at class D, and the other bot is at class A.
* 4-2:
	+ There are 1-2 classes separating the two bots. For example, one bot is at class E, and the other bot is at class F.
* 3-3:
	+ Both bots are in the same damage class.

### Control

*Control is how well a bot dictates the flow of the match. To score points here, a bot will be putting its opponent in a bad spot, like pinning it or getting it stuck.*

#### Gaining control points

The key to control is seeing your opponent put in a bad position. This could include:

* Inverting them
* Pinning them
* Getting them stuck against the wall
* Getting them stuck on a rough patch on the floor
* Getting them stuck on a side that the bot was not capable of self-righting from
* Getting them stuck on debris

Pinning a bot should not count as much as leaving them in a stuck position.

A bot that unsticks its opponent demonstrates more control than a bot that lets the house bot do the unstick. A bot that unsticks itself demonstrates more control than a bot that needs the house bot to unstick it.

If Bot A is able to use Bot B’s weapon against itself, then Bot A is considered to be showing control.

If Bot A acts in a way which prevents Bot B from successfully attacking with their weapon, then Bot A is considered to be showing control.

Following a weapon to weapon impact a robot should only gain control points if the outcome is one of the robots being put in a bad position once the bots have stabilized following the impact.

#### Losing control points

If a bot successfully pins their opponent but is unwilling to release the pin prior to the completion of the refs 10 count does not gain control points. A bot that is unable to release a pin without house bot intervention does not gain control points.

If a bot sticks itself, that counts as if it was stuck by its opponent (although see the tiebreaker rule below).

A bot should be stuck or inverted long enough to affect the flow of a match in order to lose control points. A brief period of being stuck (e.g. getting a fork stuck in a divot for a second or two) or inverted should not count against a bot for control.

#### Tiebreaker considerations

If bots seem to control the match equally, shift your focus to each driver’s control of their bot as a tiebreaker. Was the driver in control of their bot, or did they seem to frequently lose control of it? If one bot stuck itself, then the other bot should get more control points.

#### Other factors

Bots do not get control points for interfering with the house bot.

Long periods of neither bot maintaining control should be considered when determining the final score spread. Frequent, extended periods of no clear controlling bot should bring the overall score closer to an even split.

When scoring a fight with a multibot, focus on the overall control of the entry as a whole. A robot facing a multibot that uses one of the segments of the multibot against another segment of the multibot counts positively for the singular bots control score. Similarly, a multibot entry where the segments regularly interfere with each other counts negatively toward the multibot’s control score.

If a multibot segment is unwilling or unable to interact with the opposing robot this should negatively impact their control score.

In a situation where Bot A pins one multibot segment of Bot B it would gain control points. If another segment of Bot B were to attempt to pin Bot A into the already pinned portion of Bot B that does not gain control points. In this circumstance, if the second segment of Bot B prevents Bot A from releasing a pin this will not count as Bot A being unable to release their pin.

#### Control judging matrix

* 6-0:
	+ This bot pushed the other bot around the cage at will, repeatedly putting them into bad situations while never itself being put in a bad situation.
	+ The other bot got stuck far more often.
* 5-1:
	+ This bot was able to get the other bot in bad positions in the cage several times, while it got put in bad positions occasionally, but less frequently.
	+ The other bot got stuck somewhat more often.
* 4-2:
	+ This bot got the other bot in bad positions slightly more often than it was put in bad positions.
	+ The other bot got stuck slightly more often.
	+ Both bots were stuck in bad positions about the same amount, but the other bot stuck itself in bad positions more.
* 3-3:
	+ Both bots seemed to control the match equally.
	+ Neither bot seemed to take control of the match.

### Style

*Style is how exciting and entertaining a robot is. To score points here, a bot will create ‘crowd-pleasing’ moments such as high risk/ high reward driving, fun weapons, ‘bot personality’, entertaining moments during battles etc.*

#### Gaining style points

The key to style is ‘winning over the crowd’, This could include moments such as:

* High risk/ high reward driving
* Exciting attacks/ weapon systems that the crowd enjoy
* Crowd favourite aesthetics
* 'Personality’ of the bot, does the bot tell a story/ have a likeable appearance?
* Not going for the ‘easy win’ and instead trying fun or entertaining moves

Has a team gone out of their way to provide their bot with a colour scheme/ theme? Have they allocated any excess from their weight allowance to achieve this?

Have the team got branding e.g. T-shirts, hats, logos etc that add to their robot's aesthetic?

Are the crowd chanting a particular robot’s/ teams name?

#### Losing style points

Style points could be lost if a robot plays a low risk/ dull battle. This could include sitting back, not attacking and playing overly defensively.

#### Tiebreaker considerations

If both bots seem to have a similar scoring, consider the crowds opinions, which robot does the crowd want to win?

#### Other factors

Does one of the robot’s use a unique/ innovative design? This would be drive, weapon or overall shape. Innovation should score higher than a repeated design that has been proven before.

#### Style judging matrix

* 6-0:
	+ This bot showed creative driving, created exciting moments and had the crowd highly engaged.
	+ The other bot played defensively, had no attacks or moments that remain in memory.
* 5-1:
	+ This bot created vastly more exciting/ creative moments.
	+ The other bot had considerably less moments of ‘style’.
* 4-2:
	+ This bot created slightly more exciting moments during the battle.
	+ The crowd slightly favours this bot.
	+ Both bots had exciting moments, but this bot slightly takes the edge.
* 3-3:
	+ Both bots seemed to create equally exciting moments during the fight.
	+ Neither bot seemed to become the crowd favourite.