

Townsville Robot Combat Judging Criteria

Damage · Aggression · Control · Style

Townsville · Queensland · Australia

1. Tournament Judges

A panel of judges will determine the winner of matches in which time expires before one combatant is defeated as defined in the Tournament Rules and Procedures. The number of judges on the panel shall be an odd number to eliminate the possibility of ties. Judges' decisions are final.

1.1. Qualifications

- Judges must be familiar with the scoring system and Judging Guidelines as defined here.
- Judges must be reasonably conversant with combat robot design and construction.

1.1.1. Responsibilities

- Each judge shall officiate in a given robotic combat Tournament with complete impartiality and fairness, abiding by the rules that govern that tournament, in the true spirit of sportsmanship.
- Each judge is responsible for keeping track of the Combatants during the course of the match. Many robots look similar; it is the responsibility of each judge to award points correctly.
- Each judge is expected to take note of existing damage when Combatants enter the arena. Existing damage must not be counted against a Combatant in the event of a judges' decision.
- Judges must watch the entire match and award points accordingly. Judges are allowed (and encouraged) to take notes during a match to assist in scoring.

1.1.2. Foreman

One of the judges panel may be designated the Judge Foreman. The Foreman will ensure that all judges are conforming to the guidelines as set forth herein. The Foreman may or may not participate in scoring judges decisions, depending on the number of judges available. The Foreman will ensure that all Combatants conform to the tournament rules. Warnings and instructions from the Foreman will be issued to the Combatants verbally during the matches. Should a Combatant fail to comply, the Foreman will stop the match and the violating Combatant shall be deemed the loser. The Foreman will determine the point at which a knockout countdown is to begin based on the strict interpretation of the rules. When a 10 second countdown is warranted by the Foreman, the non-responsive Combatant will be notified and the countdown will begin. The arena announcer will start the countdown at 10 and count down to 0. If the non-responsive robot has not displayed sufficient translational movement as described in the rules, the Combatant will be declared the loser.

1.1.3. Conduct

- Judges will clearly identify themselves as such. Brightly coloured jackets will be provided.
- Judges will not consult with each other or the audience while watching or scoring a match.

2. Judges' Decisions: Scoring

When a match does not end in the elimination of one of the Combatants as defined by the Rules and Procedures, the winner shall be determined by a Judges' Decision. In a Judges' Decision the points awarded

to the Combatants by the panel of judges are totalled and the winner with the majority of points is declared the winner.

2.1. Point Scoring System

Points are awarded in 4 categories. All points must be awarded — each judge will determine how many points to award each Combatant in each category, according to the Judging Guidelines (see below).

- Damage
- Aggression
- Control
- Style

2.2. Judging Guidelines

2.2.1. Scoring Aggression

- Aggression is based on the relative amount of time each robot spends attacking the other.
- Attacks do not have to be successful to count for aggression points, but a distinction will be made between chasing a fleeing opponent and randomly crashing around the arena.
- Points will not be awarded for aggression if a robot is completely uncontrollable or unable to do more than turn in place, even if it is trying to attack.
- Sitting still and waiting for your opponent to drive into your weapon does not count for aggression points, even if it is an amazingly destructive weapon.
- A Combatant who attacks a stationary full-body spinner (e.g. intentionally drives within the perimeter of the spinning weapon) is automatically considered the aggressor. Note: a Combatant is considered a "full body spinner" if the robot cannot be attacked without moving within the perimeter of the spinning weapon.

2.2.2. Scoring Damage

Judges should be knowledgeable about how different materials are damaged. Some materials such as Titanium will send off bright sparks when hit but are still very strong and may be largely undamaged. Others such as Aluminium will not send off bright sparks when hit. Judges should not be influenced by things like sparks, but by how deep or incapacitating a "wound" is. Judges should be knowledgeable about the different materials used in Bot construction and how damage to these materials can reduce a Bot's functionality. Judges should not be unduly influenced by highly visual damage that doesn't affect a Combatant's functionality, effectiveness or defensibility. For example, a gash in a Combatant's armour may be very visible but only minimally reduce the armour's functionality.

Judges should look for damage that may not be visually striking but affects the functionality of a Combatant. For example:

- a small bend in a lifting arm or spinner weapon may dramatically affect its functionality by preventing it from having its full range of motion
 - bent armour or skirts can prevent the Combatant from resting squarely on the floor, reducing the effectiveness of the drive train
 - a wobbly wheel indicates that it is bent and will not get as much traction
 - cuts or holes through armour may mean there is more damage inside
- Damage suffered to robots can be grouped into the following classifications:

Trivial

- Flip over (or being propelled onto bumper, ramp, or other obstacle) causing no loss of mobility or loss of weapon functionality.
- Direct impacts which do not leave a visible dent or scratch.
- Sparks resulting from strike of opponent's weapon.
- Being lifted in the air with no damage and no lasting loss of traction.

Cosmetic

- Visible scratches to armour.
- Non-penetrating cut or dent or slight bending of armour or exposed frame.
- Removal of non-structural, non-functional cosmetic pieces (dolls, foam, or "ablative" armour).
- Damage to wheel, spinning blade, or other exposed moving part not resulting in loss of functionality or mobility.

Minor

- Flip over (or being propelled onto bumper or other obstacle) causing some loss of mobility or control or making it impossible to use a weapon.
- Intermittent smoke not associated with noticeable power drop.
- Penetrating dent or small hole.
- Removal of most or all of a wheel, or saw blade, spike, tooth, or other weapon component, which does not result in a loss of functionality or mobility.
- Slightly warped frame not resulting in loss of mobility or weapon function.

Significant

- Continuous smoke, or smoke associated with partial loss of power of drive or weapons.
- Torn, ripped, or badly warped armour or large hole punched in armour.
- Damage or removal of wheels resulting in impaired mobility.
- Damage to rotary weapon resulting in loss of weapon speed or severe vibration.
- Damage to arm, hammer, or other moving part resulting in partial loss of weapon functionality.
- Visibly bent or warped frame.

Major

- Smoke and visible fire.
- Armour section completely removed exposing interior components.
- Removal of wheels, spinning blade, saw, hammer, or lifting arm, or other major component resulting in total loss of weapon functionality or mobility.
- Frame warping causing partial loss of mobility or complete loss of functionality of weapon.
- Internal components (batteries, speed controller, radio, motor) broken free from mounts and resting or dragging on the arena floor.
- Significant leak of hydraulic fluid or pneumatic gases.

Massive

- Armour shell completely torn off frame.
- Major subassemblies torn free from frame.
- Loss of structural integrity — major frame or armour sections dragging or resting on floor.
- Total loss of power.

Post-Match Inspection

Judges may request the combatants to demonstrate operability of their robots' drive train and/or weapon following the end of the match, before the arena doors are opened. Judges may inspect the Combatant's robot after a match to determine how best to award damage points. The judges will not handle the Combatant's robot — the driver or a designated team member will handle the Combatant's robot. A member of the opponent's team may be present during any such inspection. Damage self-inflicted by a robot's own systems and not directly or indirectly caused by contact with the other robot or an active arena hazard will not be counted for scoring purposes.

2.2.3. Scoring Control

Each robot is awarded a point in the Control category based on its demonstration of control of itself, its opponent, and the match. Length of time during which control is demonstrated, and the degree to which control is demonstrated, shall both be taken into account in the final determination of which robot showed superior control and is to be awarded the control point. The degrees of possible control examples are:

- Helpless. The robot is unable to demonstrate control, is barely mobile, or moves randomly or intermittently.
- Occasional control. The robot may achieve a few shoves or wedge lifts on the opponent, or brings its weapon to bear a few times. It may dodge or escape a few of its opponent's attacks. It shows some control of its position relative to its opponent. It often has to correct its aim while driving.
- Adequate control. The robot achieves several attempted attacks, and some effective attacks. It avoids some of the opponent's attacks. It only occasionally has to correct its driving aim.
- Good control. The robot executes many attempted attacks or several effective attacks. It dodges or escapes regularly. It generally drives to its target without correcting its aim. It can often compensate for its opponent's motion.
- Excellent control. The robot executes many quality attacks. It rarely misses its target. It dodges or escapes regularly and recovers quickly. It is rarely out of position relative to its opponent.
- Transcendent control. The robot attacks at will and can stay on its opponent. It dodges most blows or escapes almost all attempts to lift, pin, or grapple. It rarely misses and does not need to stop to take aim or correct aim.

2.2.4. Scoring Style

This is the tricky one. Style can mean totally different things to different people, and in this circumstance, this is exactly as it should be. What this category of points is to indicate is how entertaining the judge (and hopefully the audience) thought the robot was in its battling.

Style can incorporate an effective strategy, where an obviously out-powered bot reliably executes a manoeuvre designed to lessen the impacts of the other bot. It can incorporate using a tactic that is particularly effective against that particular style of opponent (high-siding a wedge, for example, or keeping a spinner rammed into the wall to prevent it from spinning up). A recent example of strategic "Style" was Pinscher's jaws grabbing Arachnophobia in mid-spin with magnificent timing. The crowd roared its approval, which highlights what the "Style" point is all about — something indefinable that nevertheless appeals and entertains. Style can be as simple as a team having a bot that "looks cool", whether through innovative mechanical engineering, or a novel themed paint job. More typically, style points would be given to the bot that shows the greater level of creativity, engineering, uniqueness, articulation, or motion. A plain steel box on wheels would not be likely to win many style points.