

The Robot Fighting League's South East Championships
Battle at the Beach

Battle at the Beach Tournament Procedures
March 2003

Document Revised February 15, 2003

Battle at the Beach Tournament Procedures – March 2003

1.	Introduction	1
2.	Arena Specifications	1
3.	Tournament Format	1
3.1.	Match Pairings	1
3.1.1.	Preliminary Rounds	1
3.1.2.	Finals Rounds.....	1
3.1.3.	Byes.....	2
3.2.	Match Frequency	2
3.3.	Regular (Single Combat) Matches	2
3.3.1.	Determining a match winner.....	2
3.3.2.	Pinning & Lifting.....	2
3.3.3.	Stuck Robots	2
3.3.4.	Tapping Out.....	3
3.3.5.	Forfeit	3
3.3.6.	Special Considerations for Multi-Bots	3
3.3.7.	Postponements.....	3
3.4.	Elimination Rounds.....	3
3.4.1.	Elimination Match Format.....	3
3.4.2.	Elimination Match Pairings	3
3.4.3.	Completing the Elimination Rounds	4
3.5.	Tag Team Matches	4
3.5.1.	Entering Combat.....	4
3.5.2.	Determining a Winner.....	4
3.6.	Robo-Soccer Matches	4
3.6.1.	Goals	4
3.6.2.	Ball.....	4
3.6.3.	Beginning Play.....	5
3.6.4.	Scoring	5
3.6.5.	Determining a Winner.....	5
3.7.	Grudge Matches	5
3.7.1.	Grudge Match Formats	5
3.8.	Robot Impound	5
3.9.	Use of Frequency Clips	6
3.9.1.	IFI ISAAC Team Number and Frequency Management	6
3.10.	Combatant Eligibility	6
3.11.	Power of Officials.....	7
4.	Technical/Safety Inspection	7
4.1.	Static Inspection	7
4.1.1.	Dimensional Limits	7
4.2.	Operations test:	7
4.3.	Technical / Safety Disputes	7
4.3.1.	Failure to Pass.....	8
4.3.2.	Authority of Safety Officials	8
5.	Pit Area.....	8
5.1.	Pit Crew Members	8
5.2.	Robot Operators	8
5.3.	Age Restrictions.....	8
5.4.	Pit Passes.....	8
5.5.	Pit Safety/Behavior	8
5.5.1.	Specific requirements while in the pits:	8
6.	Testing Area.....	9
7.	Compressed Gas Storage and Tank Filling.....	9
8.	Fueling Area.....	9
9.	BattleBots™ Licensed Robots	9

1. Introduction

In the spirit of fun, entertainment and safety, we have developed the following set of rules and guidelines for the next Battle at the Beach tournament. These rules are based on generally accepted event rules as recognized across the country. Since the technology of the sport of combat robotics changes with the speed of an arms race, these rules are subject to change at any time. Should a rule change be warranted, Battle at the Beach will endeavor to give the Combatants as much notice as possible or reasonable.

Significant changes to these rules are highlighted in red and should be reviewed carefully.

Please review the following procedures, which apply to the next Battle at the Beach tournament. Should you have any questions or comments you can contact Battle at the Beach for clarification.

2. Arena Specifications

- Until further notice, the basic arena construction is of steel and includes (1) or more clear safety walls, (1) or more covered walls, a raised floor and a ceiling. The basic arena configuration and size will vary from tournament to tournament.
- The arena floor is constructed of 1/8" steel painted with battleship gray traction paint. The arena floor installed directly on an existing stage raised 2' to 3' from the venue floor.
- An perimeter of railroad ties surrounds the arena at the base of the walls. This inner perimeter or "bumper" may or may not have spikes, barbs or other non active weapons / obstructions attached.
- The arena is surrounded by a 10' tall safety wall. One or more sides of the safety wall is covered in clear poly carbonate no less than 1/2" thick. Remaining walls or (portions of the walls) and ceiling are covered in 3/4" plywood and / or 1/8" steel. The lower 12" of the front (audience) safety wall is steel sheet.
- The arena floor is marked at opposite sides with 4' diameter starting circles for single combat and a 4' deep "Tag Team" zone for Tag Team and Robo-Soccer matches.
- 2 Pneumatic "Kaate Chopper" hammers are located at the sides of the arena. These are large hammer-like hazards decorated to look like Karate-chopping hands.
- The arena is equipped with forced-air ventilation to the outside of the venue.

3. Tournament Format

A Battle at the Beach tournament is a standard double elimination combat robot tournament. Regular matches for robots in the 12 and 30 pound classes will be 2-1/2 minutes in length. Regular matches for robots in the 60 and 120 pound classes will be 3 minutes in length.

3.1. Match Pairings

3.1.1. Preliminary Rounds

For preliminary rounds robots will be paired on the tournament ladder based first by their rank and then by frequency.

3.1.2. Finals Rounds

For finals rounds robots from the winners' tree will be paired with robots from the losers' tree.

3.1.3. Byes

Matches will be filled in on the initial ladder such that robots with higher rank are more likely to receive byes.

3.2. Match Frequency

A Combatant is allowed no less than 30 minutes to prepare for the next match. This time is calculated from the time the Combatant leaves the post-match staging area. If the Combatant fails to return to the pre-match staging area within 30 minutes, the Combatant may be forced to forfeit. It is recommended that any routine maintenance (ie: battery charging) should be capable of being performed well within this time period. In extreme cases the 30 minute time period may be lengthened at the discretion of Battle at the Beach.

3.3. Regular (Single Combat) Matches

In Regular Match two robots compete head to head, starting from the starting circles located on opposite sites of the arena..

3.3.1. Determining a match winner

A robot loses a match when one of the following occur

- 1 The robot does not show sufficient controlled translational movement on request by a Tournament Official. After a 10 second countdown, the robot will be issued a loss by TKO.
- 2 The robot does not show **any** movement on request by a Tournament Official. After a 10 second countdown, the robot will be issued a loss by KO.
- 3 Should both robots in a given match become incapacitated in the arena and neither robot has achieved a clear KO, the match will go to a judges' decision.
- 4 A robot that is deemed unsafe by Tournament Officials after the match has begun will be disqualified and therefore declared the loser by TKO. The match will be immediately halted and the opponent will be awarded a win. Should the disqualified robot manage to remedy the problem and has yet to compete in the loser's bracket, they will be allowed to return to combat as would any other robot who has one loss. This is subject to approval by the highest ranking Tournament Official on site at the time of the disqualification. This rule is designed solely around the safety of spectators, Combatants and tournament staff.
- 5 All other matches will be decided by judges' decision. **Judges' decisions are final.**

3.3.2. Pinning & Lifting

Robots may not win solely by pinning or lifting their opponents. Officials will allow pinning and / or lifting for a maximum of fifteen (15) seconds per pin / lift then instruct the attacker to release the pinned/lifted opponent.

An attacker that does not stop a pin or lift immediately when requested by the Official shall be deemed the loser and move to the loser's bracket or out of the tournament, unless the two robots are stuck together. (See 3.3.3)

3.3.3. Stuck Robots

Matches will be paused to separate robots in the event that they become stuck together in the arena.

3.3.4. Tapping Out

Should a Combatant determine their robot is damaged to the point they wish to end the match, they will notify the Tournament Official of their intent. At that point the Official will ask the Combatant to confirm he/she wishes to end the match. If the Combatant says "Yes", the Official shall instruct the opponent to cease attacking and back away from the Combatant's robot. The Combatant tapping out will be deemed the loser and a win will be awarded to the attacker by TKO (See 10.0)

3.3.5. Forfeit

Should a fully registered Combatant forfeit or be disqualified prior to the beginning of a match, their opponent shall be awarded a bye and a win.

3.3.6. Special Considerations for Multi-Bots

Robots consisting of physically separate, independently controllable segments are referred to as *multi-bots*. As long as at least one of a multi-bot's segments is still able to show movement when requested to do so, that combatant is still considered "alive". To score a knock-out against a multi-bot, all of the multi-bot's segments must be incapacitated.

3.3.7. Postponements

A competitor may request a postponement of a match at any time prior to entering the arena. The tournament staff will endeavor to accommodate postponement requests. The Event Organizer reserves the right to disqualify a robot that cannot be entered in a fight in a timely manner.

Once a robot has been loaded into the arena for a match, the competitor **cannot** request a postponement. The competitor must compete in the match or request a forfeit.

To assist competitors in verifying that their robots are ready for combat, the tournament staff provides a **staging area** for the robots about to enter the arena. Before a robot can be loaded into the arena, the competitor must place it in the staging area and demonstrate that the robot is operable to the arena staff. A robot in the staging area must have its wheels off the ground, and the competitor must have the frequency clip(s) for the required frequency or frequencies.

3.4. Elimination Rounds

If there are more than **32** entrants in a class the Event Organizer may opt to begin the competition in that weight class with one or more Elimination Rounds to reduce the field before one-on-one combat begins.

3.4.1. Elimination Match Format

Four robots in the weight class are selected for an elimination match. The match ends when **any two** robots have been eliminated by knockout or when time expires. In the event of time expiring two winners will be selected by a Judges Decision.

The winning robots in an elimination match qualify for one-on-one combat. The losing robots in an elimination match will face two more robots in a subsequent elimination match. A robot receiving two losses in the elimination rounds is eliminated from the competition.

3.4.2. Elimination Match Pairings

Combatants are selected for the first elimination round as for tournament rounds (see 3.1) with byes assigned as necessary. Combatants for subsequent elimination rounds are selected from

the pool of combatants who received byes in the first round and combatants that have lost one match.

3.4.3. Completing the Elimination Rounds

The Elimination Rounds continue until all entrants have either advanced or accumulated two losses. In the event that 2 robots with one loss each are left at the end of the elimination rounds, they will compete in a one-on-one elimination fight, with the winner advancing and the loser accumulating 2 losses and thus being eliminated.

3.5. Tag Team Matches

The Event Organizer may elect to have Tag Team matches. In a Tag Team match 4 robots compete in teams of two, with one robot from each team engaging in combat in the arena while the second robot from each team waits in its home "Tag Team Zone".

3.5.1. Entering Combat

When the match begins **one** team member from each team will leave their home Tag Team Zone and engage their opponent in the arena. Either teammate may start, with the choice left up to the team members. The remaining teammate must remain in the home Tag Team Zone.

The robots waiting in their home Tag Team Zone may enter the combat when:

- Their teammate robot re-enters the home Tag Team Zone
- Their teammate is knocked out.

If an opponent enters a team's home Tag Team Zone the robot waiting there may attack it as long as it remains there, but may **not** leave the home Tag Team zone until released by re-entry of their teammate.

3.5.2. Determining a Winner

A team loses a Tag Team match when:

- (1) both team members have been knocked out as described for a Regular Match (3.3.1)
- (2) time expires, one team member is knocked out, and both opponents are still operational
- (3) All other matches are decided by Judges Decision.

3.6. Robo-Soccer Matches

The Event Organizer may elect to have Robo-Soccer matches. In a Robo-soccer match 4 robots compete in teams of two. As in soccer the object of the match is to score more goals than the opposing team.

3.6.1. Goals

The Robo-Soccer goals are steel cages 2' deep with a 2' high by 4' wide opening. The goals are affixed to the bumpers at the centers of the opposite walls behind the starting circles used in Regular Matches.

3.6.2. Ball

The ball is a plastic sphere weighted to bring it to a stop quickly. 12-lb and 30-lb Robo-Soccer matches are played with a 6" diameter ball, 60-lb and above matches are played with an 8" diameter ball.

3.6.3. Beginning Play

The match begins with the ball placed on the arena floor at the midpoint between the goals. The combatants start from positions at opposite sides of the starting circle, behind the line marking the Tag Team zone.

3.6.4. Scoring

A team scores a goal by moving the ball completely into the goal. After a goal is scored the combatants must **immediately** stop moving. The ball is replaced in the center of the arena and play resumes.

3.6.5. Determining a Winner

A team loses a Robo-Soccer match when:

- (1) The opposing team scores two goals
- (2) Time expires, the team **has not** scored a goal, and the opposing team **has** scored a goal.
- (3) In the event of a tie, the match is declared a draw.

3.7. Grudge Matches

Since inherently the Battle at the Beach schedule of matches is not determinable, any time left in the tournament (including the guaranteed time limit, see 3.2) will be set aside for "grudge matches". These grudge matches will be run as if they were official tournament matches or "Death Matches" (see 3.7.1.1) but the outcomes will not be recorded in the official log. Grudge matches are on a first come, first serve basis and Battle at the Beach will leave the arena open as long as is possible or practical. Battle at the Beach reserves the right to disallow any such matches for any safety, time or logistical reason. All grudge matches must be cleared in advance by the Event Promoter.

3.7.1. Grudge Match Formats

Combatants in a "grudge match" may choose either a **Regulation Match** or a **Death Match**. A Regulation Match is conducted using standard Battle at the Beach match rules and procedures. The combatants can elect to fight in a Death Match instead: To conduct the match as a Death Match both combatants must agree to do so.

3.7.1.1. Death Match

A Death Match lasts 4 minutes and ends when any of the following occurs:

- one of the combatants is knocked out (as defined for a Regulation Match)
- one of the combatants yields ("taps out")
- time expires

If both combatants are moving when time expires, the match is declared a draw. If it is not clear that both combatants can move, the Judge Foreman will request each driver to demonstrate mobility. If only one combatant can move, that combatant is the winner. If both can move, the match is a draw. If neither can move, the match is a draw.

3.8. Robot Impound

At the conclusion of any match, Tournament Officials may request that a Combatant's robot be placed in impound for inspection. The Combatant shall immediately move his/her robot to the impound area, completely render it safe, leave the transmitter, and exit the impound area. If the robot needs to be disassembled Tournament Officials may ask the Combatant to remove the parts requested. All work shall be performed in the impound area. Time spent in the impound will not count towards a Combatant's guaranteed time between matches (see 1.3).

During robot impound, should Combatant's robot be found to have violated any of the rules of competition including, safety and weight, that Combatant shall be subject to possible disqualification as well as having their passes confiscated. The violating Combatants may also be required to remove **all** of their robots from the premises for the remainder of the tournament.

3.9. Use of Frequency Clips

To prevent interference between robots, one antenna clip is provided for each of the frequencies used by Battle at the Beach tournament Combatants. Before their transmitter is turned on, the Combatant must obtain the appropriate clip for his or her frequency and attach it to the transmitter antenna. Clips are obtained from the Tournament Frequency Coordinator. This clip must remain attached at all times while the transmitter is on. After the transmitter has been turned off, the clip is returned to the Frequency Coordinator. Unless otherwise authorized by a Tournament Official, use of a transmitter without a frequency clip can result in disqualification and expulsion from the tournament forfeiting all passes and entry fees.

3.9.1. IFI ISAAC Team Number and Frequency Management

The IFI Robotics ISAAC 900 MHz radio control system is subject to the use of frequency clips. When a competitor checks in for safety inspection he or she is assigned a team number by the safety staff. Competitors must use the assigned team number. Competitors may use a number of their own choosing if it is approved by the safety staff during safety check-in.

The ISAAC system offers 5 channels in the 900 MHz band, enabled through the use of a dongle connected to the Competition port on the ISAAC Operator Interface:

- 04 - reserved for Safety.
- 13 - reserved for competition
- 22 - reserved for competition
- 31 - reserved for competition
- 40 - reserved for testing

The Frequency Coordinator will provide a clip for each ISAAC channel. Competitors must obtain the clip for their channel before using their ISAAC radios. Competitors should provide their own channel-enable dongles. The Tournament staff will have a small number available for use during the tournament.

Competitors may operate ISAAC systems using a tether cable without first obtaining a frequency clip, since an ISAAC on a tether operates without use of the radio.

3.10. Combatant Eligibility

To compete in the Battle at the Beach tournament, potential Combatants must complete and sign the Battle at the Beach Combatant's Contract and Entry Form. This document is released after your robot(s) have been approved for combat and before being accepted. Please consult Battle at the Beach for further information. Children under the age of 18 may enter a Battle at the Beach tournament with certain restrictions and must be supervised by an adult 18 years of age or older. (See 3.0). Building machines can be dangerous. Don't build them or operate them unless you are qualified to do so, or supervised by a qualified adult. Combatants are solely responsible for their robot or machines whether or not it complies with the rules of Battle at the Beach or has been inspected for safety or otherwise by Battle at the Beach tournament staff. The Combatants' responsibility includes all matters of safety, condition, design, conformity to law, operation, merchantability, conflict with other tournaments and fitness for use for any particular purpose. Team Captains are responsible for all aspects pertaining to their robots and pit crew members.

3.11. Power of Officials

Combatants must follow the instructions of Tournament Officials at all times. This is necessary to maintain the safety of everyone at the tournament. Circumstances beyond the scope of these rules and guidelines shall be up to the Officials' decisions. All Officials' decisions are final and will be supported by Battle at the Beach management.

4. Technical/Safety Inspection

Safety is Battle at the Beach's paramount concern. The section below covers the minimum safety requirements a Combatant must conform to, to be allowed to compete in the Battle at the Beach tournament.

4.1. Static Inspection

- Eligibility for class entered - compliance with the rules and guidelines as described in the current version of the **Battle at the Beach Technical Regulations**.
- A Combatant's robot will not be inspected if it does not have adequate protective covers. Combatants shall be required to personally demonstrate that the safety covers are adequate.
- Weight check - No tolerance for overweight robots.
- Appearance suitable for competition. No profane, racially insulting, sexually illicit graphics, etc. will be allowed. Battle at the Beach reserves the right to have removed from Combatant's robot any graphics deemed not suitable for general public viewing.
- Internal inspection -- covers/armor must be removed to allow for an internal inspection.
- Approved batteries.
- Battery terminals not exposed.
- Pneumatic and hydraulic components (pressure vessels, valves, line, etc.) are compliant with Battle at the Beach rules.
- Leakage -- There shall be no visible or audible fluid/gas leaks.
- No other hazards.

4.1.1. Dimensional Limits

There is only one restriction on the dimensions of a robot at a Battle at the Beach Tournament (provided that the robot is within the weight requirements for its particular weight class). A robot must fit into a **7' (84"X84"X84")** cube with all parts fully extended as they may be in combat. Please remember, if a robot poses any threat to safe competition, the tournament staff and Technical/Safety Inspectors reserve the right to disqualify it.

4.2. Operations test:

- Transmitter/receiver check --Ensure that the robot is receiving adequate signal without interference.
- Verify master switch and fail safe.
- Verify weapon(s) operation and safety.

4.3. Technical / Safety Disputes

Tournament Safety / Technical Officials are held to the highest standards of fairness and interpretation of the rules as set forth in the tournament documents. If a Combatant's robot should fail based on the strict interpretation of the rules every means possible will be explored to remedy the situation and allow the Combatant to compete. However, should a dispute arise between the Combatant and the Senior Safety Official, the Event Promoter shall rule on the acceptance or disqualification of the Combatant's robot and this ruling will be final.

4.3.1. Failure to Pass

Any Combatant failing safety / technical inspection will forfeit Combatant status and may be required to remove their robot from the premises for the duration of the tournament.

4.3.2. Authority of Safety Officials

The safety rules called out in this document are to be considered a guideline for Combatants. Battle at the Beach reserves the right to disqualify any robot deemed unsafe.

5. Pit Area

5.1. Pit Crew Members

Until further notice, there is no limit to the number of pit crew members a robot may have. (see 5.2)

5.2. Robot Operators

A robot may be controlled by multiple operators. The number of operators is limited to (2) only. The number of team members present on the Combatant's platform is also limited to (2) per team.

5.3. Age Restrictions

Children under age 10 are allowed to drive a robot in the Battle at the Beach tournament but are not allowed in the pit area at any time. Certain exceptions to this rule can be made by Battle at the Beach to accommodate builder's special needs.

5.4. Pit Passes

Pit Passes for crew members are included with the entrance fee for each robot.

- **(1) Pit pass is included for each 1, 12, or 30 lb robot.**
- **(2) Pit passes are included for each 60 or 120 lb robot.**
- **(4) Pit Passes are included for each 220 or 340 lb robot.**
- **Additional pit passes can be purchased at the spectator event rate.**

The Combatant and all of his or her crew members are required to wear official Battle at the Beach event Pit Passes at all times during a tournament. Pit Passes are nontransferable or exchangeable. A Combatant must carry a form of ID on them at all times and will be required to produce proof of identity upon request of any tournament staff member and members of the security team.

5.5. Pit Safety/Behavior

While it is impossible to list all the safety / behavior requirements of the Pit area, Combatants should practice common sense and good sportsmanship at all times. Any Combatant violating any of the safety rules is subject to immediate disqualification and removal from the event forfeiting all passes and entry fees as well as being banned from future Battle at the Beach events.

5.5.1. Specific requirements while in the pits:

1. All robots' wheels shall be lifted off of the ground so that they are suspended in air. This is to prevent runaway bots.

2. Under no circumstances shall a robot that employs pneumatic/hydraulic systems be pressurized in the pit area. A robot may only be pressurized in the Arena or in a designated area just prior to their match.
3. **Gas supply cylinders in robots must be emptied before the robot is moved to the pit. Competitors may fill their supply tanks one hour prior to the scheduled time of their next match.**
4. Keep all sharp objects and edges covered at all times in the pit.
5. Welding and grinding is not allowed in the pit area. A designated welding / grinding area will be made available.
6. Make sure the tournament Frequency Coordinator is aware of your radio frequency(ies) and channel(s). Do not use your radio at any time without first obtaining and attaching a frequency clip (See 1.7). **UNAUTHORIZED USE OF TRANSMITTERS IS GROUNDS FOR IMMEDIATE DISQUALIFICATION AND REMOVAL FROM THE PREMISES FORFEITING ANY AND ALL PASSES AND ENTRY FEES.** Note: a spectrum analyzer as well as homing equipment will be on site and any illegal transmitter will be located and dealt with. Any violators are subject to disqualification from all future Battle at the Beach events.
7. As safety issues arise during a tournament, the tournament staff can and will modify the rules regarding safety as set forth in this document and make them effective immediately. A flyer will be placed at each pit table indicating the rule change and the effective time of the change. Anyone found in violation shall be subject to disqualification.
8. Be safe. Keep your fellow Combatants safe. Have a good time.

6. Testing Area

An area for testing purposes will be provided for all Battle at the Beach tournament Combatants. A Tournament Staff Member will supervise the testing area. This Official will control entry and exit from the testing area, the testing area schedule, and what type of testing may be safely executed.

7. Compressed Gas Storage and Tank Filling

Compressed or liquefied gases for use in pneumatic systems will be stored in approved cylinders at a designated location in the tournament venue. All compressed gas cylinders will be stored upright and secured to a rigid support with a safety chain.

A tournament safety official will supervise the filling of all compressed or liquefied gas supply tanks.

8. Fueling Area

Fuel for robots with internal combustion engines will be stored in approved containers and kept in a secure outdoor area adjacent to the pits. All fueling will be performed in this area, supervised by a Steel Conflict safety official. Smoking and use of cellular telephones, radios, power tools, and other potential ignition sources is **STRICTLY PROHIBITED** in the fueling area.

7.9. BattleBots™ Licensed Robots

BattleBots™ licensed robots are welcome to compete at Battle at the Beach events, but due to BattleBots™ Player's Agreement issues they will be edited out of any television coverage or video. We **strongly** suggest you change the name and appearance of any BattleBots™ licensed robot prior to registration so your robot(s) can appear in television coverage and recorded video.

Battle at the Beach Tournament Procedures – March 2003

Competitors with BattleBots™ licensed robots will be required to affix an identification sticker (supplied by Battle at the Beach) to each robot so that they can be identified and edited out in post production.