



Impact Robotics League Event Safety Rules Battery & Bot Handling

Version 1.0, Effective Date August 22, 2025

1. Pit Safety

- 1.1 All builders must follow basic safety practices when handling tools or working on powered robots.
- 1.2 Safety glasses are required for anyone working on or near powered robots.
- 1.3 Teams must be alert and aware of their surroundings in the pit area.
- 1.4 Batteries may not be installed in robots while in the pit area.

2. Battery Safety

- 2.1 Middle school participants must have direct adult supervision when installing or removing batteries.
- 2.2 All battery charging and storage must occur only in designated charging areas.
- 2.3 Batteries must be stored in LiPo-safe fireproof bags or ventilated metal boxes when not in use.
- 2.4 All batteries and chargers must be clearly labeled with team or bot identification.
- 2.5 Batteries must not be left unattended during charging.
- 2.6 Batteries may only be installed just before entering the arena or test box.
- 2.7 Batteries must be removed immediately following matches or tests and stored properly.

3. Bot Safety

- 3.1 All active weapon systems must have a clearly visible locking device when not in the arena.
- 3.2 Locking devices must be brightly colored, labeled, securely affixed, and physically capable of preventing motion.
- 3.3 After each match, robots must fully spin down and deactivate before leaving the arena.

4. Functional Safety Test Procedure

- 4.1 Place the robot in the secure test box with power off and all safety devices in place.

- 4.2 Turn on the transmitter and place it on a stable surface with controls in the neutral position.
- 4.3 Remove guards and covers as needed, but leave the weapon lock engaged.
- 4.4 Confirm the test area is clear and that the handler is not in contact with any moving parts.
- 4.5 Power on the robot and confirm successful transmitter binding.
- 4.6 If any unintentional movement is observed, power off immediately and troubleshoot.
- 4.7 Remove the weapon lock.
- 4.8 Clear all personnel from the test box and securely close the door.
- 4.9 Use the transmitter to verify all functions.
- 4.10 After testing, return controls to neutral, power off the robot and transmitter, and reinstall all safety devices.

5. Robot Operation Procedures

- 5.1 Robots must have functional failsafes that immediately stop motion upon signal loss.

6. Standard Match Load-In Procedure

- 6.1 Place the robot in the arena with the weapon shielded and away from others.
- 6.2 Turn on the transmitter and place it in the designated location.
- 6.3 Turn on the robot and confirm successful receiver binding.
- 6.4 Remove weapon locks.
- 6.5 Ensure the arena door is fully closed.
- 6.6 Begin operation only after the door is closed.

7. Standard Deactivation and Load-Out Procedure

- 7.1 Disable the weapon system using applicable cutoffs or safety procedures.
- 7.2 Turn off the robot's main power.
- 7.3 Turn off the transmitter.
- 7.4 Reinstall all safety locks and guards before handling the robot.

8. Emergency Procedures

- 8.1 In an emergency (e.g., fire or runaway robot), both teams must stop their bots immediately.

8.2 Shut off the transmitter to engage the failsafe.

8.3 The referee may declare the match over for safety concerns.

8.4 Robots must be deactivated using the standard emergency procedure.

8.5 No work may be performed on the robots until a decision is made.

9. Emergency Match Stoppage

9.1 A referee may halt a match due to arena breach, damage, or safety hazard.

9.2 Upon stoppage, all operators must deactivate robots immediately.

9.3 Robots may be left in place or moved to a safe location at staff discretion.

9.4 A determination will be made whether the match may resume.

9.5 Safety of all people remains the highest priority at all times.

10. Safety Offense Policy

Our primary goal is to maintain a safe environment for all participants. Safety violations will be addressed immediately and firmly to prevent accidents and reinforce good habits.

10.1. A first minor safety offense by any team member will result in a verbal warning and a reminder of safety protocols.

10.2. Additional offenses by any member of the same team may result in match penalties, including a controller impoundment of 10 seconds per offense at the start of the next match. During impoundment, the opponent may attack the immobile robot.

10.3. Offenses are cumulative until a penalty is issued. For example, three total infractions may lead to a 30-second impoundment.

10.4. Once a penalty is assessed, the team's offense count resets.

10.5. The Event Director or safety officials have final authority to escalate consequences, including match forfeiture or team disqualification, in cases of repeated or serious violations. Their decision is final.