

# BATTLEBOTS®

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## SAFETY HAZARD WARNINGS & RULES FOR HANDLING ALL BATTERIES

Welcome to BattleBots. Below is a list of mandatory rules and procedures for the safe handling any use of all batteries including and especially Lithium-based batteries. You must read, agree to follow and acknowledge your receipt of these rules and procedures by signing where indicated at the end of the BattleBots Tournament Rules.

**Failure to comply with all of your battery and charger directions and requirements in this document can result in the removal of any Team member or disqualification of the entire Team and its robot.**

Batteries are potentially hazardous and can present a serious **FIRE HAZARD, PERSONAL INJURY AND DAMAGE**. Larger batteries, and especially Lithium, used for robots, potentially have high discharge current and frequent full discharge cycles require special precautions. Only a competent and qualified person should ever be charging, installing or removing your batteries. Contestants assume all risk associated with their batteries.

**A FIRE IS MOST LIKELY TO OCCUR DURING OPERATING CHARGING, DISCHARGING, SHORT CIRCUITING AND WRONG POLARITY CONNECTIONS ESPECIALLY IF A BATTERY HAS BEEN DAMAGED OR IS USING A CHARGER OTHER THAN SPECIFICALLY DESIGNATED FOR THAT PARTICULAR BATTERY, VOLTAGE AND AMPERAGE.**

**BattleBots Tech/Safety crewmembers have the final authority on all battery matters.**

### Allowed Battery Areas

Lithium-based batteries are allowed to be stored or used only in the following areas:

- 1) The Battery Charging/Storage area
- 2) The Testing area
- 3) The BattleBox
- 4) The Post-Fight Cool-Down/Inspection area

Obviously, when necessary, batteries can be directly moved between the above four areas.

Note that **LITHIUM BATTERIES ARE NEVER ALLOWED IN THE PIT AREA.**

### Initial Battery Handling

Battery safety begins as soon as you unpack:

- 1) Immediately after unpacking your battery packs, they must be taken to the Battery Charging/Storage Area. Lithium batteries are never allowed in the Pit Area
- 2) The batteries cannot be put on a charger until they have been inspected and approved by a Battery Safety/Tech Inspector.
- 3) A Battery Safety/Tech Inspector must also inspect all battery chargers and power supplies before they can be used to charge the batteries.

## Battery Charging

All batteries, particularly Lithium-based batteries can catch fire and even explode if not charged properly. These charging procedures and the directions that came with your batteries and your chargers directions must be followed at all times:

- 1) Verify that you and those around you are wearing safety glasses at all times.
- 2) Never charge a hot or even a warm battery; wait for it to get to room temperature before charging.
- 3) Lithium-based batteries must be charged in an appropriate fireproof bag specifically designed for your Lithium battery.
- 4) Before each charging, check carefully that the charger is set correctly for, amperage, voltage and battery type, etc. The settings from the last time you used that charger might have been changed.
- 5) Have a teammate re-check and doublecheck the charger settings before starting the charging.
- 6) While charging you must continue to monitor your batteries at all times for Excessive Temperature increase and/or Swelling. **If at any time you witness a battery starting to balloon, swell up, smoke or hot, discontinue charging process immediately, disconnect the battery and promptly notify the battery safety inspector who may take your battery to the cool down area in its fireproof bag and observe it in this safe place for approximately 15 minutes.**
- 7) Again, ALL batteries must be supervised at all times while charging. If a BattleBots official observes any batteries charging without an observer, they have the right to turn off the charger and are not obligated to notify anyone.

## Robot-Battery Handling

The procedures for handling batteries before and after matches are as follows:

- 1) The batteries may only be installed in your robot shortly before your match. Installation will be done in an outside area designated by a BattleBots safety official. As always, DOUBLE CHECK while connecting that your polarity is correct and of course safety glasses must be worn at all times.
- 2) Before installing the batteries, check that all Master Switches are off.
- 3) Once the batteries are installed in your bot you must wait 10 minutes before closing off and securing your battery box. This is in case there's a short-circuit or other problem and you need to quickly remove the batteries.
- 4) When your bot is ready, it must NOT be turned on moved inside the BattleBox or TestBox, until specifically asked to do so by a BattleBots authorized official.
- 5) **Immediately** following your match, take your bot to the outside Post-Fight Cool-Down/Inspection area, where it will be inspected by a Battery Tech/Safety person.

- 6) If there are no problems, you will be allowed to remove your batteries and take them directly to the Battery Charging/Storage area. Otherwise, follow any instructions from the Tech/Safety person.

## Damaged Batteries

A Lithium battery pack can contain more energy than you might expect.

- 1) If you see or hear a battery pack puffing (swelling), smoking, hissing or failing in any way, notify everyone nearby to get away and then **immediately** notify a Tech/Safety crewperson. Do not handle a battery pack that has been damaged or compromised in any way.
- 2) Any and all battery packs that are damaged or non-operational must immediately be disposed of by a Tech/Safety crewperson in a special battery disposal area located in the Post-Fight Cool-Down/Inspection area.

## Basic Safety Requirements

The safety of all BattleBots personal and participants is of primary importance. Thus:

- 1) Plastic safety glasses must be worn at all times while in the BattleBox, the Pit, Charging and Testing areas and whenever/wherever instructed by any BattleBots crew member. Regular eyeglasses are not sufficient.
- 2) Open-toes shoes or sandals cannot be worn in the Pit, Battery Charging/Storage area, the BattleBox or the Post-Fight Cool-Down/Inspection area.
- 3) Children under the age of 16 are not allowed in the Battery Charging/Storage area.

**BATTERIES ARE DANGEROUS. PLEASE BE VERY CAREFUL.**

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### SIGNATURE AND ACKNOWLEDGEMENT:

By signing below, I hereby certify, confirm and acknowledge that (i) my participation in BattleBots Season 5 is voluntary, (ii) I have read and fully understand these Tournament Rules, including, but not limited to, the **Safety Hazard Warnings & Rules For Handling All Batteries** section hereof, (iii) I understand and agree that all of the safety rules and instructions contained herein are for my own protection as well as the protection of other participants and show personnel and (iv) I agree with and am willing to follow and comply with all guidelines, rules and instructions provided to me now or in the future by the BattleBots Tech/Safety Inspector or other crewmembers, as well as BattleBots Inc., Greetings Media, LLC and their staff, in order to maintain the safety and health of myself and others.

SIGNATURE: \_\_\_\_\_

PRINT FULL NAME: \_\_\_\_\_