

Batteries

The powerhouse of the Robot

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Preparation

Batteries are the powerhouse of the bot, essentially the mitochondria. Crimping and managing these batteries are essential to a successfully running robot that supplies power as it should.

I take heavy reference from the Zebracorns (Team 900's) Battery Paper.

1. Cutting out the battery wire is essential, and we plan on using 12 inches of battery wire for two-gauge wire to ensure strong connectivity.
2. From there, the wire must then be stripped and crimped unto the lug crimp to ensure connection.
3. You will also need to crimp the other end of the battery wire for it to be put into the SB Connectors.

Finally, the connection to the terminal...

1. Use of any washers can reduce energy transfer and we usually cover our terminal connection with electrical tape and heat shrink.
1. You know your battery isn't working optimally if it shows visible signs of poor connection to the terminal.

Good Practices

Good practices:

1. Using a battery beak can help determine the battery connection and “charge,” and you’re looking for a “Good 130.” Having 0.02 ohm or less is also preferred.
2. However, you might need several batteries during the competition to ensure you have good batteries for all matches.
3. Labeling batteries is essential in the pits to organize and make sure you aren’t using a “dead” or used battery. It is also useful to make sure the battery is where it should be.

Scenarios

Scenario Responses:

1. If a battery is suspected not to work as it should, you can disassemble (like we did at World Champs 2024-2025 season) and check the connections, and make sure everything is as it should
2. If a battery is leaking quickly, neutralize the acid leaking from it and use battery spill kits. Try and keep the area safe and alert volunteers or officials if needed