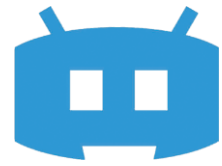


# SPARC Getting Started Guide

## Part 1: Before You Build Your First Bot



Maybe you've seen BattleBots™, been to RoboGames™ or other local events, seen video on the internet, or read event reports in Servo Magazine. Whatever the source, you've decided that you want to build a bot. At this point, you may be asking yourself a very important question: Where do I start?

### Finding an Event

One of, if not the first step you should take is to figure out where you'll be competing. For those that have been to an event, you probably have an idea where to look, but if you've not been to an event you may not even know where to look. In general, event information is readily available online through a range of sources.

In the US, the following URL's are your best bet when looking for an event:

<http://sparc.tools/>

[www.buildersdb.com](http://www.buildersdb.com)

<https://www.facebook.com/groups/RobotCombat/>

<http://www.rrevo.com/events/>

<http://robotbattles.com/>

In the UK, the best source for upcoming event information is <http://www.fightingrobots.co.uk/>

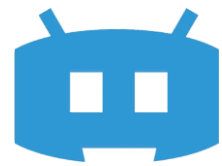
In Australia, the best source for upcoming event information is <http://www.robowars.org/forum/>

Beyond being a source for event information, the vast majority of the robot combat community online can be found spread between the SPARC Forum, the Facebook Robotics Community, FightingRobots.co.uk, (The Fighting Robots Association) and Robowars.org (Robowars Australia). These groups will be a great resource both for getting questions answered and seeing how other people have answered many of the design questions you're trying to address.

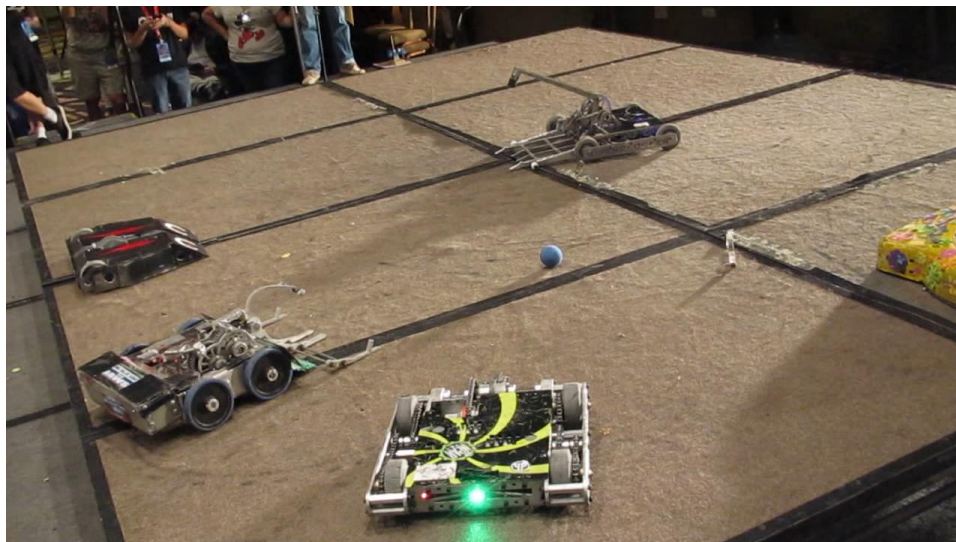
Once you've found an event you want to attend, the next step is to read through the rules of the event. While many events have the same rules across all of the weight classes, some events will have different rules for different weight classes which may influence which class you decide to start with. While not necessary, at this point it would be a good idea to attempt to find video from previous years of the event you're planning to attend. This will give you a good idea of the sort of machines you'll be fighting and the unique quirks of the environment you'll be fighting in.

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*There's a big difference between fighting in a fully enclosed arena...*



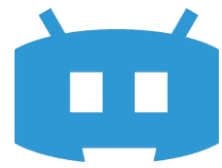
*and fighting on a stage.*

At this point, you've got enough information to start figuring out what you want your first bot to be. The next decision to be made is whether you want to start with a kit, design and build it yourself, or buy a ready to run bot.

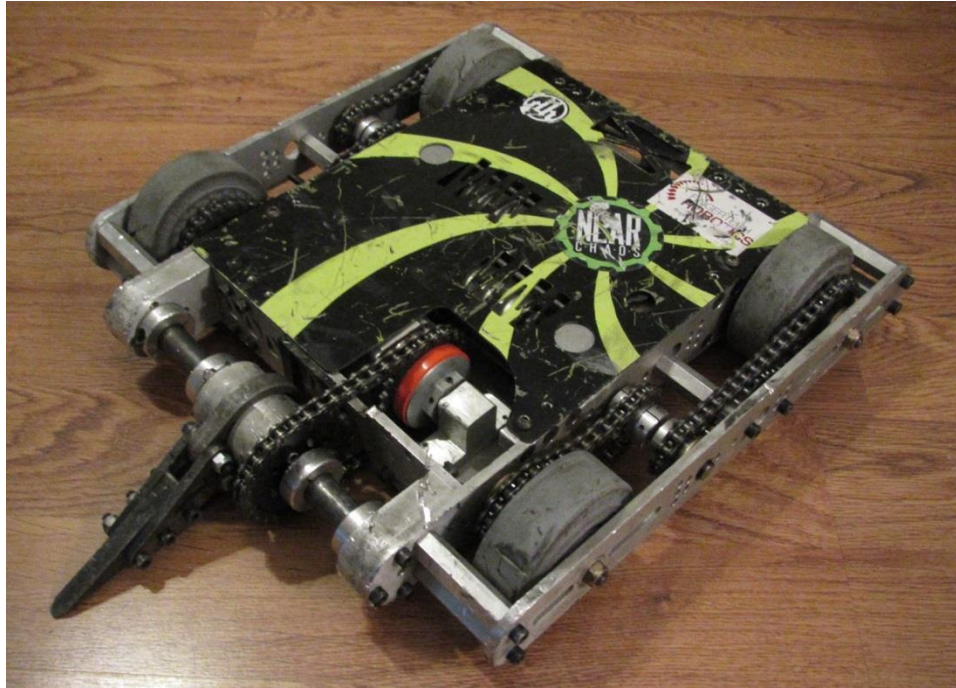
From a learning standpoint, designing and building your own machine is likely the best option. Building your own machine is also the most difficult option especially if you have limited tool access. If you go this route looking through past build reports in Servo Magazine and online will be a great means of learning from the mistakes of others and possibly picking up tricks to get better results out of the tools

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you have. A good option would be getting actively involved in the online communities and if one is available, the local robot combat community and talking with other builders about what you want to do. The best thing you can do during this process is ask questions. Every builder was new once and most builders are happy to offer advice when asked.



*Sometimes robots you design and build yourself work well.*

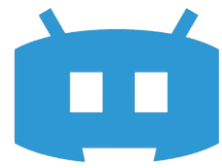


*Sometimes they don't.*

The easy option is to buy a robot that's ready to run. Some kit sites like [Kitbots.com](http://Kitbots.com) offer the option of having the kit fully assembled prior to shipping. You may also find robots for sale on any of the robotics community sites or ebay. The pros of buying a ready to run robot are pretty obvious: You know it works, you can likely find video of the bot (or the same kit in the case of kits) in action which will often show the strengths and weaknesses of the design before you buy anything, and it's a fairly quick way to go from nothing to a working robot. In the case of a pre-built kit, you'll be paying a good deal more than if you had built the same kit yourself. In the case of a used bot, you may have a large number of one-off parts that will be difficult to replace and there is the potential for worn or damaged components that are not initially obvious. If you are considering buying a used robot it would be wise to ask an experienced builder whether or not it would be a good fit for your needs. In both cases, the biggest

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thing you miss out on by buying a ready to run robot is that you won't learn nearly as much in the process of getting a bot into the arena. Taking time once you have the robot in your possession to go through all of the systems and familiarize yourself with the components and layout will help offset some of this and make it much easier to diagnose and repair any problems that occur during an event.



*Hypnus is a 12lb combat robot that was recently sold on ebay.*

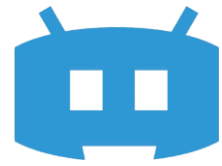
Buying an unassembled kit is effectively the intermediate option. While you'll learn more doing it yourself, you will still learn a great deal putting the kit together and you know that if you do it right, once it's together you'll have a machine that you know will work.



*Klazo is a lightly modified 1lb robot kit from Kitbots.com*

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If you're looking for a kit in the 150g-3lb range there are a large number of options to choose from. Kit vendors focused on this weight range include:

[www.fingertechrobotics.com](http://www.fingertechrobotics.com)

[www.kitbots.com](http://www.kitbots.com)

[www.botbitz.com](http://www.botbitz.com)

[www.shockbots.co.uk](http://www.shockbots.co.uk)

[www.titantechindustries.com](http://www.titantechindustries.com)

For large kits there aren't as many options. [www.rrevo.com](http://www.rrevo.com) and [www.gearseds.com](http://www.gearseds.com) offer kits focused on the 15lb educational class and [www.battlekits.com](http://www.battlekits.com) sells kits focused on the 60-220lb classes.

In the end, whatever method gets you to an event and competing is the best approach. There's no substitute for the experience you'll gain by actually entering an event.