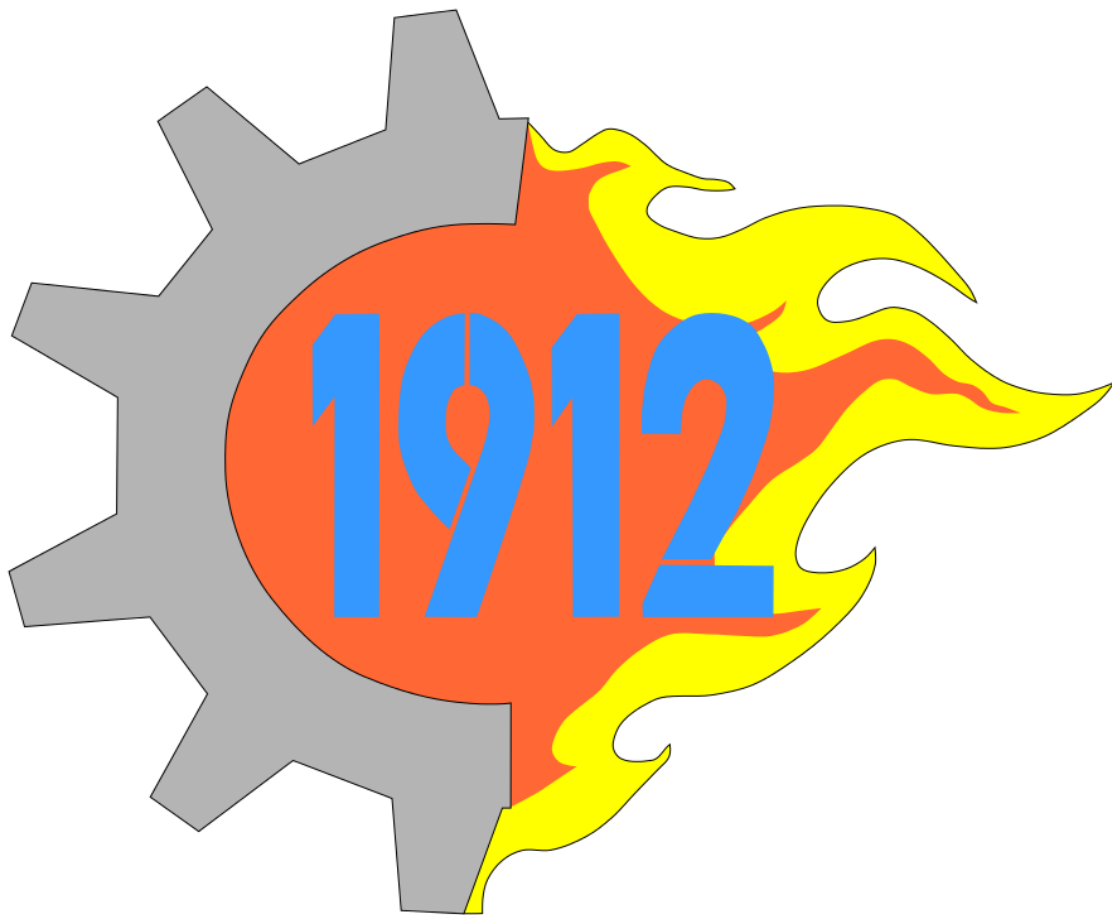


**Team 1912 Combustion**  
**Tinderbox Manual**  
**How to Run a Successful Robot Demo**



**Written by Alex Lew**  
**Edited by Clark Rowley**

It cannot be over-emphasized that *good planning is essential to a successful demo*. Know where you have to be, when you have to be there, and who you will be talking to. Plan accordingly and try to be as flexible as possible.

The exact focus of the demo will vary with the audience - when talking to potential sponsors or politicians, show them why you deserve their partnership. On the other hand, a group of kids at a summer camp wants excitement and robot interaction rather than a thorough discussion.

### **General practices to follow:**

- Safety FIRST! A 120 lb. robot is not a toy; it's a heavy machine moving at high speed. Game pieces and mechanisms can be dangerous if used without attention and common sense. Always be alert and aware of the environment.
- Don't use the robot for anything that it wasn't designed for. Countless hours have been spent in its construction. Treat it with respect.
- Instead, use the robot to attract positive attention. Engage as many people as possible.
- Allowing kids to drive depends on the age of the audience, time constraints, and space available. Only let kids drive if they are responsible enough (at least 4th grade), there is enough time for everyone to drive, and space is not a safety hazard.
- Perform a full systems check before the demo to prevent an operation issue from arising at the demo. If the robot does happen to break, stay calm. Assess the problem and quickly repair it if possible. Otherwise, explain to the audience that even the most robust machines can break.
- Document the demo with photos and videos. If your team logs outreach hours and/or impact, record the data while it's still fresh.
- Business cards are expendable. Distribute them widely so people can connect with your team website and social media. Brochures have more detailed info and are more expensive to produce – save them for VIPs (e.g. potential sponsors, lawmakers, teachers).
- Have a basic introductory speech rehearsed so you can efficiently describe FIRST without diverging off topic. Touch on each Talk Topic listed below.
- Be professional. You are representing your team and FIRST, and it's essential to project a positive image. Stay focused, eager, courteous, and inviting. This is how you build strong partnerships with other organizations.

### **5 talk topics:**

1. FIRST mission: inspiring students to pursue engineering. Include an overview of the Progression of Programs, tailoring the discussion to fit the person you're talking to.
2. About your team. How many years you've been competing, which high school(s). Where alumni are studying. Where your mentors work. Number of students, subtly highlight diversity.
3. What the robot does. Describe the challenge as well as your robot's functions. Keep this as non-technical as possible (unless talking to engineering professionals) and use common names for mechanisms.
4. "It's more than just the robot." Promote your team as a complete business that builds skills in every imaginable field. Awards writing, teamwork, etc. If talking to a potential sponsor, spend quality time on developing sustainability plans and financial stability – and how THEY can help.

5. How FIRST has impacted you. What career pathway you're considering, and how FIRST has influenced your choices. For parents/educators, promote FIRST scholarship opportunities with flashy statistics.

### 6 sparkly statistics – useful at any demo

1. **\$19 million** in scholarship opportunities
2. **350,000** students involved in FIRST
3. **70** countries participating in FIRST
4. **99** FRC regional and district events
5. **\$40,000** minimum annual budget \*
6. **71%** alumni major in STEM field \*

*\* These apply to 1912, but can be replaced by the corresponding numbers for your team*

### Helpful handouts

- [Team 1912 brochure](#) – a brochure published by 1912 to introduce FIRST and our team
- [What is FIRST? brochure](#) – a brochure available on the FRC website that gives an overview of the FIRST Progression of Programs
- [FRC Overview](#) – a concise two-page document packed with useful FRC facts
- [FRC: How to Start a Team](#) – for those who are inspired to ignite their own team

### Student roles

- Lead presenter – introduces the team and FIRST
- Driver/operator – must be able to operate the robot safely and responsibly
- Safety captain – ensures that everyone is aware of the robot's operation so that it does not become a safety hazard
- Tether manager (when running wired) – prevents Ethernet cable from becoming tangled and/or a tripping hazard
- Media representative – documents the event with photos and/or video. It didn't happen unless you have pictures!

### Things to pack:

- Robot, game piece, and operator console
- Clamshell and charger
- Batteries and charger
- Power strip and extension cord
- 50 ft. Ethernet cable (even if you're running wireless)
- Basic toolkit (screwdrivers, zip ties, adjustable wrench, duct tape, wire stripper)
- Handouts (business cards, brochures, FIRST marketing material)
- Team banner, flag, poster, etc. – anything that projects your brand
- Camera