

BOX CART INTERCOL RULES

- 1) Driver **MUST** be in a seated or reclined position (**NO STANDING OR PRONE POSITIONS**).
- 2) All carts are propelled by gravity only. Motors, engines, bands, shifting weights, levers, fans, rockets or propulsion devices are **NOT** allowed.
- 3) All runs will be started on the start ramp at a "dead-stop" without a push, bump or shove from the driver or another person. You may rock your own body back and forth for momentum, but you may not roll your wheels with your hands or shove off from the ground or another cart. **NO PROPULSION DEVICES OF ANY KIND WILL BE ALLOWED.**
- 4) Lane choice at the start will go to the competitor with the quicker qualifying time. All subsequent lane choices will be determined by the quicker time of the previous competition run.
- 5) The final series of races in each category to determine the group winner will be executed as a "two best of three" races. Lane choice in the first race in the final series will be determined as described above after which the lanes will be alternated between the two finalists.
- 6) All vehicles and drivers **MUST** pass the safety inspection prior to racing at the event. This inspection will include, but is not limited to: Vehicles checked for durability, approved helmet, knee pads, elbow pads, gloves, full-length pants, shirts, closed-toe shoes, eye protection.
- 7) A vehicle may be entered in multiple categories provided that the driver and cart meet the requirements. **NO MULTIPLE** entries are allowed on any vehicle within the same category.
- 8) All vehicles **MUST** be fitted with a tow hook at the front of the vehicle.
- 9) All drivers **MUST** wear long pants, a sleeved T-shirt and closed toed shoes.
- 10) All drivers should wear knee pads, elbow pads and gloves. Safety gear will go toward overall points for the team.
- 11) Every driver **MUST** wear protective head gear. A full-faced motorcycle helmet is suggested and bicycle helmets are allowed. Head gear must be secured with a chinstrap. A hard hat is not a helmet.
- 12) Motorcycle gloves and jackets are highly encouraged, as well as protective eyewear.
- 13) Drivers under the age of 18 years of age must have entry form signed by parent or legal guardian.
- 14) All drivers and team members are expected to conduct themselves in a manner becoming of professional competition. The conduct of any team member is the responsibility of said team and as such **the team can be penalized for the misconduct of any member.**
- 15) The Box Cart Intercol is open to competitors of any age and gender. Male and female competitors will compete against one another in the same category.

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16) There are two categories/classes for competition. Listed below are the basic requirements for each category/class:

- a. Gravity Racer
 - i. Wheel specifications - 16" / 406.4 mm maximum diameter (bicycle inflatable type wheels)
- b. Luge Racer
 - i. Wheel specifications - 5" / 127 mm maximum diameter (skate board type wheel)
 - ii. Axle specifications - lean steer activated type of axles (skate board trucks).

17) The composition of a team on race day **MUST NOT** exceed **SEVEN (7) persons**. The following restrictions on team compositions are outlined: -

- a. Drivers (maximum 2)
- b. Chaperone/Coach/Team Principle (1 liaison with officials)
- c. Support crew maximum (maximum 4)

18) A competition class must consist of a minimum of two (2) vehicles. Where there are not enough vehicles to constitute a class, the competing vehicle will compete in another class.

19) All vehicles must be competitor / team built. Vehicle must not be an already built chassis or must not be any type of race chassis i.e. engine powered chassis, pedal type chassis, etc.

20) Vehicle **track width MUST NOT exceed 36 inches** from the outside edge to outside edge of tires on the same axle.

21) Vehicles **wheelbase MUST NOT exceed 72 inches** from the wheel centerline of front axle to the wheel centerline of rear axle. Overall **vehicle length MUST NOT exceed 96 inches**.

22) Vehicles **MUST NOT** exceed an overall height of 48 inches (with driver in race position).

23) Vehicles must be of sturdy construction: wood, fiberglass, metal, etc., and must be nailed and glued, screwed, and / or welded.

24) Vehicles **MUST** have a **minimum of four (4)** supporting wheels & cannot be inline. **No bicycles allowed, even with training wheels.**

25) For Gravity Racer Class any wheel and tire combination can be used but must not exceed an overall diameter (wheel & tire) of 16 inches or as specified on tire used.

26) For Luge Class skate board wheels will qualify with polymer or rubber being part of the wheel assembly.

27) Vehicles **MUST** have an operating and effective brake mechanism (exception applied for Luge Class)

28) The race weight of the vehicle may not exceed 500lbs of vehicle and driver weight combined. Any and all added weight **MUST** be secured in a fashion where it **CANNOT** become loose during testing.

39) The nose of vehicle **MUST** be blunt and there must be **NO** sharp protrusions anywhere on the vehicle.

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BOX CART INTERCOL SAFETY GUIDE LINES

1. **Design Safety:**
 - **Stability:** Ensure that the Box Cart design prioritizes stability to prevent tipping or rolling during use.
 - **Low Center of Gravity:** Keep the center of gravity low to enhance stability.
 - **Aerodynamics:** Consider aerodynamics in the design, but not at the expense of stability or safety.
2. **Materials:**
 - **Durable Materials:** Use sturdy and durable materials for construction, such as wood, steel or reinforced plastic.
 - **Non-Toxic Finishes:** If applying finishes or paints, ensure they are non-toxic and safe for outdoor use.
3. **Construction Guidelines:**
 - **Secure Joints:** Ensure all joints are securely fastened with appropriate hardware, like bolts or screws.
 - **Smooth Surfaces:** Sand all rough edges and surfaces to prevent splinters or injuries during handling.
4. **Wheels and Axles:**
 - **Secure Wheels:** Make sure wheels are securely attached and properly aligned.
 - **Bearings:** Use quality bearings to reduce friction and enhance the overall performance.
5. **Braking System:**
 - **Effective Brakes:** Install an effective and reliable braking system to ensure control and safety during downhill races.
 - **Testing:** Regularly test and maintain the braking system to ensure its functionality.
6. **Protective Gear:**
 - **Helmets:** All participants **MUST** wear properly fitting helmets that meet safety standards cycling helmets allowed.
 - **Other Protective Gear:** Depending on the speed and nature of the soapbox event, additional protective gear like knee and elbow pads are compulsory for luge class racer and advisable for gravity racer class.
7. **Weight Limitations:**
 - **Adhere to Guidelines:** Follow weight limitations specified for the “test & tune” race event.
8. **Supervision:**
 - **Adult Supervision:** All students, children or young participants are to be supervised by responsible adults during construction and use.
 - **Event Supervision:** Races are overseen by event Race Marshals or responsible adults / parents who can enforce safety guidelines.
9. **Weather Considerations:**
 - **Rain and Slippery Conditions:** Proceed with caution at race director’s discretion in rainy or slippery conditions, as it can impact control and safety.
10. **Inspections:**
 - **Pre-Event Inspections:** GRATT officials **MUST** conduct pre-event inspections to ensure all Box Carts meet safety standards. This is done in the Scrutineering Assessment before proceeding to race.
 - **Participant Checks:** GRATT encourages participants to check their Box Carts before each test and race.

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