



Rules and Race Regulations

2026 Season

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1. KART CONSTRUCTION

To participate in this racing series, and collect points (race, series, moxie), your team members and kart must be registered as per Appendix A.

1.1. KART BODY

- Each kart shall have a body that consists of one of the following:
 - A children's ride-on toy or a recognizable portion thereof
 - Something that looks like it could conceivably be or have been a children's ride-on toy or a recognizable portion thereof
- Each kart must have a body at the start of each race.
 - If a kart's body falls apart during a race and cannot be repaired the kart may continue that race IF no required safety systems (which includes bumpers and proper driver protections.) are affected by the body's absence.
- Karts without a body or significant external decorations may not accumulate race season points, but may still run during the event, assuming like the above, that all safety regulations are still met with the lack of a body.

1.2. DRIVERS

- Each kart shall be controlled only by one human driver seated in or on the kart.

1.3. KART EGRESS

- Each kart shall be constructed such that an uninjured driver can exit the kart unassisted in 5 seconds or less.

1.4. KART SIZE

- Each kart shall not be longer than 62"
- Each kart shall not be wider than 36"
- Each kart, including the driver seated and dressed per the rules, shall not be taller than 72".

1.5. WHEELS AND TIRES

- Except for treaded tanks and walking/shuffling karts, each kart must have a minimum of three wheels that support the weight of the kart.
- Any wheel driven by a motor shall not be allowed to swivel like a caster wheel. Exceptions considered upon a 1 month notice to the Sanctioning Body prior to event.
- The minimum wheel track (wheel-to-wheel width) allowed is 12".
- The minimum wheelbase (axle-to-axle length) allowed is 18".
- Each wheel that supports the weight of the kart must have a tire mounted to it.
- Except for treaded tanks and walking/shuffling karts, all forces to drive the kart during the race must be transmitted through one or more tires.
- If wheels and tires meet budget requirements, any type of tread pattern, or lack thereof, is allowed.

1.6. STEERING

- No kart may be steered by remote control or by anyone besides the driver(s) onboard at any time.
- Axles or other metallic parts of your steering system should not extend past your wheel and tire by more than 1". Event Organizers reserve the right to correct the kart at their own discretion during technical inspection.

1.7. MOTOR PROPULSION

- Each kart shall be propelled only by one or more electric motors.
- Each motor must have a maximum RMS input voltage not greater than the fused battery voltage.
 - No DC-DC conversion allowed (i.e., boosting your 48v battery to 200v)

1.8. FUSE

The fuse is a required safety system

- Each kart must have one PRS-regulation fuse in series with the battery or batteries such that all current coming from the battery or batteries passes through the fuse before reaching any active electrical component that makes the kart go or go faster.
- It is recommended that the Fuse be located physically as close to the battery or batteries as possible.
- Each kart may not have PRS-regulation fuses stored on the kart or driver beyond the one required to be in the circuit.
- PRS-regulation fuses may not be actively cooled.
 - 'Active Cooling' is defined as cooling where energy (electrical, chemical, gravitational, dark, nuclear, thermal, temporal, etc.) is expended to obtain some reduction in the temperature or rate of temperature rise of the fuse element.
- Should you blow a fuse on race day, the timing and scoring booth, Grim, or other race officials will be the only allowed source of replacement PRS-regulation fuses. Actual physical location of the fuses may vary between races and will be determined by race officials for each event.
- Race Officials reserve the right to swap out any fuses for any team at any time
- Teams *must* replace fuses in pits or designated area once obtained from the designated person or area
- The PRS-regulation fuse that each kart is required to run varies based on the kart's nominal battery pack output voltage, must be unmodified from its purchase condition, and must be installed in such a way that:
 - The voltage at the fuse and the voltage at the batteries must be equal
 - All current moving to the motor controller must pass through the fuse before passing to the motor controller
 - You really shouldn't have anything in between the fuse and the batteries
 - Any regen protection diodes should be tested and demonstrated to the race officials during Tech Inspection

IMPORTANT NOTE: Violations or willful cheating any of the fuse rules will result in immediate ejection for the race weekend.

The fuse ratings for different nominal classes of battery systems are listed below:

| VOLTAGE (Nominal) | FUSE RATING | FUSE PART NUMBER |
|----------------------|-------------|---|
| 48 | 30A | (Digikey #F7139-ND) BF1 Series |
| 36 | 40A | (Digikey #F3089-ND) MIDI Series (Digikey #F6792-ND) BF1 Series |
| 28.8 | 50A | (Digikey #F3090-ND) MIDI Series (Digikey #F6793-ND) BF1 Series |
| 24 | 60A | (Digikey #F3091-ND) MIDI Series (Digikey #F10818-ND) BF1 Series |
| 18 | 80A | (Digikey #F3092-ND) MIDI Series (Digikey #F10820-ND) BF1 Series |
| 12 | 125A | (Digikey #F1879-ND) MIDI Series (Digikey #F7140-ND) BF1 Series |

For additional information on “Nominal” battery voltage and cell counts, see table under section **1.9.2. Battery, Fuse, and Voltage Table.**

- Any kart which makes use of walking mechanisms instead of wheels for propulsion can use a fuse with a current limit one rating higher than the standard PRS-regulation fuse for that kart's battery voltage.
- If the race is an off-road, rally-style race, 2x of the standard fuse limit may be considered by the local race officials. Please check with the organizers of your particular event **before** the event.
- If your nominal voltage is between ratings, you must use whichever current limit is lesser.
- Self-built battery packs must include a breaker or fuse inside the battery pack to interrupt the voltage on the battery leads. A full-authority BMS will be allowed in-place of the fused output leads. If you have questions, please ask your local EO.
 - This rule includes battery packs made out of commercial or automotive packs, such as Nissan Leaf cells, Chevy Volt packs, Ford C-Max, etc.
 - If you short your battery terminals, your battery should not catch fire. Don't test this.

1.9. BATTERY

- Each kart shall have at least one battery pack with a nominal voltage less than or equal to 48V that supplies traction current to the controller and motor. No batteries with a maximum charge voltage over 59.5v will be accepted.
- Each battery in the kart shall use one of the following chemistries:
 - SLA: Sealed Lead-Acid
 - AGM: Absorbed Glass Mat Lead-Acid
 - Ni-Cd: Nickel-Cadmium
 - Ni-MH: Nickel-Metal Hydride
 - LiFePO4: Lithium Iron Phosphate
 - LiPo/Li-Ion Lithium Polymer/Ion*
 - LTO: Lithium Titanate

WARNING: Teams running *any* lithium chemistry will need to demonstrate safe handling and charging procedures, and have batteries stored safely in a durable metal container on the vehicle. (EV batteries that are already in a metal enclosure do not require an additional containment). The sanctioning body must approve each kart's implementation of Lithium batteries. Failure to implement safe Lithium based battery handling procedures will result in being removed from the race.

- If using a battery technology not listed above, ensure local sanctioning body knows and approves of your battery and charging methods before the race weekend.
- Capacitor banks (100,000uF or more of parallel capacitance) are considered batteries and are not allowed.
- Advanced power storage systems can be considered by the Sanctioning Body with prior notice. They may also be vetoed by other teams under safety premises.
- If you are new, we strongly consider LiFePO4 as it is known to be one of the safer and power dense chemistries.

1.9.1. BATTERY MANAGEMENT SYSTEMS

- See Section 1.15.6.

1.9.2. BATTERY, FUSE, AND VOLTAGE TABLE

| | | | | | | | |
|---------------------------------|-------|------|------|------|------|------|------|
| Realized Voltage (Volts) | ----- | 12 | 18 | 24 | 30 | 36 | 48 |
| Fuse Rating (Amps) | ----- | 125 | 80 | 60 | 50 | 40 | 30 |
| Wattage (Watts) | ----- | 1500 | 1440 | 1440 | 1500 | 1440 | 1440 |

Battery Chemistry

| Li-Ion/LiPo | | | | | | | | |
|--------------------------|-----|------|------|------|------|----|------|--|
| # Of Cells in Series (s) | 1 | 3 | 5 | 6 | 8 | 10 | 13 | |
| Nominal (Volts) | 3.7 | 11.1 | 18.5 | 22.2 | 29.6 | 37 | 48.1 | |
| Full @ 4.1V | 4.1 | 12.3 | 20.5 | 24.6 | 32.8 | 41 | 53.3 | |
| Full @ 4.2V | 4.2 | 12.6 | 21 | 25.2 | 33.6 | 42 | 54.6 | |

| LiFePO4 | | | | | | | | |
|--------------------------|------|------|------|------|-------|-------|------|--|
| # Of Cells in Series (s) | 1 | 4 | 6 | 8 | 9 | 11 | 16 | |
| Nominal (Volts) | 3.2 | 12.8 | 19.2 | 25.6 | 28.8 | 35.2 | 51.2 | |
| Full @ 3.45V | 3.45 | 13.8 | 20.7 | 27.6 | 31.05 | 37.95 | 55.2 | |
| Full @ 3.65V | 3.65 | 14.6 | 21.9 | 29.2 | 32.85 | 40.15 | 58.4 | |

| LTO | | | | | | | | |
|--------------------------|-----|------|------|------|------|------|------|--|
| # Of Cells in Series (s) | 1 | 5 | 8 | 11 | 12 | 16 | 22 | |
| Nominal (Volts) | 2.3 | 11.5 | 18.4 | 25.3 | 27.6 | 36.8 | 50.6 | |
| Full @ 2.7V | 2.7 | 13.5 | 21.6 | 29.7 | 32.4 | 43.2 | 59.4 | |

| NiCd / NiMH | | | | | | | | |
|--------------------------|-----|----|----|----|------|----|----|--|
| # Of Cells in Series (s) | 1 | 10 | 15 | 20 | 24 | 30 | 40 | |
| Nominal (Volts) | 1.2 | 12 | 18 | 24 | 28.8 | 36 | 48 | |
| Full @ 1.4V | 1.4 | 14 | 21 | 28 | 33.6 | 42 | 56 | |

| SLA / AGM | | | | | | | | |
|--------------------------|-----|------|------|------|------|------|------|--|
| # Of Cells in Series (s) | 1 | 6 | 9 | 12 | 14 | 18 | 24 | |
| Nominal (Volts) | 2 | 12 | 18 | 24 | 28 | 36 | 48 | |
| Full @ 1.4V | 2.2 | 13.2 | 19.8 | 26.4 | 30.8 | 39.6 | 52.8 | |

1.10. CONTROLLER

- Each kart shall have a throttle-controlled motor controller to transfer power from the battery or batteries to the motor(s).
- Spark plates are banned.

1.11. THROTTLE

- Throttle must return to a position that does not provide propulsion when released. Either zero throttle or braking function upon release are acceptable.
- Upon removal of the throttle cable or a disconnect, motor controller must respond with a zero-throttle command.
- All throttles must have a spring style mechanical return to the zero-throttle position upon release.

| Throttle Type | MFR | Part | Price (est) |
|---------------------|----------------------|--------------|-------------|
| Thumb Throttle | MonsterScooterParts | X98-3441-002 | \$9.50 |
| Twist Grip Throttle | MonsterScooterParts | T53-6110 | \$20.00 |
| Foot Pedal Throttle | ElectricScooterParts | THR-89 | \$34.95 |

1.12. TRANSPONDER

Each kart must have a PRS-supplied *or approved* transponder affixed to it for timing and scoring purposes.

- Transponders must face upward and have a clear line of sight.
- Transponders borrowed from the PRS event must be returned to race officials at the end of each race weekend.
- Transponders can be purchased and installed permanently on your kart but must be approved by race officials in advance of participation.
 - Compatible transponders can be purchased from <http://www.rclapcounter.com/>
 - Other transponders may work with the I-Lap timing system but must be verified in advance of a race.

1.13. NUMBERING

- Each kart shall have a unique number somewhere on its body. The number shall be 1-3 digits long and the lettering shall be at least 1.5” tall.

1.14. MOXIE LABEL

See Section **6.2.3. Moxie Points** for more information.

1.15. REQUIRED SAFETY SYSTEMS

The following features of your kart are required for safety purposes, and the implementation costs of these systems do not count toward your \$750 budget

1.15.1. BUMPERS

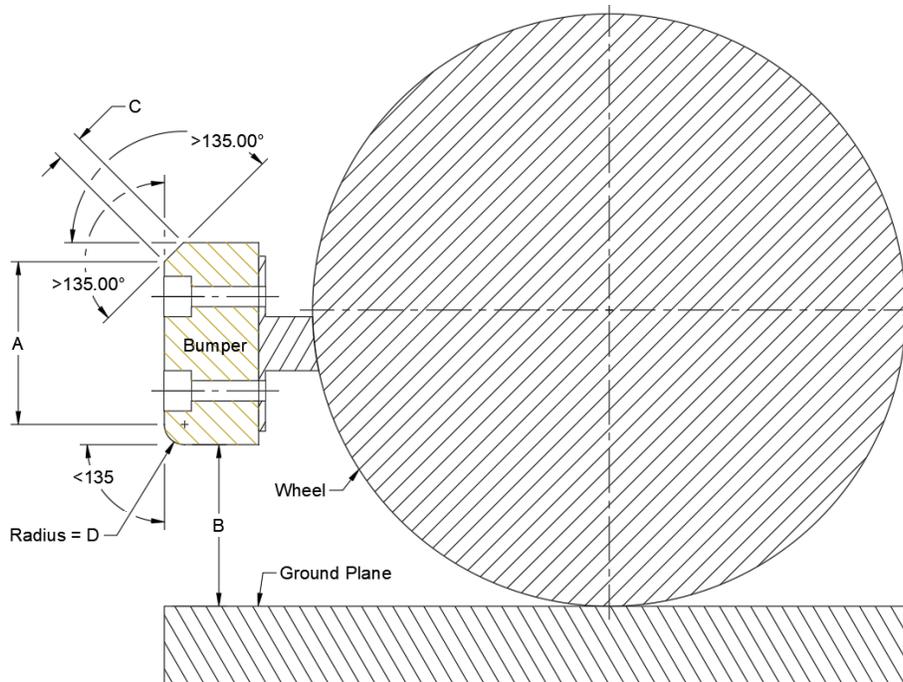
Bumpers are required safety systems. Each kart shall have bumper-like structures at both the front and rear of the kart.

General Requirements

- Each bumper must cover most of the width of the kart.
- Each bumper shall not protect any wheels of the kart from side contact.
- Exceptions may apply if the original commercially available plastic body from the original child's toy infringes on this requirement.
- The kart must be able to be lifted by the bumpers.
- Bumpers that fail to remain within the rule specifications, break, fall off, or are otherwise damaged must be repaired or replaced within 3 laps of the team being notified.

Dimensional Requirements

- Each bumper shall have a vertical face that must cover at least 2.75" of height (see dimension A).
- The bottom of the bumper should be no less than 4" and no more than 6" from the ground (see dimension B).



Corner and Shape Requirements

- No bumper shall have an external corner with adjacent faces sharper than 135 degrees with a face width smaller than .5 in. (see dimension C).
- If adjacent faces have an angle more acute than 135 degrees, the edge must have a radius larger than .375" (see dimension D).
- No bumper ends may be a tube.

Construction and Materials

- Each bumper shall be constructed from a wooden 2x4 (nominal dimensions no less than 1.5" x 3.5") or similar strength HDPE / UHMW plastic.
- Exceptions to the wood or plastic of the bumpers will be considered by the Sanctioning Body with prior notice.
- Cosmetic coverings of bumpers are allowed, if the covering does not render the bumper more dangerous or inoperable.
- It is recommended but not required that all exposed bumper surfaces that are not covered by the kart body have a 0.5" layer of EVA foam (ex. grey interlocking tile) wrapped with a layer of fabric reinforced tape or glued on fabric. (Gaffer tape, Duct Tape, etc.)

Hardware and Surface Safety

- No exterior surface shall have exposed hardware or sharp edges, especially those made of metal, but may include wood plastic parts (at the discretion of the organizer). Put in some effort or be prepared to blunt any sharp or exposed edges.
- All hardware must be countersunk below the surface of a bumper or any body panel and/or have a carriage bolt style head.

1.15.2. DRIVER PROTECTION

The kart must extend beyond the driver in every direction when viewed from directly above. This protection shall be sufficient to prevent direct contact between the driver and other kart/barriers during an impact from any direction. This protection especially applies to feet and knees, which may not dangle off the kart. Occupants may not use the bumpers as a footrest.

IMPORTANT NOTE: In the event of impact, drivers should not be the first point of contact with any outside intrusion of any other vehicle.

1.15.3. BRAKES

Brakes are required safety systems.

- Mechanical brakes must be capable of stopping the kart in full (See 4.1.1. Brake Test)
- Brakes that apply braking force directly to the tire of a kart are not allowed to be the sole source of mechanical braking
- Brakes that apply braking force to the ground are not allowed
- Kart must rapidly come to a halt if the throttle and brake are both fully activated
- If brakes are not on the driven wheel(s), then motor power must be cut, via controller or other means, during braking
- Balancing manifolds are recommended if more than one brake element is being used.

1.15.4. BATTERY RETENTION

Battery Retention is a required safety system.

- Battery must be secured so that it remains in its position relative to the rest of the kart during normal operation and during a tip or rollover.
- Battery cells that require compression (most prismatic/flat/pouch-type lithium cells) must be secured with the appropriate amount of compression so that it may operate safely. The amount of compression you will need will depend on your battery chemistry. Special attention must be given to lithium battery chemistries.

1.15.5. BATTERY DISCONNECT

The battery disconnect is a required safety system.

- The switch actuator must be Red in color
- The switch **MUST** be a button, at least 1.5” in diameter (larger is better!). Other similar shapes are allowed but must conform to the dimension above in their shortest measurement.
- The switch **MUST** turn off power when pressed in, and latch in the off position on its own without additional holding apparatus.
- A mechanical release (twist, pull, or some other manual release) is required on the button to restore the power to the system.
- The disconnect switch **MUST** either:
 - Directly disconnect all battery power from the vehicle
 - Directly switch coil power to a normally open contactor that removes all battery power from the vehicle (see below)
- Must be connected to the POSITIVE voltage terminal of the battery.
- Contactors used as battery disconnects are allowed, provided
 - It is NOT a simple relay
 - Contactor system must be normally open, and fail open
 - Contactor system must be rated for the voltage and current of the kart’s nominal electrical system and NO LESS than the fuse rating of the kart.
- The battery disconnect may not be your throttle
- The battery disconnect or contactor **MUST** be rated for DC voltage at your nominal voltage level, and rated for the current of your fuse, at minimum.
- The battery disconnect should not disable any safety systems
- Suggested part numbers for disconnects and contactor buttons are listed on the next page

Battery disconnect Suggested Part(s)

| MFR | Part | Price (est) |
|----------|-------------|-------------|
| Longacre | LON-5245749 | \$39.99 |

Contactor Button Suggested Part(s)

| MFR | Part | Price (est) |
|---------------|---------------|-------------|
| Fuji Electric | AR22VQL-01E3R | \$35.00 |

1.15.6. BATTERY MANAGEMENT SYSTEM (BMS)

All non-SLA/AGM battery systems must have an inline, attached, or integrated system that protects the cells from undervoltage or overvoltage. This system should perform one or more of the following actions to indicate that the battery system is reaching a critical charge state.

- Disconnect Battery Power
- Disable the Motor Controller
- Alert the driver or team, via sound, light, or some other reliable means

This system must monitor the batteries at the individual cell level, and not just at the full pack nominal voltage level.

If you have a battery protection device that disconnects power, it is a good idea to have an additional monitor (voltmeter, light, alarm) so that you are aware of an undervoltage condition and can pit before the car dies on the track.

WARNING: Lithium-chemistry batteries can catch fire or explode if overcharged, and can be severely damaged by over-discharge. Batteries that are either overcharged or over-discharged are more likely to fail catastrophically in the future after being recharged from such state.

A full BMS that disconnects the battery from charger/load, or opens a contactor to do such, and contains individual cell balancing functions is recommended.

If not using a full integrated BMS, charging must be done with a charging system that monitors and balances cells at the individual cell level.

Technical inspections must be performed by a race official on batteries NOT containing an integrated BMS.

SLA/AGM (Lead-Acid Batteries) and NiCd/NiMH Batteries

Although these battery chemistries don't pose the same hazards as lithium chemistries, they can still be damaged by over-discharge and it is advisable to have some sort of voltage monitor if you are concerned with battery lifespan.

1.15.7. LIFT POINTS

- Each Kart must have lift points clearly marked if the lift points are not your visible bumpers. Expect that you kart will be lifted by two persons.
- If your kart is too heavy to be lifted by two persons, clearly indicate your kart “**HEAVY - DO NOT LIFT**”
- Ensure there are no sharp points near lift areas.
- Drive train components must be protected in places where hands may grab the kart during a lift operation.

1.15.8. TUBE CAPS

- Each Kart shall not have any exposed tube cross-sections. Any cross-sections which are not closed off by other means must be covered by tubing caps or covers for handlebars.
- Suggested construction materials are machined or 3D printed plastic, oversized rubber stoppers, bicycle handlebar end caps, or readily available commercial tube caps found on popular hardware supply websites.

1.15.9. WIRING

- Properly sized wires and connectors are a required safety system and do not count toward the budget cap.

1.16. OPTIONAL SAFETY SYSTEMS

The following features of your kart are optional safety features. They are not required, but the implementation costs of these systems do not count toward your budget cap

1.16.1. LIGHTS

Lights are optional safety systems for daytime races. Front and rear lights are required safety systems for nighttime races.

1.16.2. REVERSE

A reversing system is an optional safety system. It is strongly recommended that you implement a method to put your kart into reverse operation without exiting the vehicle.

1.16.3. KART HORN

A horn (or similar noise-producing device) is an optional safety system for daytime races.

1.17. ALLOCATED BUDGET

Each kart has an allowable budget capped at \$500 in 2009 USD (The year the series began).

The 2026+ season budget for each kart is \$750, when adjusted for inflation and variable tariff rates.

The actual cost of a fully built kart and ancillary equipment may greatly exceed the allocated budget listed above due to the free items below, and those required to safely operate the kart.

Use the following table as a quick start guide example to determine how to count various items in your budget.

| Full Price / Fair Market Value | Free |
|---|---|
| <ul style="list-style-type: none"> • Motor, (A junkyard alternator as a motor counts \$10 on BOM, new alternator is as purchased priced) • Batteries (Priced as indicated in this document) • Motor Controller • Transmission • Sprockets • Chain • Belts • Pulleys • Gears • Frame • Bumper substructure • Wheels • Tires • Tubes • Axles • Hubs • Bearings/bushings • Steering Shaft/Arm • Tie-Rods • Spindles • Steering Wheel • Seat • Sensors (current, fuse/motor temp, steering, speed, etc.) • Performance enhancing Moxie • Active cooling for motors or controller | <ul style="list-style-type: none"> • Sealed Lead Acid Batteries • Brakes • Tires and innertubes • Physical Throttle linkage • Battery Disconnect Switch • Lights • Horns • Transponder • Non-performance enhancing Moxie (Paint, Bondo, etc.) • The plastic bits from an actual Power Wheels toy • Chargers • Spare parts not in kart during race • Battery box or strap (thing that permanently around it) • Battery BMS (in-kart alarm) • Power distribution • Wires, connectors etc. |

1.17.1. BILL OF MATERIALS (BOM)

Each kart *must* have a BOM submitted to race officials for points accrual on race day. The BOM for any kart must be submitted at the time of that kart's tech inspection for the race weekend. A standardized BOM template will be provided by the sanctioning body.

The minimum items to be included in the BOM are:

- Motor(s)
- Motor Controller(s)
- Wheels
- Tires
- Batteries
- Other drive train components
- Other items which increase your race performance
- Items listed in table above under **1.17 Allocated Budget**

1.17.2. EXCLUDED ITEMS

The following items are excluded from the budget:

- All items whose primary purpose is for a safety system
- Physical throttle components and linkage
- Tires and Inner tubes
- Transponder
- Original ride-on toy price
 - A ride-on kart or ATV with a real metal chassis does not count as free. Ride on toy plastic body panels are what is intended to be “free” under this rule.
- Shipping costs, taxes, and customs fees for parts/hardware/materials.

1.17.3. BATTERY PRICING

Batteries are priced per watt-hour on the BOM. Any battery chemistry on the current list (see 1.9 Battery) is allowed, from any source, at any pricing. This is to encourage teams to safely acquire batteries designed for the application at hand.

- Current Battery Pricing is set at \$0.08 / watt hour
- Watt-hours are calculated as follows:
 - Battery Capacity (Amp-Hours, Ah) × Nominal Pack Voltage (Nominal Cell Voltage × Number of Cells in Series)
 - SLA / AGM Batteries are considered free on the BOM

Any vehicle running batteries under the previous ½ FMV rule from prior years that would be overbudget under this rule are grandfathered in. If the kart or batteries from the kart change hands, they must be calculated using the new method.

1.17.4. BUDGET ENFORCEMENT AND PENALTIES

If PRS officials or the majority of teams believe a team has greatly exceed the budget cap, the offending team will be deemed suspect and are at risk of a PRS buyout. PRS officials comprising of our team-submitted volunteers and event organizers will determine if teams have exceeded the budget and hold all rights to purchase a team’s kart for the season’s budget cap amount. By entering an event, a team consents that their kart could potentially be bought out at the end of the event for the value of the season’s kart budget cap amount. A team may redeem their kart and re-enter in the next event if they agree to remove the suspected over-budget component(s).

If the panel of officials determine the kart to infringe on certain rules or bend said rules to a position that is beyond “the spirit of the series,” then a completely arbitrary, painful, and time-consuming penalty will be administered. If enough referrals are given by other teams for “breaking budget” and the Race Official agrees, the sanctioning body has complete freedom to severely limit the kart’s performance, administer embarrassing penalties, or outright strip points to satisfy the masses. This penalty will most likely be made up on the spot, will cost the offending team considerable ire and outrage and lifting this penalty will require considerable bribery (i.e., donations to the series).

1.17.5. FAIR MARKET VALUE

Each component of the kart must be totaled in the budget according to the components' Fair Market Value. Fair Market Value is the cost someone could reasonably expect to pay for that item in similar condition elsewhere without a relationship to the seller/donor.

The Fair Market Value of a used part worth \$100 new and \$25 used, that you got for \$10 because your buddy owns a shop is \$25. The Fair Market Value of a used part worth \$100 new and \$25 used, that your hackerspace got for free is \$25. The Fair Market Value of a part bought on eBay (etc.) from a seller who is not giving you preferential treatment is whatever you got it for, since anybody could have bought that part.

- Donated parts are not free and must be counted as their Fair Market Value.
- Dumpster parts are not free and must be counted as their Fair Market Value
- Karts that use shuffling and/or walking mechanisms for movement will be given a 500% increase in budget.
- This budget covers only items that are a part of the kart as it sits on the grid of any race, and does not include the cost of spare parts or development costs (except where those development costs are also part of the price of kart components as it sits on the grid)

1.18. KART DECORATIONS AND MODIFICATIONS

Teams are encouraged to decorate and modify their karts in imaginative ways if the decorations and/or modifications do not present a risk of danger or injury to other participants or spectators above and beyond the risks and dangers inherent to the sport.

- Vehicular weaponry is banned.
- Karts cannot be decorated to resemble any Tesla vehicle or have any Tesla branding, due to previous incidents.
- Imagery or symbols that are recognized as belonging to a hate or extremist group are banned. See the link below for a list.
 - <https://www.splcenter.org/resources/extremist-files/>
- The sanctioning body reserves the right to examine your kart and prevent your kart from competing if they feel it poses a danger to you, the other competitors, or the spectators.

1.19. TEAM SECRETS

To avoid the issue of race-day disqualifications, please contact the Sanctioning Body in advance to inquire if your modifications are legal.

Modifications that are “team secrets” will be kept in confidence and will not be shared with other teams.

2. DRIVER RULES

2.1. GENERAL DRIVER RULES

- Drivers must have a valid driver's license and be at least 16 years of age.
- Drivers under 18 years of age must also have a signed release from a parent or guardian.

2.2. HELMETS

- Drivers shall wear an approved helmet whenever they are on track to race or to practice. Helmets shall be subject to inspection and approval by race officials.
- An approved helmet shall be a three-quarter (3/4) or full-face motorcycle, motocross, or automotive racing helmet that meets or exceeds DOT, SNELL, or ECE standards.
- Drivers who wear helmets that do not cover the eyes are required to wear DOT approved eye protection.

2.3. OTHER ATTIRE

- Every driver is **REQUIRED** to wear closed-toe shoes.
- It is **HIGHLY** recommended that everyone on the track (driver, pit crew, marshals) wear abrasion-resistant gloves and full-body clothing including long pants and a long shirt.
- Members of the pits are highly encouraged to always wear safety glasses.

2.4. PRACTICE LAPS

All Drivers are required to drive multiple practice laps of the course before they drive during a race. These laps may be made during qualifying, moxie round, or free practice, and are preferably made in the vehicle driven in the race. However, they may be made in any PRS-Legal vehicle.

IMPORTANT NOTE: Any driver with zero (0) practice laps IS NOT ALLOWED to drive in any race. The pre-race formation lap does not count.

3. TEAM RULES

3.1. TEAM STRUCTURE

3.1.1. DRIVERS/PARTICIPANTS

- Organizations may enter as many teams as they wish.
- Teams must consist of at least one member more than the number of karts the team will run.

3.1.2. KART ENTRIES

- Teams may submit any number of kart entries to a race.
- If the race is hosted at a Maker Faire event, it is recommended (and sometimes required) that each kart be registered separately for the event as a maker. If a team is bringing a large number of karts, please contact the Maker Faire event's organization committee beforehand to ensure space.

3.2. TEAM VOLUNTEER

Volunteers from the teams are essential to race-day activities running smoothly.

Teams are required to submit at least one team member, for every two karts on a team as a volunteer for the weekend.

Examples:

- 1 Kart = 1 volunteer
- 2 Karts = 1 volunteer
- 3 Karts = 2 volunteers
- (Team Volunteers = $\text{roundup}(\text{cars}/2)$)

This member can rotate duties with other team members and track volunteers throughout the weekend, as long as a volunteer is always available.

IMPORTANT NOTE: IF YOU FAIL TO PRODUCE ENOUGH TEAM VOLUNTEERS FOR THE ENTIRETY OF THE WEEKEND, YOUR TEAM WILL NOT ACCRUE MOXIE POINTS DURING THE EVENT. (THIS WILL ESSENTIALLY KNOCK YOU OUT OF RACE-WEEKEND MEDALS, AND SEASON POINT STANDINGS FOR THE RACE)

TEAMS WILL FORFEIT 50% OF THEIR RACE POINTS FOR A RACE IF THEY FAIL TO PRODUCE A VOLUNTEER FOR MARSHALLING.

Failure for enough volunteers to be present to run every event during a race weekend will cause the race weekend to not count officially for total wins or championship points, at the Sanctioning Body's discretion.

The volunteer's duties include:

- Track setup and/or breakdown
- Race-day operations
- Flag/course marshalling

If you are worried about your ability to have a volunteer present for the race weekend, reach out to the sanctioning body to find other teams that are attending, and coordinate with a team that would like to be able to bring additional volunteers

3.3. TEAM SPONSORSHIP

- Team sponsorships are allowed, and the terms of individual sponsorships are at each team's discretion
- Team Sponsors do not become affiliated with the sanctioning body, other participating teams, sponsors, host organizations, Maker Faire, or Make Magazine by virtue of sponsoring a team in the PRS Organization.
- Teams may not represent to sponsors or potential sponsors that sponsoring a team in the series will associate the sponsoring entity with any of these organizations, including Power Racing Series Not-For-Profit Organization.
- Sponsors may sponsor the PRS Organization in addition to specific team sponsorships

4. GENERAL EVENT RULES

4.1. EVENT STRUCTURE

The General structure of a race weekend includes at minimum 6 events in the following order:

- Day 1:
 - Tech Inspection
 - Qualifying
 - Sprint 1
 - Sprint 2
 - Sprint 3 / Relay Race (Decided by Event Organizers)

- Day 2:
 - Sprint 4
 - Endurance Race

Actual race structure may be adjusted by the event organizer or the PRS Sanctioning body due to event requirements, environmental conditions, or other extenuating circumstances, with or without prior notice.

4.1.1. QUALIFYING ROUND

If the number of entries to an event exceeds 24, the race organizers may modify or add to these qualifying rules as they see fit to reduce the number of race entries to 24.

- Qualifying consists of two laps of the track plus a brake test.
- Karts that have yet to qualify will line up single-file in pit row.
- Race organizers will call on karts one at a time to perform their qualifying laps and brake test.
- Qualifying determines each kart's position on the starting grid.
- Starting positions are based on the fastest valid qualifying lap time, with the fastest qualified kart starting in the top position.
- To earn a qualifying time, a kart must also pass the brake test.

QUALIFYING LAPS / HOT LAP

To start qualifying, you will take your kart on a warm-up lap of the track. This warm-up lap allows the organizers to verify that your kart's transponder is working.

Once you cross the Start/Finish line at the end of the warm-up lap, your kart's qualifying lap has begun.

Provided your kart passes the brake test, the recorded qualifying time is the time of the hot lap.

If you are not satisfied with your kart's qualifying time, you may line up at the end of pit row and attempt to re-qualify if there is time.

BRAKE TEST

At the end of the hot lap, your kart will have to come to a complete stop within 18ft of when its transponder crossed the start/finish line.

- Deliberately skidding, swerving, or spinning out is not an acceptable method of braking for the brake test.
- Impacting the barriers is not an acceptable method of braking for the brake test.
- If you fail the brake test, you may line up at the end of pit row and attempt to re-qualify if there is time.
- Karts that do not pass the brake test are not allowed to race.

4.2. RACE TYPES

4.2.1. SPRINT RACE

Sprint races have an approximate duration of 15 minutes. The set number of laps in this race will change per event based on qualifying times and track length.

Karts will start this race in their qualifying order.

The race ends when all karts cross the start/finish line after the first kart to reach the target number of laps crosses the start/finish line.

4.2.2. RELAY RACE

Karts will be grouped into an arbitrary number of small groups of arbitrary size by the Sanctioning Body at their discretion. Expect that fast karts will be grouped with slow karts.

Drivers will determine amongst themselves what order they will race in.

The starting driver will run a predetermined number of laps around the course, as decided by the Sanctioning Body, with the Relay baton. During their approach from the exit of pit lane to the truss, the next kart in line will exit pit lane and get up to speed. The first kart will hand off the baton to the next kart around the truss, and the second kart will begin their number of laps, while the first kart exits the course at the entrance to pit lane. Repeat for all the following karts.

4.2.3. OPTIONAL NIGHT RACE

Venue permitting, Saturday night will close with a night-time race, to start after the sun goes down. All the “optional for daytime race, mandatory for nighttime race” safety items are mandatory to participate in this for-moxie-point-only event.

Karts will start this race in their qualifying order.

4.2.4. 75-MINUTE ENDURANCE RACE

The final race of the weekend will be an endurance race with a duration of

- 75 minutes, regardless of lap count.
- Karts will start this race in their qualifying order.
- The race ends when all karts cross the Start/Finish line after the race time elapsed has reached 75 minutes.
- The winner is the kart that did the most laps in 75 minutes.

DRIVER CHANGES

During the Endurance race, drivers will have to switch out on each kart every 15 minutes OR perform a significant costume change, outside of the car.

- A long horn will sound when it is time for the drivers to switch.
- Teams must enter pit row as soon as possible after hearing the horn.
- KARTs that have just passed pit lane when the horn sounds will have to complete their current laps before switching drivers.
- See Section **5.2 Pit Lane Safety** for pit rules.

5. RACE RULES

5.1. ON-TRACK SAFETY

5.1.1. FLAGS

During the race weekend, several flags of varying colors will be displayed. Some will be accompanied by audible horn sounds as well.

Additional rules for flag conditions may be imposed by local race event organizers based upon the conditions of their track/event. Please make yourself familiar with any additional or differing rules of the race you are attending.

5.1.1.1. GREEN

The green flag indicates that it is time to race.

- You will see the green flag at the start of the race, and once a yellow or red flag condition is cleared.

5.1.1.2. YELLOW

This flag indicates a local or full-track caution condition. Drivers should slow their kart to a nominal speed to navigate around the track safely. Pay attention to track workers, stopped karts, and damaged track sections.

- A full-track caution flag will be accompanied by a single short blast of the horn.
- No passing under caution, under any conditions.
- While the course is under caution, passing is generally not allowed and drivers should remain in their current order unless instructed otherwise by a track official.
- Very slow karts are encouraged to allow moderate and fast karts to pass you at the end of a caution period. Pay attention to those around you.
- All drivers are encouraged to indicate that they know a caution is underway by raising a hand as a signal.
- You may pass karts that have broken down or embedded themselves in the wall if you can do so safely.

RESUMING FROM CAUTION/YELLOW

- The Green Flag will come out, and two short horn blasts will be heard right as the current race leader is crossing the start/finish line.
- Once the leader kart passes the start/finish line, normal racing speed may resume.

5.1.1.3. RED

This flag indicates a temporary stop to the racing due to something rendering part of the track temporarily impassable. Unless otherwise directed, a red flag is meant to be a full course stop condition.

While the course is under a red flag, stop as quickly and safely as possible. Passing is not allowed, and drivers should remain in their current order unless instructed otherwise by a course worker.

5.1.1.4. BLACK

If you see The Grim waving this flag at you, make your way to the penalty box immediately. The Grim has something devious in mind to punish you for an infraction The Grim has noticed. Black flags may also be waived for major safety concerns by The Grim or other race officials; drivers should pit immediately.

5.1.1.5. WHITE

This flag signifies that the final lap (or final minute) of the race has started.

- This flag means that if your kart is on fire and rapidly losing power, the end to its suffering is near, and you should push it as hard as it can go in the last remaining seconds of the race.
- This flag means that now is the time to attempt any heroic and inadvisable overtakes for finishing position.

5.1.1.6. CHECKERED

The race is over. Finish your lap, then head back to the pits, or don't. Watch out for spectators, people driving slowly, people doing donuts, driving the course in the wrong direction, etc.

5.1.2. RACE CONTROL HORN

The horn has two purposes in a race.

- Its primary purpose is to sound the beginning and end of a caution.
 - One short blast indicates that the course is under a caution, and you will see every flag station waving the yellow flags described above.
 - Two short blasts indicate that the caution has been lifted and normal racing can resume. These two blasts are usually timed right as the current race leader is crossing the start/finish line.
- The other use for the horn is to signify a mandatory driver change in the endurance race. (See 4.2.4. Driver Changes)
 - When you hear this one long horn blast, you must pit immediately even if you have already done so and perform your mandatory driver change.

5.2. PIT LANE SAFETY

Karts and participants should not block the pit lane at any time during the weekend

- Reversing in pit row is not allowed during races
- Driving the wrong way in pit row is not allowed during races
- Karts should be stored with their battery disconnect in the “Off” position when not being raced or when unoccupied (Section 1.15.5. Battery Disconnect)
- A brisk walking pace (~5mph) should be maintained while driving in pit lane.

WARNING: Race participants should not stand, loiter, or otherwise occupy the pit lane during practice/qualifying/race sessions. Please keep aware of vehicles around you. Stand inside your pit stalls unless you are servicing or retrieving your vehicle, or your team will face penalties.

5.3. RULES INFRACTIONS AND PENALTIES

5.3.1. THE GRIM REAPER

One person, designated by the Sanctioning Body, will don black robes and carry a large black flag any time karts are on the track. Throughout each race over the course of the season, the Grim Reaper has supreme, unquestionable reign over the track. The Grim Reaper's job is to pick out violators. If the Grim Reaper sees you commit a misdeed, your kart will be impounded in the penalty box and the Grim Reaper will determine your punishment. The Grim Reaper's word is law. There is no arguing with the Grim Reaper. There's no reasoning with the Grim Reaper. The Grim Reaper was born of these rules, and you shall worship the Grim Reaper.

5.3.2. WHY AM I UPSIDE DOWN?

It's simple: if a race participant flips their kart and the driver rolls out of it during qualifying, race or any other point when other karts are on the track, the team will receive a penalty.

The Grim will determine the weight of this crime, varying from a qualifying penalty, a stupidly amusing penalty, or - if the participant is somehow determined to be a danger to everyone in a non-hilarious way – the race officials will consider making the participant fix it or park it for the weekend. Test your kart, and make sure each driver knows the limit. There's no reason for a driver to be ejected on the track for incompetence. Test your kart ahead of time in parking lots and other low risk places.

5.3.3. THE "SPIRIT OF POWER RACING" CLAUSE

We're just a show. We're here to have fun. Rules will get bent, karts will break, so just relax and enjoy yourself. If you're reading line by line and hunting for a 1/10th of a second lap time improvement, you're going to have a bad time. Aside from safety, not much else really matters. You don't race to win, you race 'til you break. Don't get too wrapped up in podiums or lap records. Share tools. Be friends with rival teams. Have rivalries just because it's funny. Make friends. Be excellent to each other.

And if you do decide to push boundaries, don't be cheap about it. We don't want sneaky exploits; we want ridiculous hacks and jaw dropping builds. If you're going to color outside the lines, go full masterpiece. Make it so bold, so absurd, or so clever that officials end up saying "I'm not even mad, I'm impressed." Go big, go weird, and make it worth telling stories about.

5.4. RACE AWARDS

5.4.1. MEDALS

GOLD ‘YES’

You are the Race Winner!!! You get a big ol’ Yes from us! You also get a high-five.

SILVER ‘OK’

You are the first loser, but that’s ok. You’re better than most so you get a low-five.

BRONZE ‘NO’

What, you get an award too? Geez, I guess so, but you get a big “no” from us. Also, your low-five is down real low, and thus we will pull our hand away in a metaphorical nod to your performance: too slow.

5.4.2. RACE AWARDS

These awards may be handed out in addition to the normal medals listed above, at the discretion of the race officials.

THE “CRASH AND BURN” AWARD

Congratulations! You have chosen to build an off-road vehicle. The only problem is that the PRS is an on-road racing series, which means you’ve spent more laps on the wall than on the track. You also might be Australian and have spent most of your time upside down. Luckily, there’s an award for that.

THE “EPIC FIX” AWARD

You did what to get this running again? We usually would make fun of somebody trying this hard, but we can’t believe how many times you had to fix this heap. You did it though, and the kart is limping around the track, barely moving but, you’re going to finish. You scrounged parts from random strangers. You broke your transmission three times and still managed to get back on the track. Literally nothing stopped your team. You didn’t win, you didn’t even look good while losing, but you managed to pull through in the end. Here’s to you, crazy person.

THE “BEST IN SHOW” AWARD

This is a prized treasure. You’ve built something so incredible we must pause and collect our breaths. You’ve built a kart that looks brilliant. It looks or drives so nicely that we felt bad when some team plowed it into the wall on the way to winning another Crash & Burn. If you intend to win this award, be sure to take a lot of pictures before race day, because she ain’t going to be pretty after we’re done. This award is also for vehicles who fall into the "Technically legal" category. We know you bent a rule to the razor edge, and we want to encourage that behavior (but it will probably be banned at the next race/end of season). Thus, we will award you for the brazen insanity for pursuing it in the first place. Consider this the PRS version of the Index of Effluency.

5.4.3. THE WEEKEND OVERALL WINNER TROPHY

Each locale will provide a custom trophy based on the region. Ideally if you are reading this and are a local representative in your region, you are responsible for creating this custom trophy for the team that wins the most cumulative points in the entire weekend.

6. SEASON STRUCTURE

6.1. SCHEDULE

Find the schedule on the official PRS website, or contact your local organizers.

6.2. POINTS

6.2.1. SEASON POINTS

The points system will reward the **BEST TWO (2)** cumulative weekend points.

- The sum of your team's points from your best two (2) race weekends are tallied and count towards the championship.
- If participating in more than (2) events, only the best two are counted.
 - i.e., burning up a motor in one race weekend won't put you out of the championship, provided you attend two others.

This also allows for some of the smaller or more remote teams to compete for the championship without having to go to more than two events.

6.2.2. RACE POINTS

Race points are earned on a per—race basis by each vehicle's finishing position, according to the following table:

| Place | Points (2018+) |
|--------------|-----------------------|
| 1 | 75 |
| 2 | 63 |
| 3 | 54 |
| 4 | 45 |
| 5 | 37 |
| 6 | 30 |
| 7 | 24 |
| 8 | 19 |
| 9 | 15 |
| 10 | 12 |
| 11 | 10 |
| 12 | 8 |
| 13 | 6 |
| 14 | 4 |
| 15 | 2 |
| 16 | 1 |
| 17 | 0 |
| 18 | 0 |
| 19 | 0 |

6.2.3. MOXIE POINTS

Moxie is that little extra spice that levels the playing field. Not only can you win race points, but you can also entice and rile up the crowd to win points from them. It will be your team's job to find ways to garner audience attention and keep it over your competitors.

This is the ultimate pursuit of the weird. Giant boom-box karts, Lucha masked racers, pre-race dance party and confetti cannons are all par for the course.

Consider this the social engineering section of your exam. Some teams will write this off, but we at PRS think you should take heed: this is where real champions are crowned. Under develop your kart against your rival hackerspace? Easy! Gain those points back by dressing up as a chicken. Your odds to win are good if your goods are odd. Consider it Halloween in July, and you must get more candy bars than that kid next door.

The crowd is instructed to reward your odd behavior by pressing the button by your team's label. Next to each button is a 6"x1.75" piece of space that is reserved for your team's name and number. Tape such as "Duct Tape" is not allowed on the Moxie board, and generally a good rule not to use any other adhesives than are provided by the event organizers.

YOU are in charge of making a plaque that occupies this space and identifies who you are to the crowd. You can make it as fancy as you'd like, it can be lit up (you'll have to power it on your own), reflective, whatever, as long as it has the name of your team and your kart number. Do not do a last-minute job on this one because it is the first thing the crowd sees when they are about to vote for you.

There's nothing like setting your kart on fire to the applause of an audience only to realize that you used duct tape and silver sharpie to identify yourself on the board and now no one knows who you are.

6.2.3.1. **MOXIE LABEL**

Each kart shall have a label for the moxie board. Teams must also submit a digital photo of their car with a driver seated for the online moxie challenge.

- The size shall be no more than 6 inches across by 1.75 inches high.
- You must provide a photo of your car during registration, to be used on your digital moxie label. If you do not provide one, a generic icon will be used in its place.
- Simple is good. Flashy is better.
- Ideal labels should contain
 - Kart and/or team name
 - Kart number
 - Vague / iconic information in alignment with design

6.2.3.2. **COUNTING MOXIE POINTS**

A microcontroller driven button board, the ***Moxie Board***, tallies the votes of members of the public during races.

The Moxie Board responds to one button press with a one second delay.

This is so you don't plant yourself or your teammates out there by the board and just sit on the button all day. It should be noted that this is considered a lazy and not-creative way to cheat, and thus lame. Don't be a lame team.

- Moxie points will always total **300** per race. These **300** points are divided among the teams according to the percentage of button presses received from the crowd.
- Event Organizers or the Sanctioning Body reserve the right to remove Moxie points from any team
- Moxie points are added to race points to determine teams' overall winningness.
- Moxie will be very crucial to your potential victory and glorious bragging rights.
- Moxie points may also have an online scoreboard for remote spectators.
- Moxie Board malfunctions happen, and the points will be counted as-is on the moxie board even with a malfunction.

*Source Code and board design suggestions can be obtained by inquiring through the PRS Github. See the "AllMyLinks" in **APPENDIX G. Contact Information** later in this document.*

6.2.3.3. **MOXIE POINT HIT LIST**

Are you a new team? How about an old team looking for some more points? Come here. Closer. Let me tell ya something. It'll be our little secret. You can get up to 150 bonus points per season if you make one of the karts below. Yeah. Seriously. I'm not messing around. Just try it.

NOTE: *These points will be awarded on a sliding scale of effort, as per the discretion of the sanctioning body. The more time you spend on making these look good (and driver costumes count!) the more points you get. If you duct tape a bunch of cardboard boxes and scream "THAT'LL DO," we will reward fewer points.*

If you're working on a particularly ambitious themed build and it isn't represented in the list, email the sanctioning body to consider your creation for extra points.

Points will be awarded at the end of the season as part of the awarded totals.

Without further ado, here are the karts that could earn you up to 150 bonus points:

2026-2027 Moxie-Theme Hit List

1. Firetruck, with working hose
2. Abolish ICE Snow Plow
3. Magic School Bus
4. A Giant Hypodermic Needle
5. Down with Cis Bus (Force Femme-Bus)
6. Air Fryer
7. Rubber Ducky Kart
8. Public Transit Vehicle (w/ accurate livery)
9. Backwards Kart
10. Flushing Commode
11. Kart that looks like an animal, but with wheels

6.3. SEASON AWARDS

Four awards are given out each season.

- If a kart wins more than one of these awards, that kart's team will choose one award to keep, and the remaining award(s) will be given to the next-most-qualified team.
- Awards must be picked up at the Summit following a season. Teams that cannot attend the summit should make arrangements to receive their award.

THE NIKOLA CUP

The **Nikola Cup** is awarded to the kart with the highest total **Moxie Points** plus **Race Points** in a season.

THE MOXIE CUP

The **Moxie Cup** is awarded to the kart with the highest total **Moxie Points** in a season.

THE CHAPMAN TROPHY

The **Chapman Trophy** is awarded to the kart with the highest total **Race Points** in a season.

THE INFLUENCER AWARD

The Influencer award is given to the team with the most moxie challenge points accrued during the season.

APPENDIX

A. RACE PARTICIPATION, MEMBERSHIP, AND REGISTRATION

The 2026 race requirements fees are as follows:

Race registration costs for racers and carts are dependent on event type and sponsor availability, and therefore subject to change. Any fees collected for a race entry will be described fully in the race registration form.

DRIVER-PARTICIPANT REGISTRATION

Each driver-participant, Pit crew member, volunteers, family members, and anyone else joining you inside the Pit Area or Event Envelope is required to sign a race waiver before their first race. Drivers-participants must register using the race form for each event.

KART ENTRY REGISTRATION

Every Kart competing for season points must register for two or more race events on the official PRS website, have a unique number, and conform to the PRS rules.

Kart Registration Entitles you to:

- Participate in the registered race*
- Reserve a kart number of your choice (first come first serve)
- Reserve a race weekend transponder (provided by the sanctioning body or personal transponders)
- Karts with integrated iLap (or other compatible system) transponders should enter their transponder number into their registration form

(*assuming the event or race is not full)

Reach out to the sanctioning body at info@powerracingseries.org if you would like to sponsor race fees for teams or if you need help covering race fees.

B. REQUIREMENTS FOR OFFICIAL PRS RACE EVENT

Want to host a race? We're excited to help you get started. See the link below for the race hosting application.

<http://powerracingseries.org/hold-a-race/>

<https://www.cognitofrms.com/TechnicalDirector1/racehostandeventdiscovery>

C. VOLUNTEER TASKS FOR ADDITIONAL MOXIE POINTS

If you're interested in working on any of these items let the sanctioning body know of your intent and for further information.

PRS Specific Motor Controller / VESC

- Design a purpose built VESC based on our current requirements
- Produce Design files
- Create sourced list of parts and components
- 3D enclosure model (to be 3D printed or machined)
- Bonus - Telemetry for Track Boosts

Boost Power-Up Gate

- Flashes at a random time during the race
- Reads a kart's transponder
- Cars take a different line/route to get the boost
- Can be extra points, maybe interface with a telemetry on VESC
- Build code and electronics to achieve goals
- Needs full documentation on construction and race implementation

Internet-Connected Moxie Board

- Design a way to count moxie points from an online source, like a twitch stream
- Would add to the physical moxie board
- Display count totals on twitch stream
- Need to maintain the 1 vote/second standard that the physical board restricts
- Document how to set up and troubleshoot

Transponder DIY How-To

- Build (or source) 3D model of a simple transponder case
- Design and print a bunch of boards
- PRS will retain all designs
- Lap counter LCD would be a great addition
- Assemble baggies of the components needed
- Tutorial on transponder construction with pics
- You tell us how much we should “sell” them for (at cost)
- Specifically, just the PCBs and components
- PRS funds the kits
- Runs on Lipo
- Supply all design files to PRS

D. RACE LOGISTICS

- Tracks adhere to basic safety regulations unless otherwise exempt.
 - Tires, water barriers, straw stacks that interlock via connectors, rope, or layered stacking
 - People barriers 4-6 feet from track perimeter in ANY crowd-facing section of track
 - Track at minimum should be 100ft x 60ft in size

- Venue must have the following facilities for operation
 - At least 6-10 pit stalls for race-day operation
 - Ample power drops for race day (Suggest 20A/120v per 2 teams)
 - Timing and scoring bridge
 - An appropriately sized speaker system with microphones that can cover venue's hearing range, both track and guests.
 - Crowd control means to ALWAYS keep unauthorized people off the track and out of pit stalls
 - Inclusion of PRS within venue's overall insurance coverage

- The exact minimum materials needed to operate event
 - A moxie board with at least 10 slots for voting
 - Timing and scoring system that includes timing chain, laptop, and timing modules with batteries for BOTH days
 - Flags, with a full set of race flags for race control, and at minimum 6 additional yellow flags for marshals
 - Race liability release waivers, and colored one-time use wrist bands
 - A very loud truck-like horn or siren that can signify caution periods, with easy recharge ability

- Race Day requirements
 - Tech inspection adhering to PRS guidelines
 - Safety overviews for track marshals according to PRS guidelines
 - The following events MUST occur for a PRS weekend to count as an official race:
 - A qualifying session from 30-60 minutes to determine field
 - Four (4) Sprint Races 30-50 laps depending on race length calculated to approximately 10-15 minutes. One race may be swapped for relay race.
 - One (1) 75-Minute Endurance Race

- Race Weekend Roles
 - Announcer/ Lead Race Marshal
 - Timing and scoring official
 - 5-6 track marshals
 - Tech Inspector
 - Grim
 - Moxie Board Operator(s)
 - Waiver handler/Track entry manager
 - 5-10 volunteers for track setup/teardown

E. TECH INSPECTION CHECKLIST

A full size, printable version of this technical inspection checklist as a downloadable PDF is available on the Power Racing Series website alongside the rules.



Power Racing Series 2026 Technical Inspection Checklist

Event: _____ Date: _____
 Team Name: _____ Kart #: _____
 Driver #1 Name _____ Volunteer #1 Name _____
 Driver #2 Name _____ Volunteer #2 Name _____

| SAFETY | | | |
|--|---|---|---|
| Bumpers 4-6" height (Fit fist under bumper?) Tube ends blunted; No sharp metal exposed | <input type="checkbox"/> Pass <input type="checkbox"/> Fail | Driver protection: frame and/or body extends beyond driver in plan view | <input type="checkbox"/> Pass <input type="checkbox"/> Fail |
| Mechanical brakes present and functional w/o power | <input type="checkbox"/> Pass <input type="checkbox"/> Fail | E-stop/battery disconnect accessible (in/out) & latching | <input type="checkbox"/> Pass <input type="checkbox"/> Fail |
| Fuse rating correct for nominal voltage; kills all traction power | <input type="checkbox"/> Pass <input type="checkbox"/> Fail | No active fuse cooling; flyback path not powering drivetrain | <input type="checkbox"/> Pass <input type="checkbox"/> Fail |
| Driver helmet & eye protection present; closed-toe shoes | <input type="checkbox"/> Pass <input type="checkbox"/> Fail | Egress: driver exits unassisted in ≤ 5 seconds | <input type="checkbox"/> Pass <input type="checkbox"/> Fail |
| ELECTRICAL | | | |
| Battery chemistry declared; BMS/low-voltage alarm for lithium | <input type="checkbox"/> Pass <input type="checkbox"/> Fail | Battery retained; terminals covered; not used as bumper | <input type="checkbox"/> Pass <input type="checkbox"/> Fail |
| Charging method appropriate; balancing for lithium | <input type="checkbox"/> Pass <input type="checkbox"/> Fail | High-current wiring protected; abrasion/short protection | <input type="checkbox"/> Pass <input type="checkbox"/> Fail |
| No exposed live conductors; service loop strain relief | <input type="checkbox"/> Pass <input type="checkbox"/> Fail | Main contactor (if used) DC-rated; fails open | <input type="checkbox"/> Pass <input type="checkbox"/> Fail |
| Harnessing secured; no loose wiring in cockpit | <input type="checkbox"/> Pass <input type="checkbox"/> Fail | | |
| MECHANICAL | | | |
| Chain/gearbox guarded (driver/marshal reach zones) | <input type="checkbox"/> Pass <input type="checkbox"/> Fail | Steering tight; no binding; stops present if applicable | <input type="checkbox"/> Pass <input type="checkbox"/> Fail |
| Wheels/axles secure; fasteners cottered/locked | <input type="checkbox"/> Pass <input type="checkbox"/> Fail | No sharp protrusions; tube ends capped | <input type="checkbox"/> Pass <input type="checkbox"/> Fail |
| Fasteners torqued; critical joints secured | <input type="checkbox"/> Pass <input type="checkbox"/> Fail | Brake linkages robust; no tape/zip-tie temporary fixes | <input type="checkbox"/> Pass <input type="checkbox"/> Fail |
| No structural cracks or bent members affecting safety | <input type="checkbox"/> Pass <input type="checkbox"/> Fail | | |
| BODY/GENERAL | | | |
| Body resembles children's ride-on or playful equivalent | <input type="checkbox"/> Pass <input type="checkbox"/> Fail | Panels secure; nothing likely to fall off in light contact | <input type="checkbox"/> Pass <input type="checkbox"/> Fail |
| Approx size: ≤62" L × ≤36" W × ≤72" H (visual check ok) | <input type="checkbox"/> Pass <input type="checkbox"/> Fail | Transponder installed with clear sky view | <input type="checkbox"/> Pass <input type="checkbox"/> Fail |
| Kart number visible (1-5 digits, ≥1.5" tall) | <input type="checkbox"/> Pass <input type="checkbox"/> Fail | Lift points marked (or bumpers are valid lift points) | <input type="checkbox"/> Pass <input type="checkbox"/> Fail |
| No sharp edges on body; covers/caps present | <input type="checkbox"/> Pass <input type="checkbox"/> Fail | Rain/night lights present if event requires | <input type="checkbox"/> Pass <input type="checkbox"/> Fail |

Inspector: _____ Date: _____
 Team Rep: _____ Time: _____

Note: This inspection is a visual checklist and does not certify fitness. Teams are solely responsible for safety and compliance.

ROLES

Option to participate in Board Meetings

- Want us to make you an actual board member? Let's talk.

- Community Moderator
 - Discord Moderator
 - Email correspondence
 - Respond to questions about the series
 - Flag inappropriate posts

- Corporate outreach partner
 - Reach out for sponsorship opportunities
 - Communicate sponsorship tier benefits
 - Coordinate Sponsor Requests
 - Coordinate with PRS Treasury

F. TRACK MARSHAL CHEAT SHEET

The Sanctioning Body hereby assigns the community to develop and update a Track Marshal 101 guide for new marshals. The goal is to cover the basics of proper track marshalling and race safety.

G. CONTACT INFORMATION

info@powerracingseries.org

<https://allmylinks.com/powerracingseries>

PRS Sanctioning body reserves the right to change these rules at any time, for any reason, with or without prior notice.

Bound Copies of this ruleset may be purchased by emailing the Power Racing Series Board of Directors. Price is \$175 each, shipped.