

# SORRCA Light

## “KEEPING SCALE RC FUN!”

### 2018 SORRCA Light RULES

#### Class 0 “Scale”

- Resembles a street legal vehicle that you would drive daily and that could also be used on very mild off road trails.

#### Class 1 “Street

- Resembles a street legal off road vehicle that you would drive to the trail head and would be outfitted like an expedition vehicle.

#### Class 2 “Stock”

- Resembles a stock vehicle that has minor modifications to make it a capable mild off road trail rig.

#### Class 2.5 “Trail”

- Resembles a stock vehicle that has been highly modified to make it a capable trail rig and may no longer be street legal.

#### Class 3 “Modified”

- Resembles an off road vehicle that you would be built from the ground up that would compete in a TTC/King of the Hammers type event.

#### General Vehicle Details

- We encourage you to go above and beyond to make your rig as scale as possible, no matter which Class the rig is in.
- Vehicles and scale accessories must resemble real 1:1's. The event organizer has the final decision on whether a rig/scale accessory is accepted or not.
- Tire size is determined by the advertised manufacture specifications. Tires without available specifications are to be measured to determine size.
- Tire modifications:
  - Class 0 “Scale” - No tire modifications are permitted
  - Class 1 “Street” - No tire modifications are permitted.
  - Class 2 “Stock” - No tire modifications are permitted.
  - Class 2.5 “Trail” - Tire lugs may be removed, siped, grooved, and/or trimmed.
  - Class 3 “Modified” - Tire lugs may be removed, siped, grooved, and/or trimmed. “Cut and shuts” are permitted as long as all tire parts used are from a legal tire. No max tire size.

- No motor on axle (MOA) of any kind is permitted. All motors, transmissions, and transfer cases must be chassis or frame mounted. Axles must be driven by one transmission or transfer case and a minimum of two drive shafts. No separate throttle control of drive line and/or axles.
- All electronics (other than steering servos), including batteries must be chassis or frame mounted and hidden as much as possible when rig is viewed from the top and all sides.
- There is no wheel size distinction. For example, you are permitted to run a 1.55", 1.9" or 2.2" rim in any class. Wheel larger than 2.2 and 2.2/3.0 truggy style wheels are not permitted in any class.
- Winching must be performed off of natural objects (*i.e. trees, rocks, etc...*), other vehicles, or stakes provided by the event organizer. Winching off of a person, such as their shoe or hand, is not permitted.

#### **Tire Ban List:**

- Losi tires (all sizes and types)
- Hot Bodies Rover
- Hot Bodies Sedonas
- HPI Rock Grabbers
- Panther Cougars
- Panther Leopards
- Pro-Line Chisels
- RC4WD Rocklin
- RC4WD X-Locks
- RC4WD Crazy Crawlers
- Imex Skulls and Bones
- Ottsix Voodoo Pins
- JConceptes Ruptures

#### **Class 0 "Scale" Details:**

- Body must be scale street legal and may be constructed of lexan, hard plastic, wood, or metal.
- Body must have a minimum of one functional (opening) component (*i.e. hood, door, tailgate, etc...*)
- Chassis mounted steering (CMS) servo is required.
- Inner fenders are required on all 4 wheel wells.
- Interior and driver figure is required. Driver figure must be full bodied (head to toe) unless floor pan is level with seat bottom then knees up will be permitted.
- Vehicle must have full windshield that fills entire windshield frame.
- Servo winches / retractor style winches are permitted but must be hidden. Which line must pass through a fairlead mounted on bumper or front of body.
- Full width front and rear bumpers are required. Bumpers are measured from the outside edges and must be equal to or wider than the windshield at its widest point. Bumpers must be made of hard plastic or metal. Bumpers that are molded into the body must be hard plastic or metal (no lexan molded bumpers permitted). A rear bumper is not required on a flat bed, but adding one to the flat bed will gain the additional scale point.
- All electronics must be out of sight when viewed from top and sides.

- Wheels must be aligned within the body wheel wells (center of wheels to center of wheel wells, +/- ½ inch total combined).
- Vehicle body must be mostly intact. Only mild trimming such as removing flares and hardtop are permitted.
- Tire tread may not extend outside of wheel wells more than ¼ of the tread width. Flares may be added to reach minimum specification.
- Vehicle must run a full length frame rail chassis and the frame rails must be as long as the vehicles wheelbase. Tamiya CC-01 chassis are permitted.
- Truggies are not permitted.
- Flatbeds with full length frame rails are permitted. The bed must be as wide as the cab the entire length of the bed.
- Cab only vehicles are not permitted.
- Tires may not extend beyond the front and rear bumpers or the rear of the flatbed, if used. Stingers, fairleads, shackles, bolts, etc. are not considered part of the bumper.
- Dovetailing, boat sides, sectioning or narrowing of the body is not permitted.
- Bobbing of truck bed is permitted as long as all body specifications are met.
- 4.19" max tire size, including spare.
- Course gates are to be set at 11" or wider.

**Class 1 "Street" Details:**

- Vehicle must have a full windshield that fill the entire windshield frame.
- Full width bumpers are required, front and rear. Bumpers that are molded with the body are permitted. A rear bumper is not required on a flat bed, but adding one to the flat bed will gain the additional scale point. Bumpers are measured from the outside edges and must be equal to or wider than the windshield at its widest point.
- Wheels must be aligned within the body wheel wells (center of wheels to center of wheel wells, +/- ½ inch total combined).
- Tire tread may not extend outside of wheel wells more than ½ of the tread width. Flares may be added to reach minimum specifications.
- Body must be mostly intact. Only mild trimming such as removing flares and removing a hardtop are permitted. If a hardtop is removed, a full interior is required. No extreme trimming of bodies is permitted.
- Tires may not extend beyond the front and rear bumpers or the rear of the flatbed, if used. Stingers, fairleads, shackles, bolts, etc. are not considered part of the bumper.
- Vehicle must run a full length frame rail chassis and the frame rails must be as long as the vehicles wheelbase. Tamiya CC-01 chassis are permitted.
- Truggies are not permitted.
- Flatbeds with full length frame rails are permitted. The bed must be as wide as the cab the entire length of the bed.
- Dovetailing, boat sides, sectioning or narrowing of the body is not permitted.
- Bobbing of truck bed is permitted as long as all body specifications are met.
- 4.19" max tire size, including spare.
- Course gates are to be set at 11" or wider.

## **Class 2 “Stock” Details:**

This class is designed for entry level drivers to get to experience competition and to attract new people to the hobby and to have FUN!!!

- This class is designed for stock RTR or kit vehicles.
- All vehicles must include the following
  - Brushed motor
  - 2S or smaller lipo battery. 7.2v Nimh/Nicd is permitted.
  - Stock frame rails only. No aftermarket frame rails are permitted.
  - No Tire modifications are permitted.
- Vertical mounted shocks (any brand) on factory mounts only.
- Body must be a minimum of 4.5” tall.
- The inside of the front tires may not extend outside of the width of the cab at the doors.
- A front bumper is required and must be mounted to the frame rails. Bumpers must be wider than the outside width of the frame rails. Chassis cross braces do not count as bumpers.
- Aftermarket bumpers are permitted as long as they meet the class specifications.
- Chassis, including bumpers, must be a minimum of 3” longer than the vehicle's wheel base.
- Flatbeds are permitted. They must run the full length of the frame rails and be as wide as the cab the entire length of the bed.
- Tires and wheels can be changed from the factory setup.
- 4.75” max tire size, including spare.
- 2.2” max wheel size, including spare
- Course gates are to set at 12” or wider.
- Battery relocating is permitted as long as it is attached to the chassis.
- Aftermarket stock aluminum hubs, knuckles, and lockouts are permitted. No XR Mod or 8 Degree Knuckles are permitted.
- Axle housings must be plastic
- Links may be upgraded. No link risers are permitted.
- Any ESC, brushed motor, and servo is permitted.
- Steering servo must remain in stock location.
- No aftermarket parts that may create a mechanical advantage are permitted. This is to be determined by the event organizers.

## **Class 2.5 “Trail” Details:**

- Body/cage work must be a minimum of 4.5” tall (including boat sides) and the inside of the front tires may not extend beyond the outside of the width of the body at the front doors.
- A front bumper is required and must be mounted to the frame rails. Bumpers must be wider than the outside width of the frame rails. Chassis cross braces do not count as bumpers.
- Vehicle must have a full frame rails. The chassis must be a minimum of 3” longer than the wheelbase. This includes chassis with truggy rear frames.

- Truggies are permitted. Frame rails behind the cab must be replaced with tube work and extend beyond the rear axle pumpkin to be legal. Truggy tube work must include a roll bar hoop at the back of the cab and have integrated shock mounts. Truggy tube work must be a structural part of the rear of the vehicle. If any of these specifications are not met, it will not pass as a truggy.
- Flatbeds are permitted. They must run the full length of the frame rails and be as wide as the cab the entire length of the bed.
- Two of the three following modifications are permitted:
  - Dovetailing the rear. A Truggy that is narrower than the cab counts as dovetailed. (1/2 the width of the widest part of the cab).
  - Boat sides (no more than 1.25" measured vertically from the bottom of the skid).
  - Pinching of the front (2/3 the width of the widest part of the cab).
- 4.75" max tire size, including spare.
- 2.2" max wheel size, including spare.
- Course gates are to set at 12" or wider.

### **Class 3 "Modified" Details:**

- No max tire size, including spare.
- 2.2" max wheel size, including spare.
- Bumpers are not required. If bumpers are used, they must be mounted to the chassis and be wider than the chassis main rails.
- Minimum body specs:
  - Inside of tires may not be greater than 1.25" of the width of the body at the front doors. *Example: 7" inside of tire to inside of tire, body must be a minimum of 5.75" wide at the front doors.*
  - Body must be a minimum of 5" wide at the front doors.
  - Tire height may be no more than 1/2" taller than the height of the cab. Height is measured from the bottom of the skid to the top of the body/tube work (not including light bars). *Example: 5.5" tire, body must be a minimum of 5" tall from bottom of skid to top of cab/tube work.*
  - Body must be at least the length of the wheelbase of the vehicle.
  - Body modifications including, but not limited to, pinched front end, dove tail, and boat sides are permitted as long as the final dimensions comply with the minimum size rules.

### **Scale Points:**

Class 0 "Scale" - 40 scale points max

Class 1 "Street" - 40 scale points max

Class 2 "Stock" - No scale points

Class 2.5 "Trail" - 30 scale points max

Class 3 "Modified" - 30 scale points max

**Bed:** *Not available on tubers.*

- Tube bed or flatbed: metal -3, plastic -1
- Bed mounted headache rack or roll bar: metal -2, plastic -1
- Truggy: metal -4, plastic -2

**Full Tube Chassis:** metal -8, plastic -4

- A Tuber consists of a complete body/chassis structure comprised entirely of tube work. *Tube bed, roll bar, internal/external cage, and shock mount points are not available in addition to full tube points.*

**Interior/Exterior Cage:** metal -3, plastic -1

- Per row of seats or area where seats would be (interior not required to receive cage points). Cage must have down bars and cross bars in front of and behind each row.

**Tube Accessories:**

- Sliders (both sides): metal -3, plastic -1
- Integrated tube shock mounts: metal and brazed/welded to the frame -1 per pair

**Body:**

- Hard body: full body -8, cab -4
- Drop bed: -3
- Custom built hard body(in addition to hard body points): full body -4, cab -2
  - Must have three dimensional body panels that cover the chassis constructed of metal, wood, or another rigid material. (Flat panels on a full tuber do not count)
  - Must resemble a real 1:1.
  - Must be hand formed and fabricated.
- Inner fender wells: -1 per pair
- Rigid flat metal/plastic body panels -1

**Bumpers:**

- Bumpers: metal -3 each, plastic -1 each
- Stinger/grill guard: -1

**Interior:**

- 3D interior: One seat -3, two seats or bench -4, four seats -5 (#D interior must include seat, dash, steering wheel, and floor).
- #D SUV cargo area: -1
- 2D/half interior: one seat -1, two seats -2, four seats -3.
- Driver/ passenger figure (Class 0 & Class 1 must be human)
  - Must have an interior to receive driver/passenger points.
  - Complete figure (Head to toes): -4
  - Knees up: -3

- Torso up: -2
- Head with arms: -1
- Third and fourth passengers: -1 each

**Suspension/drive train/steering:**

- Leaf springs (must support vehicle weight, no external shock springs):
  - One axle: -3
  - Both axles: -7
- Multiple axles:
  - Three driven axles: -3
  - Four or more driven axles: -5
- Chassis mounted steering servo (CMS):
  - Front axle: -5
  - Rear axle (Class 3 only): -2
- Functional transfer case: -4
- 3D engine (must be in a reasonable location and appear to power the drive train): -4

**Realistic non-functional exterior items: Maximum of -6**

- Fuel cell: -1
- Exhaust: -1
- Jerry can: -1
- Hubs on all wheels: -1
- Steering stabilizer: -1
- Disc/drum brakes on all wheels: -1
- Mirrors (2): -1
- Wipers (2): -1
- Antenna: -1
- License plate: -1
- Fire extinguisher: -1
- Trail tools: -1
- High lift jack: -1
- First aid kit: -1

**Realistic functional exterior items: Maximum of -8**

- Tow strap: -1
- D ring (shackle): -1
- Pull Pal (land anchor): -1
- Hitch: -1
- Opening doors and hood: -1
- Spare tire mount: -1
- Headlights (2) and tail lights (2): -2
- Working winch (max -4)
  - Front: -2
  - Rear: -2
- Spare tire: -3

### **Course points and penalties:**

- Reverse: no penalty
- Hit gate marker: +10
- Rollover: +5
- Boundary: +5
- Vehicle touch (reposition): +5
- Use of winch: +1
- Hand winch: +5
- Did not finish (DNF): High score on course, minus progress points +10 points
- Did not start (DNS): High score on course +20 points

### **Penalty Definitions:**

**Reverse:** Anytime that the wheels of the vehicle roll in the reverse direction.

**Rollover:** +5 points are given when a vehicle must be rolled over by hand. Vehicles that roll but are able to be powered back onto its wheels without hand assistance are not penalized. No reverse penalties are given while a vehicle is attempting to right itself. During a hand rollover, at no time may the vehicle be lifted, slid, or moved in any fashion other than a smooth, continuous roll to the left or to the right side.

**Vehicle Touch/Reposition:** +5 points are given anytime that a driver touches the vehicle or the vehicle touches the driver, whether intentional or unintentional. The judge will stop the clock (if time is a factor) whenever a vehicle touch happens. The vehicle is then moved back, by the driver or judge, to the previously cleared gate with the rear axle aligned between the gate markers. If the vehicle cannot be aligned between the gates due to course design, the judge will position the vehicle to the next stable location after the previously cleared gate. This location will then be used for all drivers. Vehicle touches include, but are not limited to, on course repairs, repositions, vehicle falling into the driver, etc.. Winching, rollovers, and removing/replacing scale items to be used on the course (i.e. sand ladders) are not to be considered a touch.

**Off Course Repairs:** (No penalty) A driver may call time to make an off course repair. Repairs must be completed in 30 minutes or the driver will receive a DNF. If the repair is made within the allotted time, the driver must return to the end of the line. The driver will start on the course at the last gate cleared.

**Gate Marker:** Each gate marker will be comprised of 2 gate markers. Gate markers are assumed to be infinitively tall meaning that they go straight up, forever. All gates must be cleared in the intended direction. Progression through a gate in the wrong direction will receive a DNF. The complete vehicle, all four tires, must pass between the gate markers to clear a gate. If either gate marker is hit by any part of the vehicle, the entire gate is dead. All gate markers are live at all times unless they have been deemed dead.

**Boundary:** +5 points are given when any two wheels of the vehicle cross over a boundary marker. When a boundary is crossed, the judge will stop the clock (if time applies) and move the vehicle back to the previously cleared gate in the same fashion as a reposition.



**DNF (Did Not Finish):** Highest score on the course minus progress points +10 points are given anytime a driver cannot complete a course for any reason.

**DNS (Did Not Start):** Highest score on the course +20 points are given anytime a driver does not start a course for any reason. Vehicles must start course under its own power.

**Winching:** A Winch penalty of +1 will be assessed every time the vehicle winch cable is connected/reconnected, or self recovery tools are positioned/repositioned. If, at any time during the process of removing recovery tools from the vehicle and/or winch line are pulled, the vehicle is moved by any force other than the winch or its own power, a touch penalty will be assessed (see Vehicle Touch rule). All self recovery tools must be carried on the vehicle.

**Hand Winching:** All Judges shall have a tow rope and be able to offer a hand winch to those that do not have a winch on their vehicle. The judge shall pull the vehicle no longer than the length of the tow strap (24" tow strap is recommended). The driver will receive a +5 point penalty for each hand winch.

**Dig/Rear Steer (Class 3 only):** Dig and rear steer are both legal in Class 3 only, but only one may be used per course. Once one has been used, use of the other is prohibited. If, at any time on the same course, the driver uses rear steer after using dig or uses dig after using rear steer, a +5 point touch penalty will be given (see Vehicle Touch rule).

**Safety Time Out:** A driver may call for the judge to stop time so the he/she may safely reposition **themselves** (NOT their vehicle!) on the course. This time is to be used for the purpose of the drivers safety and may be used to survey the course or for any other advantage. Once the driver is repositioned, the time will start. However, the judge reserves the right to restart time at any point.

**Vehicle Out of Spec:** If, at any time, a judge has reason to believe a vehicle is out of spec while on course, he/she may call for time to stop. At this point, no additional input is to be given to the vehicle by the driver. The judge will mark the vehicles location and remove the vehicle from the course for a tech inspection. If the vehicle has been deemed within spec, the vehicle will be returned to the course at the location marked by the judge and the clock will start as soon as the vehicle moves. If the vehicle is deemed out of spec, the driver must take a repair to correct the issue. If the vehicle cannot be brought back to spec, the driver will receive a DNF for the course. If a vehicle falls out of spec due to breakage while on course and the judge determines that the vehicle has not gained a mechanical advantage, the driver will be allowed to continue.

These rules have been written so that everyone that attends any SORRCA Light event will be welcomed. Event coordinators may modify any rule to fit their event and the decision of the event coordinators is final. We are all here to have fun and enjoy tiny trucking with fellow hobbyist. Let keep it this way!!!