
TOUR

Introduction

The objective of *our* organization, **Team of United Racers (TOUR)**, is focused on one goal; to coordinate rules for carpet oval 1/10th scale pan car racing. The rules and guidance package below, addresses the carpet oval season from September 1st 2018 through May 1st 2019.

TOUR's objectives in coordinating carpet oval pan car racing are:

1. To standardize the classes featured in oval racing in an attempt to concentrate the classes and increase class counts.
2. To create and maintain a Sportsman Class intended to provide a place in this hobby for the long time sportsman and a point of entry for the new beginning racer.
3. To favorably impact the cost of pan car racing

It is **NOT** the charter of TOUR to force racetracks or events to adopt these rules. TOUR recognizes that individual racetracks must adopt rules satisfying their local racers in order to survive financially; just as many tracks adjust ROAR and other rules to suit their local situation. By defining classes and rules, used for a TOUR series, we provide guidelines for local tracks while making it clear for the traveling racer what rules will be used at our events. Our hope is that racers enjoy the consistency and stability provided by these rules and choose to compete locally using the same rules, also in effect for our major events, leading to a natural adoption of these rules across the country.

Committee

- Director: Allan Arrington

Class Guidelines

The class structure provided in these guidelines are the TOUR Championship Series classes used at major events and local tracks around the country. The tables below provide a quick synopsis of the class structure for 2018/19 followed by a brief description of the classes.

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“Sportsman Class”

<u>Class</u>	<u>Motor</u>	<u>Battery</u>	<u>Tires</u>	<u>Body</u>	<u>ESC</u>
TOUR Sportsman Truck	Trinity Equalizer 21.5	Fantom Spec	World GT	NASCAR Truck	Blinky

“Primary Classes”

<u>Class</u>	<u>Motor</u>	<u>Battery</u>	<u>Tires</u>	<u>Body</u>	<u>ESC</u>
Stock	Fantom Tour 17.5	Fantom Spec	World GT	Gen 3 / Nationwide / Spoiler	Blinky
Pro Stock	13.5	ROAR	World GT	Gen 3 / Nationwide / Spoiler	Blinky
13.5 Open	13.5	ROAR	OPEN	Cup style / Wing	OPEN
10.5 Open	10.5	ROAR	OPEN	Cup style / Wing	OPEN
Open Modified	Modified	ROAR	OPEN	Cup style / Wing	OPEN

“Rubber Tire Classes”

<u>Class</u>	<u>Motor</u>	<u>Battery</u>	<u>Tires</u>	<u>Body</u>	<u>ESC</u>
Stock RTT	13.5	ROAR 1-cell	CRC Rubber Tires	NASCAR Truck	Blinky
Pro RTC	ROAR 17.5 (or) Fantom Tour 17.5	2S Thin Shorty	CRC Rubber Tires	Protoform RTC	Blinky

“Short Track Suggestions”

Many tracks throughout the country cannot support the speeds of some of the National classes. In the spirit of consistency between tracks, TOUR suggests smaller tracks simply reduce the motor size while leaving the remaining rules intact for each class. For example the 13.5 Pro Stock class is often too fast for very small tracks. The suggestion is to keep all the other rules intact and drop the size of the motor from 13.5 to 17.5.

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TOUR Sportsman Truck (21.5)

This class is intended for sportsman racers.

This class features a NAS-Truck style body, World GT spec tires, any 1/10th pan car chassis, Trinity Equalizer 21.5 motor, and Electronic Speed Controls (ESC) approved under the “ROAR Sportsman Class ESC rule” set to the Sportsman profile at all times. The only battery allowed in this class is the new Fantom 4600 TOUR Spec pack (P/N: FAN26185).

Stock (17.5)

This class features NASCAR Nationwide Cup style bodies, World GT spec tires, any 1/10th pan car chassis, Fantom TOUR 17.5 motor, and Electronic Speed Controls (ESC) approved under the “ROAR Sportsman Class ESC rule” set to the Sportsman profile at all times. The only battery allowed in this class is the new Fantom 4600 TOUR Spec pack (P/N: FAN26185).

Pro Stock (13.5)

This class features NASCAR Nationwide Cup style bodies, World GT spec tires, TOUR approved 13.5 motors, any 1/10th pan car chassis, and Electronic Speed Controls (ESC) approved under the “ROAR Sportsman Class ESC rule” set to the Sportsman profile at all times.

13.5 Open

This class uses NASCAR Nationwide or Sprint Cup style bodies and TOUR approved 13.5 motors along with ROAR approved batteries. Any ESC may be used. Racers have the option of using a rear wing and/or a spoiler. Removal of material from the back of the body is allowed. Racers may use any foam tires intended for use on 1/10th scale pan cars.

10.5 Open

This is the premier class at most national events, featuring some of the best drivers across the country. It features NASCAR Nationwide or Sprint Cup style bodies with the option for a rear wing and allow removal of material from the back of the body, ROAR approved batteries, and any ESC may be used. Racers may use any foam tires intended for use on 1/10th scale pan cars. See 10.5 motor rules.

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Open Mod

This is the elite class of the TOUR featured at special events where the track is able to accommodate the speed of these vehicles. This class includes the best of the best drivers. It features NASCAR Nationwide or Sprint Cup style bodies with the option for a rear wing and allow removal of material from the back of the body, ROAR approved batteries, and any ESC may be used. Racers may use any foam tires intended for use on 1/10th scale pan cars, and ROAR legal modified motors.

Stock RTT

This class features the a NASCAR Truck body, any TOUR legal 13.5 motor, any ROAR approved 1-cell battery, CRC Rubber Tires, 5mm ride height, a 39 oz. weight minimum and Electronic Speed Controls (ESC) approved under the “ROAR Sportsman Class ESC rule” set to the Sportsman profile at all times.

CRC Tire and Wheel Rules – Team CRC GTR rims will be the only rims allowed (Part #2310). The only front tires that will be allowed are Team CRC RT-1 (Part#2311) or Team CRC Mounted RT-1 (Part#2314). The only rear tires that will be allowed are Team CRC RT-1 (Part#2312) or Team CRC Mounted RT-1 (Part#2316). Tires must be mounted “F1/NASCAR” style with the larger sidewall visible from the outside profile of the car. Sidewalls may be glued. Tires must display the molded letters (CRC). Stock inserts only. No Modifying inserts or “double stuffing” of inserts will be allowed.

Pro RTC

This was the first official TOUR rubber tire pan car class and is the premier class at most national events, featuring some of the best RTC from drivers across the country. This class features the Protoform RTC body, any ROAR legal 17.5 motor [and/or the Fantom TOUR 17.5 motor], any 2-cell “Thin Shorty Battery” (7.4v or 7.6V battery in a 1S case size 93mm x 47mm x18.5mm), CRC Rubber Tires, 5mm ride height, a 39 oz. weight minimum and Electronic Speed Controls (ESC) approved under the “ROAR Sportsman Class ESC rule” set to the Sportsman profile at all times.

CRC Tire and Wheel Rules – Team CRC GTR rims will be the only rims allowed (Part #2310). The only front tires that will be allowed are Team CRC RT-1 (Part#2311) or Team CRC Mounted RT-1

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(Part#2314). The only rear tires that will be allowed are Team CRC RT-1 (Part#2312) or Team CRC Mounted RT-1 (Part#2316). Tires must be mounted "F1/NASCAR" style with the larger sidewall visible from the outside profile of the car. Sidewalls may be glued. Tires must display the molded letters (CRC). Stock inserts only. No Modifying inserts or "double stuffing" of inserts will be allowed.

General Rules

Batteries

For classes other than TOUR Sportsman Truck, Stock, and Pro RTC, 1-cell LiPo batteries (nominal voltage; 3.7V or 3.8V) having received ROAR approval prior to October 1, 2018, are to be used. The **ONLY** battery permitted for the TOUR Sportsman Truck and Stock (17.5) class is the new Fantom 4600 TOUR Spec pack (P/N: FAN26185). The Pro RTC class will use any 2-cell "Thin Shorty Battery" (7.4v or 7.6V battery in a 1S case size 93mm x 47mm x18.5mm)

Label must be clearly visible. Fantom 4600 TOUR Spec packs (P/N: FAN26185) carry an MSRP of \$55.00.

Single Power Source

In all TOUR classes the 1-cell LiPo main battery is the only power source permitted for **any** electronics in the car (i.e. receiver packs are no longer permitted). The only exception to this is the Open Modified class, where receiver packs are permitted.

Voltage Limits

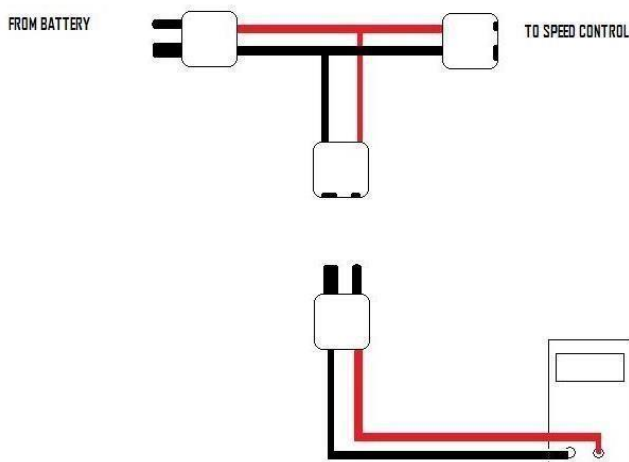
1s LiPo batteries may be charged to a maximum of 4.22v, regardless of their nominal rating. Batteries presented to Tech over the 4.22v max voltage must be drawn down to 4.20v before they will be permitted to race. This should prevent the problem with voltage creep back up over the legal limit.

2s LiPo batteries may be charged to a maximum of 8.44v, regardless of their nominal rating. Batteries presented to Tech over the 8.44v max voltage must be drawn down to 8.40v before they will be permitted to race. This should prevent the problem with voltage creep back up over the legal limit.

Voltage verification to be done as part of standard pre-tech race procedure

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- 4.22V per cell is not only the maximum voltage per cell that LiPo batteries may be charged to.....it is the maximum voltage per cell allowed to be presented to the motor drive circuitry for the purpose of powering your car.....period.
- Any attempt to use a secondary source of power (receiver pack battery or booster) to drive the motor at a higher voltage than 4.22V per cell is prohibited. No sneak circuits, no gray areas. This is blatant cheating.
- If any violation of this rule is suspected, the race director has the right to perform an “in-line test” of the car’s operating voltage on the starting grid. A connector wired in the configuration below will detect all voltage influences on the motor drive circuitry. All battery mfg. labels must be clearly visible. Any battery presented without label will not be allowed.



Motors

ROAR motor rules apply. Any ROAR legal spec motor with the class appropriate wind are to be used. Every motor must have a ROAR approval date on or before August 31st, 2018. Summer season approval date is on or before May 1st, 2019. Motors used in major TOUR events must have both a ROAR approval meeting the requirements above **and** be available to the racing public (as determined by the judgement of the event promoter) through normal distribution channels at least 30 days prior to the date of the event.

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NEW: Any motor presented to tech that shows signs of tampering or are below spec may not be returned. It is totally up to the Race Directors discretion.

Most Mfg. have agreed to replace a stator that is a factory mistake. Tampered motors will not be replaced.

TOUR reserves the right to modify the list of allowed motors to preserve a sportsman-like competitive atmosphere.

Rotors

All motors may only use rotors approved by ROAR for the specific motor may be used. Max rotor diameter is 12.51 mm. No mod rotors. Exceptions apply to the 10.5 motor classes (see 10.5 Motor Rules below), and the Open Modified class.

Heat Sinks

No cooling apparatus may be used, other than a single 30mm fan. Motor heat sink devices directly contacting/attached to the motor must be made of aluminum only, no other materials are allowed.

Vented Endbells

Vented or upgraded motor end bells produced and sold through regular distribution channels by the original motor manufacturer and approved by TOUR will be legal in all TOUR classes. No Hybrid motors.

21.5 Motor rules

Motor for this class will be the Trinity Equalizer 21.5 motor. No modifications can be made to this motor at all. Any signs of tampering will be result in disqualification and the motor will be confiscated.

17.5 Motor rules

Motor for Stock (17.5) class will be the Fantom TOUR 17.5 motor. Stators and Rotor will be laser etched with TOUR logo. Rotor may be replaced with TOUR rotor only. Sensor board may be replaced with Fantom sensor boards only. No replacing of hardware (screws, etc.) other than OEM original equipment. No modifications to motor or rotor from way it was designed and sold.

Minimum Stator Resistance to be minimum of 38.6 milliohms between any 2 phases of the motor (AB, AC, BC), when measured at 25C (77F) with an Instek milliohm meter.

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13.5 Motor rules

Any ROAR legal 13.5 spec motor may be used provided that the motor has a ROAR approval date on or before August 31st, 2018. ROAR motor rules apply. Summer season approval date is on or before May 1st, 2019. Motors used in major TOUR events must have both a ROAR approval meeting the requirements above **and** be available to the racing public (as determined by the judgement of the event promoter) through normal distribution channels at least 30 days prior to the date of the event.

10.5 Motor rules

Due to some changes over the past few years in the RC industry, Oval has been left in a unique position on motor approval and rules, regarding 10.5 motors. TOUR has decided to take a very positive step and implement suggestions that TOUR has received from many racers and manufacturers over the last few years. Therefore, for the 2018/2019 season, TOUR legal 10.5 motor rules are simplified to the following:

1. Minimum Resistance changed to meet ROAR's new minimum of 14.6 milliohms between any 2 phases of the motor (AB, AC, BC), when measured at 25C (77F) with an Instek milliohm meter.
2. Inductance numbers will be used to verify 10.5 winds if needed, motors may be tore down if needed to verify legality.
3. Rotors are open to any stock or mod brand compatible rotor (no hybrids).
4. There can be no other stack or motor modifications. The "base" (the teardown) of the motor must be from a commercially available motor.
5. There is no rule on wire size. Only circular (round) pure copper magnet wire permitted.

Heating & Cooling (Batteries *and* Motors)

Batteries max temp will be 90 degrees; motors must be no less than 5 degrees below the ambient temperature of the track area when the vehicle is presented for tech inspection. Racers will not be able to race if battery temp is too high or motor is too low. Fans will be allowed (ambient air), No forced cooling of batteries allowed (freeze spray, etc.) or any other product used to cool the battery.

Lipo sacks will be required at all TOUR events!

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Tires

- RTC Class to use CRC Rubber Tires with stock inserts:
- Team CRC GTR rims will be the only rims allowed (Part #2310). The only front tires that will be allowed are Team CRC RT-1 (Part#2311) or Team CRC Mounted RT-1 (Part#2314). The only rear tires that will be allowed are Team CRC RT-1 (Part#2312) or Team CRC Mounted RT-1 (Part#2316). Tires must be mounted “F1/NASCAR” style with the larger sidewall visible from the outside profile of the car. Sidewalls may be glued. Tires must display the molded letters (CRC). Stock inserts only. No Modifying inserts or “double stuffing” of inserts will be allowed.
- Any foam tires intended for 1/10th scale pan cars may be used in 1/10th scale classes other than the TOUR Sportsman Truck, 17.5 Stock, and 13.5 Pro Stock.
- World GT Tires are the **only** tires allowed for use in the TOUR Sportsman Truck, 17.5 Stock, and 13.5 Pro Stock. World GT Tires must meet the following specifications:
 - Tire and wheel must meet 10th scale specifications
 - Tire compound to be Japanese R4 compound, 38 shore
 - Tires must have an identifier ring of purple colored foam visible around the circumference of the tire
 - Tires meeting the above criteria will be considered legal for use after samples are submitted and approved by TOUR.

Current Approved WGT List

- John’s BSR Tires
- T.M. Racing
- CRC
- RC 4 Less
- GQ Racing Products
- Jaco Tires (white rim with purple stripe)

*** Tampering with or deviating from the original foam (Japanese R4 compound) in any way could result in disqualification from an event and suspension from any TOUR event for up to one year (including the Snowbirds, Ovalmasters, and TOUR Nationals).*

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Electronic Speed Controls (ESC)

TOUR Sportsman Truck, 17.5 Stock, 13.5 Pro Stock, and Pro RTC competitors must use an ESC approved by ROAR for Spec use. The ESC must be set to the Sportsman mode (i.e. no timing boost, cheat modes, etc.) **at all times** when used in these classes. No wirelessly configurable ESCs are permitted in these Spec classes. No Delayed Turbo.

Any speed control may be used in all other classes. ESC's hardware and software version used in a TOUR Championship event must be available to the racing public through normal distribution channels at least 30 days prior to the date of the event.

No modifications to the ESC circuitry are permitted. This includes and is not limited to jump circuits, extra non-factory wiring configurations that include extra components such as buck boost circuits and/or capacitors. Normal Factory supplied components that are available to the general public are allowed in the configuration suggested by the manufacturer of the ESC.

Factory supplied capacitors, if wrapped in heat shrink, must be identifiable. Therefore, only clear transparent heat shrink is allowed.

Any questionable ESC is subject to further analysis and may be removed and held during an event at the race director's discretion.

ESC's must be configured so that they cannot be wirelessly updated when presented for technical inspection and as used in all competition (qualifying and mains). Some examples include removal from the car of any separate, external wireless modules; removal of any specific receiver used to enable wireless programming; and / or a locked software mode in the ESC which prevents wireless updating (locked mode must be indicated by a specific distinctive blink code or LED color).

Also no driving enhancement radio or gyros (AVC) may be used.

Weight Minimums

- All 1/10th scale Foam Tire classes - 36 oz.
- Stock RTT and Pro RTC (1/10th scale Rubber Tire classes) - 39 oz.

Body Rules

Bodies may be submitted for approval to TOUR. Once approved and available for purchase they will be added to the list of approved bodies for the appropriate classes.

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Bodies must be available to the public at least 30 days prior to an event through normal distribution channels. No scraping of bodies will be allowed in the TOUR Sportsman Truck class or Stock RTT class. Truck bodies are to be at a minimum weight of 105 grams, painted.

Bodies used in competition are required to have the minimum details of numbers, headlights, and grills. Numbers must be displayed on the doors and roof with minimum sizes of 1 ¾" and 2.5" tall, respectively. All details may be painted or stickered and must be scaled appropriately.

Pre and Post Race Tech:

All Cars will be presented to pre-race tech and pass all rules required to race. They must also pass post-race inspection or be DQ'd. It is the racers responsibility to know the rules of the class they have entered. It is the racers responsibility to mount all accessories to the chassis in a way they cannot come off during completion. It is also the racers responsibility to insure all electronic of their car are operating correctly so there is no issues during the race. (battery, ESC, transponder etc.)

TOUR Sportsman Truck – NASCAR Truck (NASTRUCK) & Stock RTT

- 2" spoiler max (no side dams attached)
- Tailgate/rear bumper must be left in
- Holes may be drilled in the body for the purpose of mounting the body or transponder. Any other holes in the main body surface area, for any other reason are prohibited.
- Minimum roof height: 4 3/8". **Approved Bodies:**
- Protoform 1227-21
- McAllister 300/301/302
- RJ speed 1050

Stock and Pro Stock – NASCAR Nationwide

Bodies must resemble current NASCAR Nationwide cars and be approved by TOUR. TOUR will approve bodies at its discretion after submission by manufacturer.

- Minimum roof height of 4 ¼"

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- Minimum height at the center of hood @ the centerline of the front axle – 2 ½ inches
- Rear of body only trimmed as high as the trim line. No air relief holes above the trim lines in the rear. (i.e. leave rear of body in)
- Body must be centered (front to back) in alignment with the mold lines for the front wheel wells.
- Holes may be drilled in the body for the purpose of mounting the body, wing, or transponder. Any other holes in the main body surface area, for any other reason are prohibited.
- Front of body (ahead of front wheel wells must be trimmed on the manufacturer's molded in cut line or to provide a minimum splitter height of 2mm if a cut line is not provided.
- **INTENT of the Rules: Cut the body on the body line and don't rake or slam the body.**
- For all approved bodies a spoiler with a maximum height of 1.5" from the deck lid may be used. Wings of any type may not be used.
- **Approved Bodies:**
 - 1 Protoform Gen 3 (part # 123221, 1237-25, 1233-25)
 - 2 McAllister part # 277

13.5 Open and 10.5 Open – Nationwide or Sprint Cup

- Back of car bodies **may** be cut out
- NASCAR Cup-style bodies (e.g. C-HD, D-HD, and T-HD)
- 1.5" spoiler max (no side dams attached)
- Holes may be drilled in the body for the purpose of mounting the body, wing, or transponder. Any other holes in the main body surface area, for any other reason are prohibited.
- All bodies must be available to the general public at least 30 days prior to an event through normal distribution channels.
- Wings may be used subject to the following dimensions:
 - Max width: 8"
 - Side-dam max height: 2"
 - Side-dam max length: 3.75"

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- Chord max: 3"

Pro RTC

- Minimum roof height of 4 3/8"
- Minimum height at the center of hood @ the centerline of the front axle 3.00".
- Rear of body only trimmed as high as the trim line. No air relief holes above the trim lines in the rear. (i.e. leave rear of body in)
- Body must be centered (front to back) in alignment with the mold lines for the front wheel wells.
- Holes may be drilled in the body for the purpose of mounting the body, wing, or transponder. Any other holes in the main body surface area, for any other reason are prohibited.
- Front of body (ahead of front wheel wells must be trimmed on the manufacturer's molded in cut line or to provide a minimum splitter height of 2mm if a cut line is not provided.
- **INTENT of the Rules: Cut the body on the body line and don't rake or slam the body.**
- For all approved bodies a spoiler with a maximum height of 1.5" from the deck lid may be used. Wings of any type may not be used.
- Front of body, ahead of front wheel wells must be trimmed on the manufacturers' molded in cut line or to provide a minimum splitter height of 2mm if a cut line is not provided. Splitter may not be removed and reattached.

Approved Bodies:

- Protoform RT-C Body (Part #1239-25)

Race Director's Discretion:

TOUR has done its best to define rules encouraging fair and competitive racing. We have focused on defining simple, clear, and understandable rules.

We realize it is the nature of every racer to push the limits, but the time and energy required to write an "air tight" rules package is not available to us.

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(And we don't have the money to pay an attorney to write R/C rules.)
Therefore, we ask that each of you adhere to the rules listed and follow the common sense guideline that we have all observed for over 20 years. These are the "generally accepted guidelines" that usually go without saying and simply follow ROAR's most basic oval guidelines (i.e. wheelbase, width, tire [type, diameter, & width], single speed, one-piece drive axle only, etc...)

However, in the event that there is a question or discrepancy, the Race Director has the **FULL AND EXCLUSIVE AUTHORITY** to interpret the rules. His or Her decision is final for the purposes of that event.

The TOUR reserves the right to edit and/or "repair" the rules listed above to account for oversight, unforeseen circumstances and /or in the interest of promoting fair competition.