

2010-2011 Brushless Racing League Rules

September 14, 2010

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1) General Rules

Rules apply to classes within the BRL and are intended to provide guidelines for fair competition. In the event a rule is not covered in this package the BRL will have the right to adjust or amend rules at any time.

- 1.1) Rules may be revised on an as needed basis. No person attending a BRL event will have any claim for damages, expenses, lawsuits, or otherwise against a promoter, track operator, BRL, it's officials, agents, or employees, resulting from any damage to any car, personal injury, on monetary loss of any kind whatsoever. All attendees waive any claim they have against any promoter, track operator, or the BRL, when they participate in any event being run under these rules.
- 1.2) It is the driver's responsibility to be in compliance with all BRL rules and regulations. Failure to do so may result in penalties or race disqualification.
- 1.3) The intention for the BRL is to promote racing in a fun, family oriented atmosphere. Unsportsmanlike behavior WILL NOT be tolerated. BRL staff and track management reserves the right to levy penalties or may disqualify a driver for any of the following:
 - Excessive foul language
 - Drinking of alcoholic beverages or use of illegal substances
 - Verbal or physical abuse of a race official or fellow competitor
 - Rough driving or intentional hacking of a competitor
 - Intentionally circumventing the rules
 - Actions detrimental to the BRL or participating tracks
 - Not following the commands of a race official
- 1.4) Race director reserves the right to "black flag" any driver whose car is operating in a reckless or uncontrolled manor, or that may constitute a hazard to other drivers in the race.
- 1.5) Race director's decision is final regarding penalty or scoring disputes.
- 1.6) For your safety, drivers are required to wear closed toed shoes at all times while in the racing area.
- 1.7) Safety of our racers is of utmost concern. In the event of hazardous winter weather conditions a race event may be shortened and or cancelled. Shortened event will be considered complete after 2 rounds of qualifying. Cancelled race may be made up at the next available time
- 1.8) Drivers are required to turn marshal the race immediately following their own. Failure to do so will result in the loss of laps off their best qualifying time. If for some reason a driver is not able to turn martial it is the driver's responsibility to find another entered driver as a replacement. The replacement martial most notify the race director. The original driver is responsible for the actions of the substitute martial.

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- 1.9) Turn marshals are not allowed to repair race cars during qualifying races or Main.
- 1.10) Marshaled cars should be returned to the track outside the racing line at a point closest to that where they left the racing surface.

2) Competition Classes for the 2010-2011 season

- 2.1) Points championships will be contested in 5 classes for the 2010-2011 season:
 - 17.5 Sportsman Truck
 - 17.5 Stock Nationwide
 - 13.5 Stock Spec COT
 - 13.5 Super Stock COT
 - 10.5 Pro Stock
- 2.2) Other classes may be contested at individual events

3) General Chassis Specifications

- 3.1) **Car Specifications**
 - Length: 20" Maximum
 - Width: 9.875 Maximum 7.25 Minimum
 - Minimum Ride Height: 4mm
 - Wheelbase: 11" Maximum 9" Minimum
 - Weight: 36oz Minimum in 1 cell classes
- 3.2) **Wheel Specifications**
 - Diameter - 2" Maximum 1.625" Minimum
 - Width - Front 1.25" Maximum Rear 2" Maximum
- 3.3) **Tire Specifications**
 - Diameter - 2.6" Maximum
 - Width - Front 1.25" Maximum Rear 2" Maximum
- 3.4) **Single one piece rear drive axle only.** (No independent rear suspension)
Single speed only

4) General Body Rules

- 4.1) Bodies used in the BRL are to resemble full sized NASCAR style vehicles.
- 4.2) All bodies used must be on the BRL approved body list.

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- 4.3) New bodies must be submitted to the BRL for approval. Bodies may be submitted throughout the season but must be available through distribution channels for a minimum of 30 days.
- 4.4) Bodies should be neatly finished, painted and or trimmed. All windows (front, rear, sides and quarters) must remain clear. No objectionable or suggestive art, decals, or lettering will be permitted.
- 4.5) All cars are required to run car numbers on the roof and both doors. Door number must be between the A and C pillars of the body. Numbers must be easily identifiable and MUST have a contrasting outline.
- 4.6) Numbers may be up to three numerical digits or a combination of numeric number(s) followed by a letter. (Example 15B) Numbers are to be a minimum of 1.75" tall for a single digit and 1.5" tall for two or three digit numbers. Letter should be no larger than .75". (The number 1 is only available for the previous year's class champion)
- 4.7) Wheel cut-outs: Maximum .5" over the tire diameter.
- 4.8) Body should have no sharp edges, corners must be rounded. Fender flares are not allowed.
- 4.9) Holes may be drilled in the body for the purpose of mounting the body, wing, or transponder. Holes or material removal from the main body surface area for any other reason is prohibited.
- 4.10) Spoilers
 - 4.10.1) Lexan may be added to the spoiler provided by the manufacturer or to replace the manufacturer supplied spoiler up to the maximum dimensions allowed.
 - 4.10.2) Spoiler maximum blade length 1.50" measured from the back edge of the rear deck lid unless noted in the specific class rules. (Note: Molded spoiler lips are to be included as part of the spoiler blade measurement.)
 - 4.10.3) Spoiler not to extend beyond the width of the body.

5) Class Specific Rules:

5.1) 17.5 Sportsman Truck

5.1.1) NASCAR Camping World Series style truck bodies:

Protoform ORT: 1227-21

McAllister: 176, 203, 218, 245

Windtunnel: 2259, 2272

5.1.1.1) 2" spoiler max (no side dams attached)

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- 5.1.1.2)** Rear of the body must remain intact. (No cutouts). The rear of the body may not be cut any higher than the manufacturer's molded cut line at the bottom of the rear bumper cover.
- 5.1.1.3)** If a body does not have a bumper or manufacturer's cut line molded into the back, the rear of the body may not be cut out any higher than 1.50" measured down from the top of the deck lid.
- 5.1.1.4)** No wings allowed, spoiler only.
- 5.1.1.5)** Minimum roof height: 4.375"
- 5.1.2)** The only battery allowed in the 17.5 Sportsman Truck class is the SMC 4000 Mahr, 25C single cell Lipo (PN SMC4025).
- 5.1.3)** Any 17.5 turn, sensored, brushless motor approved by ROAR may be used in this class. A list of approved motors may be found at:
http://www.roarracing.org/?page_id=251
- 5.1.4)** Electronic Speed Controls used in this class must be approved by ROAR for use in sportsman racing. When used in any practice or competition for this class these ESC's must be set to their sportsman or zero timing advance mode. A list of approved ESC's can be found at this link:
http://www.roarracing.com/?page_id=737
- 5.1.5)** World GT Tires are the only tires allowed for use in the TOUR Sportsman Truck Class. World GT Tires are to meet the following specifications:
 - 5.1.5.1)** Tire compound to be Japanese R4 compound, 38 shore
 - 5.1.5.2)** Tire must have an identifier ring of purple colored foam visible around the circumference of the tire

5.2) 17.5 Stock

5.2.1) Approved Bodies

Mc Allister Bodies: 224, 225, 226, 238

Protoform: 122421, 122521, 122621, 122821, 122930, 123121

Windtunnel: 2210, 2212, 2214, 2222, 2235, 2241, 2242, 2243.

- 5.2.1.1)** Rear of the body must remain intact. (No cutouts). The rear of the body may not be cut any higher than the manufacturer's molded cut line at the bottom of the rear bumper cover.

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- 5.2.1.2) If a body does not have a bumper or manufacturer's cut line molded into the back the rear of the body may not be cut out any higher than 1.75" from the top of the deck lid or the top of any molded in spoiler, whichever is higher.
- 5.2.1.3) No wings allowed, spoiler only.
- 5.2.1.4) Minimum height 4.25"
- 5.2.2) Racers may use any 3.7v (nominal) single cell Lipo battery approved by ROAR prior to October 1st, 2010. This listing can be found at:
http://www.roarracing.org/?page_id=259
- 5.2.3) Any 17.5 turn, sensored, brushless motor approved by ROAR may be used in this class. A list of approved motors may be found at:
http://www.roarracing.org/?page_id=251
- 5.2.4) Racers in this class may use any brand of Electronic Speed Control available to the general public that complies with the requirements of Section 7.

5.3) 13.5 Stock Spec COT

5.3.1) Approved COT bodies:

McAllister Charger COT 261
McAllister Fusion COT 254
McAllister Impala COT 249
Protoform TCC 1230-30

- 5.3.1.1) Minimum roof height: 4.375"
- 5.3.1.2) Minimum height at center of hood in line with the centerline of the front wheels: 2.5"
- 5.3.1.3) Rear of the body must remain intact. (No cutouts). The rear of the body may not be cut any higher than the manufacturer's molded cut line at the bottom of the rear bumper cover.
- 5.3.1.4) If a body does not have a bumper or manufacturer's cut line molded into the back, the rear of the body may not be cut out any higher than 2.0" measured down from the top of the deck lid.
- 5.3.1.5) Front splitter thickness to be a minimum of .125"
- 5.3.1.6) No sectioning or deforming of body to obtain an aerodynamic advantage.
- 5.3.1.7) Wing must be OEM supplied COT style wing. McAllister wing on a McAllister body, Protoform wing on a Protoform body.

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5.3.1.8) Rear wings must remain clear and unpainted to visually differentiate this class from Super Stock COT when on the track.

5.3.1.9) Wing Dimensions to be as follows (+/- .125"):

5.3.1.9.1. Protoform wing dimensions:

- Width including end plates: 6.5"
- End Plate height: 1.25"
- End Plate length: 1.5" on bottom; 1.0" on top
- Chord Max: 1.375" (leading to trailing edge)

5.3.1.9.2. McAllister wing dimensions:

- Width including end plates: 6.75"
- End Plate height: 1.0"
- End Plate length: 1.5" on bottom; 1.0" on top
- Chord Max: 1.375" (leading to trailing edge)

5.3.2) The only battery permitted in the 13.5 Stock Spec COT class is the Thunder Power 5400 Mahr, 65C single cell lipo battery (PN TP5400-1SPR65B; TP5400-1SPR65D)

5.3.3) Novak 13.5 turn SS or Ballistic motors only.

5.3.4) Electronic Speed Controls used in this class must be approved by ROAR for use in sportsman racing. When used in any practice or competition for this class these ESC's must be set to their sportsman or zero timing advance mode. A list of approved ESC's can be found at this link:

http://www.roarracing.com/?page_id=737

5.3.5) BSR spec tires with the yellow identifier ring are the only tires allowed in this class. The right front wheel position must be the BSR Blue compound spec tire.

5.4) 13.5 Super Stock COT

5.4.1) The same body rules will be used for 13.5 Super Stock COT as for 13.5 Stock Spec COT with the exception that rear wings must be painted and can not remain clear. Please see section 5.3.1 for complete body rules.

5.4.2) Racers may use any 3.7v (nominal) single cell Lipo battery approved by ROAR prior to October 1st, 2010. This listing can be found at:

http://www.roarracing.org/?page_id=259

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5.4.3) Any 13.5 turn, sensored, brushless motor approved by ROAR may be used in this class. A list of approved motors may be found at:

http://www.roarracing.org/?page_id=251

5.4.4) Racers in this class may use any brand of Electronic Speed Control available to the general public that complies with the requirements of Section 7.

5.5) Pro Stock 10.5

5.5.1) Approved bodies

Mc Allister Bodies: 224, 225, 226, 238

Protoform: 122421, 122521, 122621, 122821, 122930, 123121

Windtunnel: 2210, 2212, 2214, 2222, 2235, 2241, 2242, 2243.

5.5.1.1) Rear of the body may be cut out.

5.5.1.2) Wings and spoilers may be combined

5.5.1.3) Only single element rear wings allowed

5.5.1.4) Wings may be mounted to or through the rear window of the body or attached to the deck lid.

5.5.1.5) Wing Chord or Side Dams may be no closer than .25" to the rear deck lid.

5.5.1.6) Wing chord may not extend past the rear spoiler. Side dams may extend behind the spoiler but no more the 1".

5.5.1.7) Wing Dimensions

Chord: 3" Maximum

Width: 8" Maximum

Side Dam Length: 3.75" Maximum

Side Dam Height: 2.0" Maximum

5.5.2) Racers may use any 3.7v (nominal) single cell Lipo battery approved by ROAR prior to October 1st, 2010. This listing can be found at:

http://www.roarracing.org/?page_id=259

5.5.3) Any 10.5 turn, sensored, brushless motor approved by ROAR may be used in this class. A list of approved motors may be found at:

http://www.roarracing.org/?page_id=251

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5.5.4) Racers in this class may use any brand of Electronic Speed Control available to the general public that complies with the requirements of Section 7.

6) Availability of Motors, Batteries and ESC

Regardless of inclusion on any approval list in these rules or by ROAR; motors, batteries and electronic speed controls used in competition must be available to the general public at least 30 days prior to an event. For the purposes of this rule, "available to the general public" is defined as able to be purchased through recognized distribution channels (including the manufacturer's website) in North America.

7) General Rules for Electronic Speed Controls

ESC's for all classes must be sensed type and motor / ESC sensor harness must be plugged in and operating. Because not all ESC are capable of monitoring motor temperature, the blue temperature wire (pin #5) in the sensor harness may be removed from those ESC's which have temperature sensing / limiting.

The BRL is committed to competitive consistency throughout our 6 month long season. We reserve the right to impose limitations on ESC's or ESC software introduced after October 1st should this prove necessary to maintain speed ranges in each class that are consistent with those that exist at the start of the season.

8) General Rules for Batteries

8.1.1) Intentional overcharging, or pre heating of the cells **WILL NOT** be tolerated.

8.1.2) Voltage limits: 4.220v

This voltage limit applies to the car in ready to race condition. It is the maximum voltage to be presented to the ESC motor drive circuitry under all conditions. 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. The race director or technical inspector has the right to inspect a vehicle for maximum voltage at any time including on the starting grid.

8.1.3) Any competitor's battery that exceeds these voltages will be disqualified from that heat or main. **You will be given one opportunity to reduce the voltage and re-tech the car.**

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- 8.1.4) All Lipo batteries are required to have a connector, (no hard wiring to the ESC). Approved connectors include, Deans, Traxxas, EC3, or Banana plug.
- 8.1.5) A control battery will be placed in the tech area to establish ambient pack temperature. Your battery must measure within +/- 5 degrees of this temperature during pre race tech. **Failure to comply will result in disqualification from your upcoming heat or main.**
- 8.1.6) Receiver packs used in 1 cell classes will be limited to a maximum capacity of 500 maHr's and must be connected to the vehicle's electronics using wiring no larger than 20ga through a standard servo plug or JST plug.
- 8.1.7) Hard cases for receiver packs are recommended but not required.

9) General Brushless Motor Specifications

- 9.1) Any ROAR approved, sensored brushless motor with the appropriate wind for the respective classes is allowed.
- 9.2) All motors must have the original manufacturer's logo or name visible.
- 9.3) Motors must be available thru major distribution channels for a minimum of 30 days prior to being used in BRL competition.
- 9.4) No hybrids allowed. (mixing of parts from approved brushless motors unless otherwise specified)
- 9.5) The maximum retail price of a brushless motor shall be \$129.00.
- 9.6) Motors may be inspected or torn down at the race director's discretion.
- 9.7) Motors may NOT have any material removed from the can, endbell, coil winding stacks, or any other motor component. This includes the aluminum "Center Band" if so equipped. No modifications other than those specifically addressed in these rules are permitted.
- 9.8) A single hole may be drilled in the plastic end cap for the purpose of oiling the rear bearing, the hole may be no larger then 3/8".
- 9.9) Bearings may be replaced with steel or ceramic version of the same size.
- 9.10) Timing adjustment of the motor is allowed within the limits provided by the manufacturer. No modifications to the motor to extend the range of timing adjustment are allowed.
- 9.11) The use of freeze spray or motor cooling devices is prohibited. Motor must be within 5 degrees Fahrenheit of ambient room temperature at pre-race tech.

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10) General Radio Equipment Rules

- 10.1) All transmitters and receivers must be FCC approved.
- 10.2) Unless using a 2.4ghz system, all radios are required to be off when not on the racing surface.
- 10.3) Drivers using crystal based systems are required to have two alternate frequencies. If a frequency conflict occurs the lower qualified driver is required to change.
- 10.4) No roll-over antennas

All cars are required to be scored with transponder. It is the responsibility of the racer to make sure his transponder is operating correctly.

11) Supplemental Event Regulations

The BRL is a touring series and we are fortunate to be guests at some of the finest racing facilities in the country. Often these facilities have local track rules for safety or maintenance reasons which may require the use of lipo sacks when charging batteries, limitations on the type of traction compounds which can be used, the use of hard cases for lipo receiver packs, etc. When competing at these facilities, all BRL racers are expected to comply with any special track requirements. Any breach of these track rules will be treated as a breach of BRL regulations and the full range of penalties available to the BRL may be applied at the discretion of the race director.

12) Rules of Competition

- 12.1) A drivers meeting will be held prior to the start of the first heat. It is mandatory for all drivers to attend.
- 12.2) All drivers will report their cars to tech before and immediately after each race. Failure to do so will result in penalty or disqualification
- 12.3) Tech official may check for any rules infraction at any time. Motors may be torn down at his discretion.
- 12.4) No car may enter the track area after a race begins.
A car pulled for repair or adjustment may not re-enter a qualifying race or main. Doing so will result in penalty or disqualification.
- 12.5) Once the competition begins substitute drivers will not be allowed.
- 12.6) Practice- In an effort to keep competition fair and limit the amount of travel required for BRL Regional events, practice will be restricted. Friday night practice, if available, will be limited to less than 2 hours in the evening. (The Friday session will be left up to the individual track owners and may start no earlier than 7 pm local time). Official practice times will be posted in advance of each event.

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- 12.6.1)** Controlled Practice- Controlled sessions will be broken out by class and limited to 8 cars maximum for a duration of 4 minutes. Drivers may enter and exit as many times as they like during their 4 minute session. Due to the large number of cars each driver will participate in only 1 session per rotation.
- 12.6.2)** Open Practice - Open practice times may be declared at the race director's discretion. Practice is un-controlled and drivers may enter and exit as they please during this time.
- 12.6.3)** Drivers competing in a BRL Tour race will not be allowed to practice on the event track for a period of 72 hours prior to the first scheduled practice session.
- 12.6.4)** All drivers must be registered with paid entry before they can participate in a practice session.
- 12.6.5)** Drivers are limited to one practice attempt per class entered in each available controlled practice rotation.
- 12.6.6)** Final round of practice will be set-up by heat order.

12.7) Qualifying

- 12.7.1)** 4 rounds of IFMAR style qualifying will be conducted at each event. Cars will be placed on the starting grid and launch on the tone. Heat length will be 4 minutes.
- 12.7.2)** A driver's single fastest round will be used to determine heat resort or main placement.
- 12.7.3)** Heats/Main will be re-sorted at the conclusion of qualifying rounds 2, 3 and 4.

12.8) Mains

- 12.8.1)** All mains will be packed full (8 cars maximum).
- 12.8.2)** All A-mains will run for a scheduled distance of 75 laps.
- 12.8.3)** The fastest 6 drivers at the conclusion of qualifying are locked into the A-main. Bonus points will be awarded based on qualifying position.
- 12.8.4)** Drivers qualified 7 - 14 will compete in the B- main. The winner of the B will bump to the A-main. The winner will start in grid position 7.
- 12.8.5)** Grid Position 8 ("The Lucky Dog") will be filled by the driver who turns the fastest time in a lower main. (Note: This may be second place B-main finisher or any lower main winner.)

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A-Main Starting Grid

1. Qualifier #1
2. Qualifier #2
3. Qualifier #3
4. Qualifier #4
5. Qualifier #5
6. Qualifier #6
7. B-main winner
8. Lucky Dog

12.8.6) Driver may protest scoring within 5 minutes of a completed race. Protest must be written describing the problem

12.8.7) The Race Director's decision is final on all scoring issues.

13) National Points

13.1) National points will be kept in all classes.

13.2) Eligible drivers will be awarded point scores based on overall finish after each regional event. Overall finishing position is determined by main performance. (Example A-main finishers ranked 1-8 overall, 9th place points score goes to the highest finishing B-Main driver not bumped to the A.) (See chart below)

13.3) Points awarded for the Novak National Finals (including bonus points) will have a point value of 1.5 times that of a regional event. (Example: 400 points x 1.5 = 600 points)

13.4) Points Total for each individual race is a combination of over Overall Points Score plus all accumulated Bonus Points for that event.

13.5) National Points ranking will be determined at the end of the season using their highest 4 finishes in any combination of the 6 events.

13.6) Driver may compete in a class at as many regional events as they like.

13.7) Points are awarded based on finishing position. If a driver not eligible for points was to win an event the top score of 400 points would not be awarded for that event. 2nd place would receive 398, third 396 and so on.

13.8) Points System

The winner of each A main will receive 400 points. The winner will received 4 points more than the runner up. After that points will decrease in increments of 2.

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1. 400
2. 396
3. 394
4. 392
5. 390
6. 388
7. 386
8. 384
9. 382
- 10.380

Bonus Points:

Awarded to the Top 6 Qualifying Positions at each event.

- (TQ) 6 points,
- (2nd) 5 points,
- (3rd) 4 points
- (4th) 3 points
- (5th) 2 points
- (6th) 1 point

A Hard Charger bonus of one point will be awarded to the winner of the B Main and all lower mains.

Tie-Breaker - Finishing position at the National Final.

13)The BRL National Finals

- 13.1)** Due to a limited time schedule entries for the BRL National Finals will be capped at 160.
- 13.2)** Divers ranked in the top 20 in points in the each class will be guaranteed an entry into the National Finals provided they meet the pre-entry deadline (TBA). These drivers will also receive higher seeding for practice and qualifying heats.
- 13.3)** Points ranking per Section 11.2 will be based on top 3 combined event scores before the finals.
- 13.4)** All other entries for the finals will be based on the reception dated of paid pre-entry. (Entry forms and due date will be available after the first of the year.)