

# ***USRA***

***UNITED SLOT RACERS ASSOCIATION***

**1971-2013**

**RACING INTO OUR  
5TH DECADE OF  
NATIONAL CHAMPIONSHIPS**

# **2013**

**RULE BOOK**

*By accepting membership into the USRA as a racer or commercial member, you are agreeing to comply with all rules and bylaws in this rule book and to bring any legal actions against the USRA or any of its officers.*

*This document is provided for informational purposes only. The information contained in this document represents the current view of United Slot Racers Association on the issues discussed as of the date of publication. Because United Slot Racers Association must respond to changes in market conditions, it should not be interpreted to be a commitment on the part of United Slot Racers Association and the United Slot Racers Association cannot guarantee the accuracy of any information presented after the date of publication.*

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## **2013 NATIONAL CHAMPIONSHIPS**

### **SCALE DIVISION**

#### **SpeedZone Raceway and Hobbies**

201 Pine St., Mt. Holly, NJ 08060

(609) 702-0146

Manager: Jay Kisling

**Wednesday, April 10**

JRL

**Thursday, April 11**

GT12 Amateur & Expert

**Friday, April 12**

F1/32 & 1/32 Eurosport

USRA Annual Meeting

LMP

**Saturday, April 13**

GP10

1/24 Eurosport

**Sunday, April 14**

GTP

*LMP, GP10, and GTP will be on the Engelman.*

*All other classes will be on the Jersey Devil.*

## **2012 NATIONAL CHAMPIONS**

### **SCALE DIVISION**

**1/24 Eurosport**

Roy Hood

**1/32 Eurosport**

Paul Gawronski

**Formula 1/32**

George Russell

**4-1/2 Nascar**

Frank Sarkella

**GT-12**

*Expert:* Greg Gilbert

*Amateur:* Frank Gawronski

**LMP**

Frank Sarkela

**GTP**

Paul Gawronski

**4" Nascar**

*Expert:* Justin Colvin

## **2013 NATIONAL CHAMPIONSHIPS**

### **WING CAR DIVISION**

#### **Mid-America Raceway**

2035 63<sup>rd</sup> St., Downers Grove, IL 60516

(630) 484-8574

Owners: Roger & Laura Schmitt

<b>Saturday, August 24</b>	Spec 12 Amateur Group 12
<b>Sunday, August 25</b>	Expert Group 12 Amateur Cobalt 12
<b>Monday, August 26</b>	Amateur International 15 Expert International 15
<b>Tuesday, August 27</b>	Expert Cobalt 12 Group 7 warm-up
<b>Wednesday, August 28</b>	27 Lite National Meeting
<b>Thursday, August 29</b>	Amateur Group 27 Expert Group 27
<b>Friday, August 30</b>	OMO Geezer Group 7
<b>Saturday, August 31</b>	Semi Pro Group 7
<b>Sunday, September 1</b>	Pro Group 7

## **2012 NATIONAL CHAMPIONS**

### **WING CAR DIVISION**

<b>Group 7</b>	<i>Pro:</i> Paul 'Beuf' Pedersen
	<i>Semi-Pro:</i> John Waller
<b>OMO</b>	Marcio Pascholin
<b>Senior Group 7</b>	Richard Curnutte
<b>Group 27</b>	<i>Expert:</i> Luca Bernardino
<b>27 Lite</b>	Hamilton Veroneze
<b>Cobalt 12</b>	Justin Risk
<b>International 15</b>	Jim "Spove" Sproviero
<b>Group 12</b>	<i>Amateur:</i> Justin Risk
	<i>Expert:</i> Bob Lucky
<b>Spec 12</b>	Jennifer Marquette

# BYLAWS

## ARTICLE I

### A. DEFINITION OF BYLAWS

These bylaws constitute the code of rules adopted by the United Slot Racers Association (hereinafter USRA), for the regulation and management of its affairs.

### B. PURPOSES & POWERS

The primary purpose of the Association is to establish rules and procedures to standardize the sport of slot car racing, and to further the general interests of all persons engaged in the hobby/sport of scale model slot car racing.

### C. BOOKS & RECORDS

The association will keep correct and complete books recording all receipts of Association income and all disbursements of expenses incurred by the Association.

### D. NON-PROFIT OPERATIONS

The Association will not have nor issue shares of stock. No dividend will be paid and no part of the Association's income will be distributed to its members or officers. The Association may pay reasonable compensation to members or officers for expenses incurred on behalf of the USRA.

## ARTICLE II – MEMBERSHIP

### A. DEFINITION OF MEMBERSHIP

The members of this Association are those persons having membership rights in accordance with the provisions of these Bylaws.

### B. CLASSES OF MEMBERSHIP

The Association will have the following classes of members: General Membership and Commercial Membership. Only General Members in good standing may enter sanctioned events.

### C. MEMBERSHIP DUES

The membership dues payable to the Association by members will be in such amounts as may be determined from time to time by vote of the members. Dues are payable annually. Dues are \$12.00 for General Membership at the national level and \$25.00 for Commercial Membership, which are payable to the National Treasurer during the year, or at the National race event. Only products of USRA commercial members will be approved for use at USRA regional and national competitions. Elected USRA officials will receive a paid Membership. All monies are U.S. funds.

### D. VOTING MEMBERS

All members will be entitled to vote in the Online Vote for Bylaws and the election of the National Director. Members attending the National

Championships will vote on the Divisional Officers and the National Championship site during the General Meeting. The voting for Division Officers will be done by paper ballot.

#### **E. TRANSFERABILITY OF MEMBERSHIP**

Membership in this Association is non-transferable and non-assignable.

#### **F. TERMINATION OR SUSPENSION OF MEMBERSHIP**

Membership will terminate or be suspended with this Association on any of the following events:

1. The death of a member.
2. Conduct detrimental to the sport, subject to the discretion of the Board of Directors, will result in suspension.
3. Dishonesty with respect to the handling of USRA funds.
4. Commercial members found by the Board of Directors to be operating outside of the bounds of proper conduct either in the marketing and production of products or in violation of specific USRA rules with respect thereto will be subject to suspension, or in extreme cases, expulsion from the USRA. This action would, pursuant to Article XI, Section A, preclude their products from use in competition in sanctioned events for the duration of the suspension or, in the case of expulsion, until re-admittance. The Board of Directors will decide length of suspensions after a full investigation. Such investigation will include a full and fair opportunity for the member and any other individuals directly involved to be heard.

### **ARTICLE III – EMERGENCY CLAUSE**

#### **A. EMERGENCY RULE CHANGES**

The USRA Board of Directors may add, delete, or modify any rule(s) to ensure fairness in the sport of slot car racing. All decisions will be final.

### **ARTICLE IV – OFFICERS**

#### **ROSTER OF OFFICERS**

The officers of this Association are charged with the responsibility of conducting general business in the name of the Association at the national level, to include the publication and administration of rules, the management of The Association's financial affairs, publicity in any medium, and other necessary business, and said officers are hereby granted such authority.

1. National Director.
2. Division Director (one for each Division).
3. Treasurer.
4. Technical Directors (one for each Division).
5. Assistant Technical Directors (one for each Division).
  - a) Additional Assistant Tech. Director(s) will be appointed from the region of the Nats Host Track to function as a liaison.
6. Webmaster (optional)

## **SELECTION OF OFFICERS**

The term of the officers will be as follows:

Beginning in 2012 the National Director will be elected to a 2-year term; he/she can succeed once (2 consecutive term limit) and will remain on the BoD as a past ND for 2 years following the expiration of the elected term.

Beginning in 2013 the Division Director will be elected to a term of 2 years; he/she can succeed once (2 consecutive term limit). For 2012 the Division Director will be elected for one year.

Beginning in 2012 the Assistant Tech Director will be elected to a term of 2 years. At the beginning of the second year of the term he/she will move to the office of Division Tech Director. Beginning in 2013 only a Division Assistant Tech Director will be elected annually. The Division Tech Director will serve a one-year term for 2012.

Each officer will remain in office until a successor to such office has been elected and qualified. The changeover date will be on October 1 for the Wing Car Division. The Scale Division changeover date will be June 1.

## **NATIONAL DIRECTOR**

The National Director will chair the general membership meeting, and will have full and final authority to make decisions on technical matters that have not been approved by vote of the members of the Association. He/she has the authority to cancel or relocate the site of the USRA Nationals, in accordance with the national rulebook procedures. He/she has the responsibility of ensuring that the rulebook is updated in accordance with the annual vote of the membership. The National Director may not be a manufacturer, owner, or employee of any company manufacturing or distributing "Restricted Products" used in USRA racing. The National Director may appoint an assistant to function as a Communications Director. The Communications Director will assist in the USRA custodial requirements of record keeping as required by law or the USRA Bylaws and communicating public announcements as necessary. He/she will be responsible to publish all of the following in accordance with the USRA Rules and in a timely manner: current rulebook, BoD decisions, proposals, and vote results.

## **DIVISION DIRECTORS (Wing Car & Scale Divisions)**

The Assistant Directors will perform all duties when the National Director is absent or is otherwise unable to act. The Assistant Director of each Division will exercise control over their respective Division. The Assistant Directors may not be manufacturers, owners, or employees of any company manufacturing or distributing "Restricted Products" used in USRA racing.

## **TREASURER**

The Treasurer will be responsible for the collection of dues from the membership, and for the preparation of an annual report on the finances of the Association. He/she will be responsible for the distribution of the National USRA Rulebook to the membership.



### **TECHNICAL DIRECTORS (Wing Car & Scale Divisions)**

The Technical Directors will be responsible for the review of technical specifications proposed in rules changes and for the technical inspection for rules compliance of entries in National Championship events. He/she will be a member of the Committee reviewing equipment modifications (which have not been approved by membership vote) for acceptability in USRA competition, and will head the Technical Committee. The Tech Directors may not be manufacturers, owners, or employees of any company manufacturing or distributing "Restricted Products" used in USRA racing.

### **WEBMASTER (optional)**

The Board of Directors may appoint or retain a Webmaster for the maintenance and operation of the official USRA website. National Director must approve all content.

## **ARTICLE V – COMMITTEES**

### **A. OFFICIAL COMMITTEES**

The Board of Directors may create certain committees by appointment that will have specific prescribed authority in the management of the Association. Committee Members may not be manufacturers, owners, or employees of any company manufacturing or distributing "Restricted Products" used in USRA racing. Suggested committees are as follows:

**Rules/Technical Committees** – There will be a Rules/Technical committee for each division, which will consist of the Division Director, the Division Tech Director, and the Division Assistant Tech Directors. This Committee shall be responsible for reviewing all rule proposals and making the appropriate recommendation to the BoD for the Online Ballot.

**Product Approval Committee** – This committee will consist of the National Director, the Division Tech Director and the Division Assistant Tech Director for each respective Division.

**Ethics Committee** – If needed, this committee will be a minimum 3-person panel consisting of former USRA Officers and/or Members at Large. It will be responsible for monitoring the compliance of Commercial Members with the USRA rules and Bylaws. Any USRA Member in good standing may bring an item to the Ethics for consideration. Decisions of any Ethics Committee become recommendations first for the Divisional Director and then the BoD to consider, and are not binding until passed by a vote of the BoD.

## **ARTICLE VI – AMENDMENT & MODIFICATION OF BYLAWS & TECHNICAL RULES**

All proposals will be reviewed by the USRA Board of Directors as applicable. The Board will decide if the proposal should be placed on the respective ballot. Voting on rules proposals for individual classes will be conducted as outlined on pg. 18 of the 2013 USRA Rule Book in a Drivers Meeting prior to qualifying for the individual class at the Nats. Only those members entered in

the National Championship Race will be allowed to vote. The deadline for submitting Technical Rules Proposals will be March 1 for Division 2 (Scale) and July 1 for Division 1 (Wingcar). The respective Division Officers and the National Director will review the proposals to insure continuity and validity. The submitting member must be present at the race for the proposal to be brought to the floor for voting. Paper ballots will be used in lieu of a show of hands. All USRA Bylaws proposals MUST be submitted in writing by the close of the Wing Car National Championship and can be submitted by any current D-1 or D-2 member to any current USRA Officer. The member does not have to be present and the proposal can be submitted electronically.

## **ONLINE VOTING** (also see Article II: D, pg. 6)

### **1. Annual Bylaws Online Vote**

- a) The Online Ballot will be posted on September 15. The voting will commence immediately and will close on September 29.
- b) The General Membership will vote in this election.
- c) This election will be for changes to the Bylaws and National Director.

### **2. Online Voting Procedures**

- a) A USRA official will be appointed by the National Director each year to officiate in the voting. This official's name will be published on the USRA website along with contact details.
- b) Paid members will be notified of the online voting by email sent to the email address they provided when signing up to the USRA. Public notice of the beginning/ending dates/times will be posted on the USRA website, Old Weird Herald, and Slotblog. Final results will be posted on the USRA website homepage at the completion of the vote.
- c) The current membership number and matching name are required and votes must be received prior to the published deadline to be counted.
- d) Any ties will be broken by a vote of the Board of Directors.
- e) Amendments to technical specifications, class rules, bylaws and other rules of the USRA require a simple majority vote of the membership through an annual online vote.

## **FORMAT OF PROPOSED RULE CHANGES**

- 1. Rule proposals must include an explanation of how they will impact the current rules and must be submitted by the deadline stated in the opening paragraph of Article VI. A USRA Board Member will review the proposal with person submitting the proposal for clarity/definition and for the intent/meaning prior to it being submitted to the Board for consideration of being placed on the ballot.
- 2. The USRA Director or his designee shall be present at the Respective Divisional General Meetings and all pre-meetings for the purpose of announcing the proposals and counting votes.
- 3. The next year's rulebook for both divisions will be publicly available via the USRA Website no later than December 1.

## **ARTICLE VII - GENERAL MEETING**

### **A. ANNUAL MEETING**

A general meeting will be held annually in conjunction with the National Championship events. Business will include:

1. Presentation of the Division's financial report.
2. Election of divisional officers.
3. A limited period of general discussion regarding proposals to be put before the USRA membership on the Online/Postal vote.
4. Nats site selection vote, if the division is required to perform such selection at the Annual Meeting.

### **B. CLASS MEETING**

There will be a meeting for each class prior to qualifying and rules proposals submitted and approved by the Division BoD will be discussed and voted on as outline in the opening paragraph of Article VI. Voting will be conducted by paper ballot.

### **C. ORGANIZATION**

For various administrative purposes the 48 contiguous states into 11 Regions

1. Northern California, Northern Nevada, Oregon, Washington
2. Southern California, Southern Nevada, Arizona
3. Idaho, Montana, Wyoming, Colorado, Utah, New Mexico
4. North Dakota, South Dakota, Nebraska, Kansas, Oklahoma, Texas
5. Minnesota, Wisconsin, Iowa, Illinois, Missouri
6. Arkansas, Louisiana, Mississippi
7. Michigan, Indiana, Ohio, Kentucky
8. Tennessee, North Carolina, South Carolina, Georgia, Alabama, Florida
9. Virginia, West Virginia, Maryland, Delaware
10. Pennsylvania, New York, New Jersey
11. Rhode Island, Massachusetts, New Hampshire, Vermont, Maine



## **ARTICLE VIII – SANCTIONED RACING EVENTS**

### **A. National Championship**

1. A National Championship shall be conducted annually for each division of USRA (i.e., major racing category).
2. All entry forms and/or tech sheets are and will remain the property of the USRA. All forms must and will be turned over to USRA officials only.
3. Once the hosting track has been established, the actual Nats race schedule will be determined in collaboration with the hosting track and the USRA Divisional Director. Once a mutual agreement is decided upon by both parties, the final schedule will be sent to the national director for final approval.
4. The annual Scale National Championship Race shall be held between April 1 and May 7.
5. The annual Wing Car National Championship Race shall begin and finish in the month of August.

### **B. Sponsorship**

USRA sanctioned events shall not take on the name of any company nor individual engaged in commercial sale of, or production of, products sold for the purpose of slot racing nor any entity deriving commercial benefit from the sport of Slot Car Racing. This would not preclude a retail establishment from normal promotional billing, but would specifically exclude manufacturers or distributors from usurping the USRA image for their benefit. There are no such restrictions placed on major corporations not operating in or affiliated with persons or firms operating commercially in the sport of slot car racing, and such outside sponsorship is encouraged.

### **C. Nats Site Selection Voting Procedure**

1. Wing Car and Scale Division site selection: the following voting procedure will be used during the annual Wing Nats. All fully paid members of the USRA present at the National Championship are entitled to vote for the site of the next year's National Championships in that division. A written ballot will be used for all voting. Votes will be collected during the days preceding the day of the last race. The morning of and prior to that race the vote will be tabulated and the results announced. Should there be a tie in the vote, a track that has not had a Nats before will be declared the winner, if all have had a prior Nats then the totaled votes of current Board of Director members present at the Nats, will break the tie. Results will be announced and recorded immediately at the conclusion of the voting, including actual numbers of votes for each site.
2. If the raceway that is selected to host a USRA Nats is sold or closes, the race automatically goes to the alternate location. (This does not mean that if a slot car track is sold and replaced in the same location, under the same owner, the race will be moved; only if the slot racing business itself changes hands). If the alternate site also has been sold or closed, the USRA National Director must either:

- a) Select a new site to host the National Championship.
- b) Cancel the race for that year.

#### **D. Bidding On National Event**

Any raceway or persons involved in slot car racing may make a bid to host a National Event. Following is a list of guidelines that may be helpful in preparing presentations.

1. The raceway or promoter should be well established with a reputation for organizing and directing quality races. Raceways that have hosted well-attended events will receive preference in the selection process.
2. If it desires to submit a bid for a USRA National event, a raceway must notify the USRA Director of its intentions by May 31 for Division I and February 7 for Division II. Notification in writing or email is required.
3. Each bid for the USRA Nationals must be accompanied by a refundable deposit of \$500.00 (raceway or personal Check). Deposits will be returned promptly to the unsuccessful bidders after the Nats site determination is made. The deposit for the successful bid will then be deposited and returned after the National Event (two weeks) provided there are no financial problems such as bad checks, failure to deliver advertised payouts, etc. If financial problems occur, the deposit will be forfeited and the USRA treasurer shall use the full amount of the deposit funds to correct bad checks or other losses in an equitable way. The disbursement of Nats site deposit funds, if any, is to be included in the treasurer's report.
4. A raceways desiring to bid will make its presentation available online via a link on the USRA website by March 1 for Division 2 and July 1 for Division 1. The presentation can be a video, PowerPoint/slideshow or other standard electronic means of media presentation. Presentations should include:
  - a) Contact information, and pictures of the raceway or host site and of previous races (if possible).
  - b) A summary of selected past races, including race schedule, number of entries, etc.
  - c) Details about the facility's track(s) and lap counter system(s), including information concerning track power, batteries, color, braid recess, power polarity, etc.
  - d) Information concerning lodging, airlines, restaurants, and places of interest.
  - e) Pictures of available pit space.
  - f) Letters of approval from local City Directors, and radio and/or television stations.
  - g) It is strongly suggested that prospective Nats raceways consult at length with the owners and/or managers of previous Nats host raceways to insure a complete understanding of the challenges attendant to conducting a USRA Nats.
5. All bids **must include the following** in the bid proposal:

All financial details of the race including the following points. Any changes to these once the bid has been won must be approved by the Board of Directors, once sufficient reasons for the changes have been given and investigated.

1. Guaranteed prize purse over and above the usual 50% of entry fees.
2. Payout structure.
3. Entry fees for all races.
4. Cost of track time.
5. Any other fees or costs racers will incur.

#### **E. Site Eligibility And Area Rotation**

In order to encourage participation by racers nationwide, the National Champions shall be moved around the country every year. The National Championship may not be held in consecutive years by the same or adjoining areas unless there are no other bids. The map on pg. 11 shall be used to define areas.

#### **F. Scale Nationals Track**

To be considered to hold the annual Scale Nationals a raceway must have their own or have access to a flat track suitable for holding the traditional flat track events.

#### **G. Wing Car Nats Schedule**

Classes contested are as follows: Spec 15, GP-12, Intl-15, C12, 27 Lite, G27 Am, G27 Pro, OMO, Geezer G7 Semi-Pro, and Pro 7. Start the races on Saturday and end on the following Saturday or Sunday. An Open warm-up race is optional. The USRA Division I General Business Meeting should be held on Tuesday or Wednesday.

#### **H. Scale Nats Schedule**

Classes contested will GP 10, 4-1/2" Stock Car or 1/24 JRL/IRL/Indy Car (host raceway choice), GTP, LMP, GT-12, 1/24 Eurosport, 1/32 Eurosport, and Formula 1/32.

#### **I. Hand-Out Motors**

Concerning "hand-out motors", the primary initiative is to have quality and affordable competitive racing. Every effort possible will be made to rotate the choice between member manufacturers equally. However, the USRA BoD in conjunction with the Nats Host owner(s) will make the choice based on performance, reliability, availability, cost, etc. See respective class rules for a list of motors allowed for the respective class.

### **ARTICLE IX – EQUIPMENT APPROVALS**

1. Manufacturers of products who wish to have their components accepted for use in restricted classes in USRA sanctioned events at the national or regional level must be Commercial Members of the Association and must conduct themselves in a manner conducive to the best interests of the sport.

2. Manufacturers must submit one piece of each component for which they seek approval to the respective Divisional Tech Director by August 1 for evaluation and inspection.
3. Each Divisional Tech Director will report their findings and decisions directly to the USRA National director. The manufacturer will be notified accordingly. Approval will be pending subject to the Manufacturer having product in production to begin filling orders by October 1.
4. The National Tech Directors may remove any restricted products that they can prove are no longer commercially available. Refer to General Competition Regulations, Commercial Availability.
5. The products submitted to the USRA for product approval are the property of the USRA, and not the individuals in the respective positions of the USRA. All products are to be available for inspection at the Nats. Products must be turned over to the incoming Tech Director by the outgoing Tech Director.
6. When submitting new products to the USRA, manufacturers must provide a written request including a definitive description of the product and if it supersedes a previous product or if it is completely new. If a product is similar to a previous product the Manufacturer will also provide information that will assist a Tech Director in identifying the product.

## **ARTICLE X - COMMERCIAL AVAILABILITY**

1. Major components for Group and restricted racing (motor, motor parts, chassis, chassis parts, bodies) must be readily available to all participants sufficiently in advance of the race event for all participants to be able to compete on an equitable level.
2. "Commercially-available" means that the product must be "readily available" through at least six (6) retailers across the country and one (1) Commercial Distributors. A Commercial Distributor is defined as business that engages in "Business to Business" sale of slot car products and does not sell direct to retail customers (end users). Commercial Distributors for 2013 are Crawley Distributing, Eagle Distributing, ERI, and REH. "Readily available" means that a retailer/distributor must be able to procure product from the manufacturer to reasonably supply demand for the products in a timely manner. This rule does not compel a retailer/distributor to stock slow-moving products, but does require the retailer to act as an order/supply point for the manufacturer's products. Whereas the USRA New Year begins October 1, Member Manufacturers should have newly approved products available to begin filling orders on that date. Manufacturers experiencing any delays in meeting this deadline shall notify the USRA for consideration of an extension. Failure to comply may result in the revocation of the approval of that product for the upcoming year. Additionally Member Manufacturers must provide a list of distributors and retailers where their products can be found to the USRA

official handling the product submissions for the relevant division before October 1.

3. The number of pieces required to be available for a product to be considered commercially-available varies (adequate for current market conditions and will be reviewed by the BoD as necessary) motors, tagged armatures, restricted chassis, and any other restricted components.
4. A product will be considered to be no longer commercially-available after production has ceased. Products in this status that have been approved for competition will continue to be legal for USRA competition for a period of no longer than 3 years after production ceases. For motors and armatures specifically this time is extended to 5 years. Manufacturers must notify the National Director in writing when a USRA approved product ceases production.

All products which are considered to be commercially-available as well as restricted products must meet retail specifications and must be sold at standard industry discounts through approved dealers. Any product that is restricted in retail price by the USRA may be adjusted in retail price according to the annual cost of living, maximum 5% annually. These items are listed on pg. 43.

## **GENERAL COMPETITION REGULATIONS**

### **I. DRIVER CLASSIFICATION (Wing Car Division)**

#### **A. Sponsored Racer**

1. Sponsored racers originally were "Team Racers" that represented a manufacturer of major components and as such received merchandise (major components/ motors, armatures, chassis) directly from a major manufacturer at less than retail prices. This will continue to be the definition of a sponsored racer although the racer may not have an affiliation with a particular "Team".
2. A racer receiving assistance from their raceway, employer, or individual are not considered sponsored.
3. Whereas the USRA is unable to monitor who purchases what from whom, any racer's status is subject to be reviewed by the BoD.

#### **B. Amateur**

1. Those racers with average driving and/or technical abilities.
2. Any racer 14 years of age or older who wins an Amateur class may continue through that Nats as an Amateur. They will be allowed to defend their title **one time** and then they are **required** to compete as an Expert/Pro in that class and all lower classes. They may compete as an Amateur in all higher classes.



### **C. Expert/Semi-Pro**

1. Those racers with above average driving and/or technical abilities, any racer who has won a USRA Wing Championship in any Amateur division and Sponsored Racers may only compete in the Expert divisions in the same and any lower class.
2. No racer may run Pro Group 7 and Semi-Pro Group 7 at the same event.
3. Any racer that wins Semi-Pro at the USRA Wing Championship must move to Pro the following year.

### **D. Pro Group 7**

1. Those racers with exceptional driving and/or technical abilities, any racer that has previously won the USRA National Championship in G7 Semi Pro, and Sponsored Racers.
2. Any racer who was classified as a Pro and that has not competed in the National Championship in 5 years may apply to the Board to have their racer status changed from Pro to Expert/Semi-Pro. This will also apply to a racer that voluntarily or mistakenly entered the Pro class but does not meet the rest of the requirements for Pro Classification.

### **E. Senior Open (Geezer)**

All drivers age 50 or over are permitted in this class. Pro Group 7 rules will be followed.

### **F. Wing Racing Payouts & Prizes**

1. Race merchandise certificates and/or cash payouts will be at least 50% of the total entry fees for each race, and will be paid to at least the top 8 finishers.
2. Amateur and Expert Race prize payout will be in merchandise certificates and/or trophies.
3. Payout will be in cash to Pro Group 7, Senior Open, and Sponsored Pro Group 27 racers. Amateurs or Experts competing in Pro Group 27 will receive merchandise prizes.

## **II. RACE PROCEDURE**

### **A. Registration**

1. All cars shall be inspected and impounded prior to qualifying.
2. No cars will be accepted after announced registration closing time.
3. The chassis should be engraved with the driver's entry number, class, and the initials of the tech inspector. The body should be marked with a distinctive spot of non-removable paint or ink.

### **B. Acknowledgement**

All racers entering an event should be aware of the rules governing it, and withdrawal is not an option in the case of a protest.

## **III. NO SMOKING**

Smoking is prohibited within the raceway at all USRA events.

## **IV. NO ALCOHOLIC BEVERAGES**

No alcoholic beverages may be consumed within the raceway or within close proximity. Consumption of these beverages must be confined to those establishments licensed for this use.

## **V. FIREARMS**

Firearms are prohibited within the raceway at all USRA events.

## **VI. DRIVERS MEETING**

A Drivers Meeting will be held prior to qualifying to discuss race and qualifying procedures, marshaling responsibilities, racer conduct, glue rules, track calls, disqualifications, track tech, etc. Drivers with specific questions should ask them at this time. Also rules proposals submitted and approved by the Division BoD will be discussed and voted on as outline in the opening paragraph of Article VI. Voting will be conducted by paper ballot.

## **VII. TRACK PREREQUISITES (Voltage)**

At all USRA National Events OMO and 27 Lite qualifying and race voltage is 14.3v max. For all other classes qualifying voltage is 16.0v max. and race voltage is 14.3v max. This voltage is to be measured unloaded, without cars on the track, using accurate digital voltmeters to measure the values.

## **VIII. TRACK CONDITIONS**

### **A. Limited Glue**

1. Glue zones must be clearly marked, and be no more than ten inches (254 mm) in length as measured from the start of the curve backwards. Glue may be applied to glue zones only and then may be spudged or smoothed past zone and through turn with glue spudger and/or hand (fingers).
2. Glue may be removed from the turns with a clean, dry, rag only. Care must be taken to avoid changing conditions on adjacent lanes.
3. All gluing and cleaning of the track braid and straights must be completed before the power comes on. No glue or other chemicals may be put down or removed from the track surface while the track power is on.

### **B. Spray Glue**

1. The track will be cleaned and sprayed prior to the racing and maybe re-sprayed as deemed necessary by the race director(s).
2. The track surface in the turns may not be touched or altered in any way. No addition, deletion, or redistribution of the glue is allowed without specific and prior race director approval.

### **C. Track Cleaning**

All braid and the track surface of all straight sections and the bank may be cleaned in both spray glue and limited glue conditions.

## **D. Accidental Spillage**

If an accidental spill occurs, the race director may re-spray the affected area to restore fair racing conditions.

### ***PLEASE NOTE:***

**Most track cleaning solutions are very FLAMMABLE! Care must be taken during their use. Fire extinguishers MUST be located in the immediate area and all other necessary precautions MUST be taken to ensure adequate safety!**

## **IX. QUALIFYING**

See individual classes starting on pg. 29 for additional qualifying specifics.

### **A. Order**

1. All Classes: Determined randomly, such as by blind draw.

### **B. Format**

1. Time - a one-minute run is allowed to establish the fastest single timed lap. Back up times will be recorded to break ties. Spec-12 class will not qualify. Lanes will be chosen at random. Amateur GP-12 will run a one-minute no-bye round of qualifying.
2. The first qualifier will receive a one-minute glue break period.
3. Byes - A racer may take one bye for any reason (may abort initial qualifying attempt and re-attempt during the bye round).
  - a) Each racer will receive two 30-second rounds for qualifying.
  - b) Cars will be technically inspected prior to their bye round.
  - c) Times made during the initial attempt and the bye round will count.
  - d) Byes will be run (racers remaining time less a thirty second deduction) at the end of qualifying for each respective class; order will be the same as the original round.
4. If a lap timer is not available, qualifying may be conducted in the form of a one-minute run for total laps and sections. Adequate marshaling must be available.
5. Each racer will be given a specified amount of time (not to exceed fifteen seconds) to get hooked up to begin his/her qualifying round. This should be set into the computer to automatically start the time and make it uniform for all racers. Any registered racer not present to qualify when called will be given an automatic bye. Any racer unavailable for the bye will stand by his/her previous best, or if no times are recorded, will be placed in the first (lowest) level of consolation races.
6. Local Option Format (excluding National Competition):
  - a) One minute with no byes.
  - b) One minute with bye with no loss of time.

## **X. EUROPEAN (STAGGERED) LANE ROTATION**

1. USRA events will follow the European or staggered system. The rotations for tracks marked with American Model Raceways colors are as follows:
2. Consis - Racers will race on either the red or the black set. Racers on the red set (red, green, blue, purple) rotate down the track to purple and then jump to red continuing rotation down the track. Racers on the black set (black, yellow, orange, white) rotate up the track to white and then jump back to black continuing rotation up the track.
3. Quarterfinal, Semi, and Main Event races - Racers running on the red set rotate down the track to purple, keeping on the red set. After running purple, rotate to the black lane of the black set. After running white, jump to red and rotate as indicated for the red set. Continue until all eight lanes have been run.

## **XI. AUSTRALIAN RACE FORMAT**

1. All entrants will contest a series of Consis, Heats, Quarterfinals, Semifinals, and Finals depending on the number of entries.
2. All races designated as Consis will be contested over 4 lanes only, running on either the red set (red, green, blue, purple) or the black set (black, yellow, orange, white).
3. All other races will be contested over 8 lanes.
4. All races will be on a "move up" basis. The following schedule has been adopted to ensure that a minimum of four drivers move up from each race. The following has been created with the intention of racing with no "Round-Robin" races.

**1-8:** Main only.

**9-10:** top 2 qualifiers go to Main, run Semi, and top 6 move up.

**11-16:** 2 Semis and a Main.

**17:** Top 10 Qualifiers go into Semis, 7 remaining go into 1 Quarter, and 6 move-up to Semis.

**18:** Top 10 Qualifiers go into Semis, 8 remaining go into 1 Quarter, and 6 move-up to Semis.

**19:** Top 12 Qualifiers go into Semis, 7 remaining go into 1 Quarter, and 4 move-up to Semis.

**20:** Top 12 Qualifiers go into Semis, 8 remaining go into 1 Quarter, and 4 move-up to Semis.

**21-23:** top eight qualifiers move to Semis, all others divide into 2 heats moving up 4 most lap totals from each. Then run two Semis and a Main.

**24-32:** 4 Quarterfinals, 2 Semis, and a Main.

**33-34:** top 26 from qualifying into Quarters. Remaining racers into one 4-lane 2x3 race using red set, black set rotation with the top 6 moving into Quarters. 2 Semis and a Main.

- 35-36:** top 28 qualifiers into Quarters. Remaining racers run one 4-lane 2x3 race using red set, black set rotation with top 4 moving to Quarters. Then 2 Semis and a Main.
- 37-38:** top 22 qualifiers into Quarters. Remaining run two 4 lane 2x3 races using the red set black set rotation. Top 5 from each move into Quarters. Then 2 Semis and a Main.
- 39-48:** Top 16 qualifiers into Quarters. Remaining racers into four 4-lane 2x3 races using red set, black set rotation. Top 4 from each race moving into Quarters. Then 2 Semis and a Main.
- 49-54:** Top 22 qualifiers into Quarters. Remaining racers into four 4-lane 2x3 races using red set, black set rotation. Top two from each moving into Quarters plus two top lap totals not finishing 1or 2. Then 2 Semis and a Main.
- 55-64:** Top 16 into Quarters. 17-32 into consis. Remaining into four sub-consis using 4 lane 2x3 red set, black set rotation. Four move up each race. Then two Semis and Main.
- 65-80:** Top 16 qualifiers into Quarters. Qualifiers 17-32 into consis. Qualifiers 32-48 into sub-consis. Qualifiers 49-80 into sub-sub-consis. All consis using red set black set rotation with 4 lanes 2x3 races. Top 4 from each moving up.
- 81-unlimited:** using same as sub-sub-sub-sub.
5. Lane choice will be determined first by qualifying position then by lap total and position from previous heat.
  6. In moving racers up from Consis, Quarterfinals, or Semis, the same logic applies. Lane choice selection order is determined by the total laps turned by the winners of the qualifying race.
  7. For Main event move-ups first pick goes to the racer with the most laps out of the two Semis, second pick goes to the racer with the most laps out of the other Semi.
  8. Choices are then alternated between Semis. Third pick goes to the second-place finisher in the Semi that had first pick, and fourth goes to the second-place finisher in the Semi with second pick, etc.
  9. Racers are seeded into the appropriate Semis, Quarterfinals, or Consis according to the following pattern (example given for Semis and Quarterfinals; Consis same pattern as Quarterfinals).
  10. Heats, Consis, and Quarterfinals are run: D, C, B, A.
  11. Semis are run: B, A.

<b>24 or fewer entries</b>	<b>Semi-A</b>	<b>Semi-B</b>
Qualifier #	1	2
	3	4
	5	6
	7	8
	9 or winner Heat-A	10 or winner Heat-B
	11 or second Heat-A	12 or second Heat-B
	13 or third Heat-A	14 or third Heat-B
	15 or fourth Heat-A	16 or fourth Heat-B

<b>25 or more entries</b>	<b>Semi-A</b>		<b>Semi-B</b>	
	Quarter A or B winner w/most		Quarter C or D winner w/ most	
	Other winner of Quarter A or		Other winner of Quarter C or D	
	Second place from Quarter with first pick			
	Second place from Quarter with second pick			
	Continue alternating for remaining picks			
<b>Quarterfinal-A</b>	<b>Quarterfinal-B</b>	<b>Quarterfinal-C</b>	<b>Quarterfinal-D</b>	
Qualifier #1	2	3	4	
8	7	6	5	
9	10	11	12	
16	15	14	13	
17	18	19	20	
24	23	22	21	
25	26	27	28	
32	31	30	29	

## XII. DURATION OF RACES

<i>Race</i>	<i>Heats</i>	<i>Heat Length</i>	<i>Lane Change</i>
<b>Mains</b>			
1. Pro/Semi-Pro Group 7	8	5 minute	5 minute
2. Group 27/Pro 27	8	4 minute	4 minute
3. Group 27 Lite & OMO	8	4 minute	3 minute
4. All other Wing Car Divs	8	3 minute	4 minute
<b>Semis</b>			
A. Pro/Semi-Pro Group 7	8	3 minute	3 minute
B. Group 27/Pro 27	8	2 minute	3 minute
C. All other Wing Car Divs	8	2 minute	3 minute
<b>Quarterfinals</b>			
1. Pro/Semi-Pro Group 7	8	2 minute	3 minute
2. Group 27/Pro 27	8	2 minute	3 minute
3. Group 27 Light	8	2 minute	3 minute
<b>Consis &amp; Sub-Consis</b>			
A. Pro/Semi-Pro Group 7	4	3 minute	3 minute
B. Group 27/Pro 27	4	2 minute	3 minute
C. All other Wing Car Divs	4	2 minute	3 minute

## XIII. MISCELLANEOUS PROCEDURES

### A. Black Flag

The race director is obliged to black flag any car which is dragging, interfering with other cars, or continuously de-slotting due to mechanical problems. Upon

being black-flagged, the driver must bring the car in for repairs immediately. If the problem is not corrected, the black flag may be enforced again as required.

## **B. Track Calls**

1. The power will only be turned off for extremely unfair or dangerous situations. The following are the only acceptable reasons:
  - a) Braid up.
  - b) Power failure (one lane or all).
  - c) Debris in slot.
  - d) Lap counter or track equipment failure.
  - e) An unmarshallable car.
  - f) Car in wrong lane (rider). **In both Wing Car and Scale divisions, riders will be track calls.**
2. During a track call, there will be absolutely no work performed on the cars or lane preparation. Doing so will result in a 20-lap penalty. A second infraction will result in disqualification. This restriction applies to both drivers and their pit helpers.
3. During track calls due to e) above, an un-marshalable car, racers may continue to work on cars in the pits, if the cars are already in the pits at the time of the track call. A car may not be taken from the track into the pits during a track call. Work may not be carried out during tracks calls a), b), c), or d) above, i.e. braid up, power failure, computer problem, etc.
4. In the Scale Division, if a driver is judged by the race director to have made an unnecessary track call, he/she will be penalized five (5) laps. Repeat offenders may be disqualified from the race at race director's discretion.

## **C. Lap Counter**

1. The lap counter will be considered correct unless it can be proved otherwise. The counter should be corrected if necessary (as when a car crosses in the wrong lane). If a major error occurs in the counting process that cannot be corrected, the race director may at his option:
  - a) Assign responsible stewards to count laps or verify the counter.
  - b) Add or subtract mutually-agreeable laps as established by race officials and drivers.
  - c) Restart the segment.
  - d) Restart the race from the latest possible point.
2. Laps should not be added or subtracted unless the race director is certain the counter is incorrect.
3. For a major error in counting, the steps taken should preserve as much of the race as possible, while remaining as fair as possible to all racers.

## **D. Marshaling**

All drivers are expected to marshal the race(s) preceding their own races. Substitute marshals must be acceptable to the race director and drivers. Good racing is not possible without good marshals. Every racer is required to do his/her part both before and after racing if necessary. Failure to fulfill marshaling responsibilities will result in lap penalties and/or disqualification.

All cars will be impounded after all races to insure fair and proper marshaling responsibilities. Cars will be returned and move-up drivers will be given equal time to prepare for upcoming races.

#### **E. Lane Change**

1. Following each lane change, all cars must be returned to the track in the position where they stopped. Cars may be moved backwards to allow easier restarting. Putting a car back on the track forward of its original position will result in a five lap penalty. A second infraction will result in disqualification. It is the driver's responsibility to know where his car stopped. When a car is removed from the track during racing the same rule applies. Corner marshals should notice the cars stopping in their section and pay close attention to cars near the lap counter section. At the conclusion of the race all cars are impounded and fall under the control of the tech director, and remain impounded at his discretion. Cars will be left on the track until the order of finish is positively determined.
2. Racers are required to use lane change cards at all National Championship events. These cards must stand vertically in the slot of the lane the driver will be changing to at the end of the break. Lane cards may not be wider than the slot width. If a lane is without a lane card during a lane change (except in the case where a returning driver was sitting out) the car must be moved back as far as possible towards the lap counter, but not to a position where any extra laps would be gained.

#### **F. Unsportsmanlike Conduct**

1. Unsportsmanlike conduct on the part of a driver or turn marshal will be subject violators to immediate disqualification at the discretion of the race director. Verbal abuse or profanity will not be tolerated. The race director may first warn drivers, marshals, or pit helpers if their behavior is unacceptable. Serious or repeat violations will result in a five-lap penalty for the first infraction and disqualification for the second.
2. Repeat offenders of any of the unsportsmanlike conduct guidelines may be prohibited from future USRA events.

#### **G. Protests**

A competitor may protest another racer's equipment by officially informing the race director. Special provisions for armature protest are in the following section.

1. A racer must be aware of the rules when entering a USRA event and withdrawal is not an option in the case of a protest.
2. Any racer in a USRA-sanctioned race whose motor is protested and then refuses to have his/her motor torn down shall be banned from competition in any USRA race for a period of one year from the date of said infraction.
3. Non-Armature Protest Procedure:
  - a) A written protest must be filed with the race director within 20 minutes of the end of a Main event. Where racers are moving up into another



race, protests must be made within 10 minutes of the end of the race in which the protested racer competed.

- b)** A protest fee of US\$10.00 must accompany the written protest. The race director will hold this protest fee.
- c)** The race director is responsible for notifying the appropriate USRA officials of the protest. The USRA officials in attendance will then carry out an investigation and make a decision on the protested equipment.
- d)** Should the protest be upheld, the protest fee will be returned to the protesting racer. Should the protest not be upheld, the protest fee will be retained by the USRA.
- e)** The right of appeal to the highest-ranking USRA official in attendance is granted to both the protestor and protested. The decision rendered by this USRA official is final and cannot be further appealed.

## **XIV. ARMATURE PROTEST**

### **(Restricted Classes Only)**

- 1.** Any competitor may protest another racer's armature. He/she must officially inform the race director, at which time the race will be stopped.
  - a)** The protester may "buy-a-look" by posting a US\$2.00 fee. He/she is then entitled to look at the suspected armature in the car.
  - b)** If not satisfied, he/she may formally protest which requires posting a fee equal to double the current manufacturer's suggested retail price of the protested armature. The "buy-a-look" fee is transferable.
  - c)** At this time, the armature must then be non-destructively and indelibly marked (suggested method is unique Dremel marks on the shaft). Extreme care must be exercised to avoid damage to armature balance and delicate components such as ball bearings, motor brushes, etc.
  - d)** An impartial race steward must then be charged with the responsibility of observing and verifying the authenticity of the armature for post race inspection. The race will then be restarted.
- 2.** Thorough disassembly and inspection must be conducted immediately upon completion of racing, in a manner assuring accurate technical verification. Armature stack length will be measured, and if within specs, the inspection will proceed to the wire. This can be accomplished by destroying any epoxy or similar binder with extreme heat (suggested method is to use a small torch). Then dissecting the armature with a Dremel and carefully measuring the wire and counting the turns.
- 3.** The fees will be held by the race director until resolution of the matter, then promptly surrendered to the appropriate party. Likewise, any winnings and/or points will be held pending the outcome of the inspection.
- 4.** "Buy a look" proceeds go to the protested party, if not applied to a formal protest.
- 5.** There is a maximum fee of US\$100.00 for protesting Group 27 armatures.

# GENERAL TECHNICAL RULES

All cars/racers are expected to comply with these guidelines. All drivers are responsible for the legality of their equipment. There is one car per driver per class, and one driver per car per class. The foundation for rules interpretation is "that if it is not stated as being permitted then it will not be allowed". **The National Director and/or the Rules Committee will clarify any rule that is in question or is being interpreted improperly.**

## I. SCALE

The scale to which the cars must be built is 1/24 of the size of an actual race car. The minimum length from center of guide flag hole to center of rear axle for all USRA Division 1 chassis will be 4.1 inches (104.14 mm). For the 1/32 Eurosport and Formula 1/32 classes, cars must be built to 1/32 of the size of an actual race car.

## II. WIDTH

All cars may not be more than 3.25 inches (82.55 mm) wide at any point. Round head body mounting pins may extend beyond this width. Other type body pins such as glass head type are not allowed.

## III. WHEELS

All cars must have two front and two rear wheels, with rubber tires.

1. Rear tire minimum diameter is .750 inches (19.05 mm), unless otherwise specified. Rear wheels maximum width is .810 inches (20.57 mm), unless otherwise specified.
2. Front tire minimum diameter is .500 inches (12.7 mm), unless otherwise specified.
3. Front wheels, or one-piece wheel/tire units, must rotate on their axles.
4. Front wheels must be mounted so as to contact the racing surface, as the car is rocked to the side, before grounding on the chassis or body. This rule applies only to the Wing Car division.

## IV. CLEARANCE

For all classes, the minimum track clearance of chassis, gear, and motor is .062 inches (1.58 mm) prior to the beginning of the race unless specified otherwise. Once the race begins, a minimum rear tire diameter of .750 inches will be utilized during "mid-race tech inspections. No parts may drag. Guide flag/braid, and front and rear tires are exempt from this rule.

## V. GUIDE FLAG

One guide or pickup device per car.

## VI. BODY

Body designs should resemble full-size race cars. Manufacturers are urged to maintain scale proportions. Variations are allowed to conform to state-of-the-art practices.

1. Paint: All bodies must be fully painted and opaque when sitting on the tech block, except for the sides of the body, which may remain clear.

Bodies should be detailed to resemble full-size race cars. Exhaust pipes, body lines, injector stacks, mirrors, and decals are optional.

2. Numbers: All cars must display three numbers of reasonable size and position, 1/4 inch (6.35 mm) minimum.
3. Interior: All cars must contain a suitably painted, 1/24 scale driver, with helmet, shoulders, arms, and steering wheel, mounted in the original cockpit position at all times during race. May be made of any material, paper included.
4. Windshield: Bodies must include a windshield, bound by mould lines. The windshield area may not exceed 1 inch by 1 inch (31.75 mm x 31.75 mm). Windshield must be clear and allow for viewing of driver.
5. Wheel Wells: Wheel wells must be transparent, or cut to the horizontal centerline of the front wheel. When viewed from either side of the car, 75% of both of the front wheels must be visible through the wheel wells.
6. Body Openings: The chassis must be completely covered by the body and air control when viewed from above, except for the cockpit opening or USRA legal body openings (such as accurate representations of vents, scoops, etc.).

## **VII. AIR CONTROL DEVICES (Wing Car Division Only)**

**No part may exceed 2.5 inches (63.5 mm), measured from the tech block surface. No air control devices can be opaque.**

1. Side dams may be a maximum of 2.5 inches (63.5 mm) high behind the rear wheel centerline and continue on a taper to a maximum of 2.0 inches (50.8 mm) high at a point 3.75 inches (95.25 mm) forward of the rear wheel centerline. The same taper may continue ahead of the front wheels.
2. All air control devices must have their front edges taped and their outside corners rounded to a degree which will minimize the chance of injury to race participants and spectators.
3. May affix any decals or markings on any air control surface (including spoiler) but air control surfaces cannot be opaque.
4. Diaplane maximum length is .500 inches (12.7 mm). Corners must be rounded to help prevent injury to race participants and spectators.

## **VIII. PARTS REPLACEMENT**

Any component may be replaced during competition except the original chassis or body. Any racer found to have switched chassis or body will be disqualified. All replacement parts must conform to the class rules.

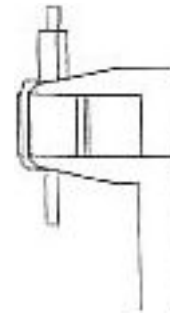
## **IX. GENERAL TECHNICAL SPECIFICATIONS**

### **A. AMATURE STACK LENGTH**

1. Any armature that has been purposely altered or tampered with to make the stack appear longer in an attempt to circumvent the stack length rules as listed shall be declared illegal at the tech inspector's discretion. Stack length minimums shall be required on all three poles of the armature (using calipers with the faces across each end of the pole) and only the actual lamination material shall be used to determine this figure. This is

meant to specifically exclude, for example, such practices as the insertion of spacer-type materials between the laminations, abnormally thick applications of coatings, or any other method of artificial compliance with the rule.

2. Any armature presented for tech inspection that is found to be illegal for competition (such as short stack) will be impounded until the completion of the racing class.
3. Litz wire may not be used in any class with armature wire specifications.



#### **B. CONTROLLER SPECIFICATIONS**

Any controller/choke may be used as long as the controller/choke uses no batteries or additional power sources to increase or regulate voltage or amperage at track braid. Specifically prohibited are voltage multipliers or doublers, transformers, batteries, encapsulated components, and capacitors. Specifically allowed are simple wire chokes, and diodes. These devices lower power but do not regulate it. A variable choke operated by the driver shall not be considered regulated. Relays, if used, must be powered by track current only. Controllers/chokes are subject to inspection by USRA officials to verify compliance with the above rules. Transistorized controllers such as the Ruddock DR40 are approved for USRA use.

#### **X. TIRE RUBBER**

1. No Speed type rubber or rubber deemed as Speed type rubber may be used in any race. Determination will be at the discretion of the USRA. Use of this rubber may result in penalties to the racer, up to and including disqualification. Manufacturers are asked not to produce "Race Tires" utilizing speed rubber for use at USRA National events.
2. Speed type rubber may be used for qualifying in all classes.

#### **XI. SPEC TIRES**

Spec tires will be marked by the USRA prior to shipment to the host raceway. A minimum of two brands of tires shall be available for the specific class using spec tires. They must be purchased from the host raceway at the event. Classes - Spec-12 and Amateur GP-12, price - \$13.00.

## **WING CAR SPECIFICATIONS**

### **SPEC-12**

All General Rules also apply. Spec-12 is intended to introduce entry level racers to Wing Car racing at the National Level.

**Drivers:** This class is only open to Amateur drivers. Drivers may only compete in Spec-12 and Amateur Group-12. Once a racer has won in the Spec-12 class and he/she is over the age of 14 they may not compete in this class again.

**Awards:** Awards will be donated merchandise and trophies only.

**Qualifying:** Qualifying will be by random lane pick. Number of entries will determine format.

**Glue:** The National Championship race will run using spray glue. The raceway owner/race director/USRA BoD will collectively determine the formula and application of the spray glue.

#### **A. Motors**

1. Spec 12 “hand-out motors” supplied by Koford or Pro Slot will be utilized in this class on a rotating basis until another manufacture submits and is approved.
2. Must be commercially available, as defined in Article X of the Bylaws (pg. 15) and available at the USRA Maximum Retail Price or less (pg. 43).
3. Motors are marked by the USRA prior to shipment to the host raceway and must be purchased from the raceway at the event. Every racer will be entitled to purchase two (2) motors. Additional motors can be purchased as availability allows. Regional racing is encouraged to run all makes of motors to help promote the class at the local level. Springs and brushes may be changed from hand-out motors. Springs must be of three-coil type from a USRA-approved manufacturer.
4. C-Can Motor Specifications apply (pg. 43).

#### **B. Armature**

See Armature Technical Specifications table for Gp-12 armatures (pg. 46).

#### **C. Chassis**

For 2012 and succeeding years the previously-approved Spec-15 chassis will be used. All chassis manufacturers are encouraged to produce Spec-15 chassis. The USRA will provide each manufacturer with a disk that will have the USRA-designed chassis drawing and specs (measurements) on it. Any manufacturer wishing to make a Spec-15 chassis will be required to make the chassis to these specifications and design only. An assembled chassis showing where all of the components are to be placed will also be sent to any manufacturer that wishes to make a Spec-15 chassis. All Spec-15 chassis will be engraved by the manufacturer with a serial number. The racers will then fill out the attached registration card and send it in to the USRA to register his chassis. Each chassis competing at the Nats will be checked for this serial number to insure its appropriate use and legality. Chassis may not be modified from original assembled form. All weight must be attached to top of chassis pans only. No weight under the chassis is allowed. All body mounts to be left in original position. (No floating of rear body mounts.) See USRA Price List Table (pg. 43) for Spec-15 chassis maximum retail price.

#### **D. Bodies**

Any USRA-approved body may be used.

#### **E. Tires**

Spec tires will be marked by the USRA prior to shipment to the host raceway and must be purchased from the raceway at the event. The price of tires will be \$13.00 per pair.

## **F. Gears & Axle**

1. Any gear ratio or pitch may be used. Drilled gears are permitted.
2. Only solid axles retailing for US\$5.99 or less may be used. May have flats.
3. Axles must be a minimum of 3/32 inch in diameter.

## **G. Bearings**

No ball, roller, or other frictionless bearings are allowed.

## **H. Weight**

No minimum weight for Spec-12 cars.

# **GP-12**

**GP-12** will be contested in both Amateur and Expert Driver Classifications. See Amateur Driver Classification (pg. 16) regarding the "Move Up" Policy.

All General Rules also apply.

## **A. Motors**

See C-Can Motor Specifications (pg. 43). USRA Maximum Retail Price applies.

## **B. Armature**

1. See Armature Technical Specifications table for armature specs (pg. 46).
2. Must be commercially available, as defined in the Bylaws Article X (pg. 15).
3. USRA Maximum Retail Price applies (pg. 43).

## **C. Chassis**

1. USRA Maximum Price applies (pg. 43). Chassis for the GP-12 class must be commercially-available and be specifically approved on an "as-submitted" basis, in accordance with the following parameters:

- a) Any chassis, which has been submitted and approved, that retails for the USRA Group 12 Chassis maximum price or less (see USRA Price Limit Table, pg. 43) in completed form.
  - b) Chassis must be commercially-available separately, and may also be available in an assembled ready-to-run car.
  - c) See the Approved Components for GP-12 for the list of approved chassis.
2. Chassis may be made of any material.
  3. Chassis containing steel components, except steel wire, pillow blocks, motor brace, and lead wire retainer:
    - a) Must have a guide mount that is integral.
    - b) Must be one continuous piece extending from the guide mount to the rear axle line, to which the rear pillow blocks are attached.
    - c) The bottom of the guide mount must be level with the bottom of the chassis with no offset.
    - d) Chassis may be sold as kits, but must be commercially available in an assembled form. Kits must be assembled in a manner identical to the assembled production chassis except as noted.
  4. Front body mounting tubes must be rigidly attached to the chassis (no shakers or floating mounts).

5. Rear body mount may be floated on any steel chassis, but must remain in original location as on the RTR car. Steel pin tubes may be used.
6. May only reposition front wheel mount location on any chassis but wheels must be able to be seen through body wheel well opening. No other component may be altered or repositioned from its original location in ready to run car.
7. Minimum weight of a completed, RTR car will be 72 grams at ALL times during a race.

#### **D. Modifications**

Pre-assembled chassis may be re-soldered, but components may not be altered or repositioned, chassis kits must be assembled the same manner as production chassis. Anything not listed here is illegal.

1. Static bracing, consisting of straight piano wire may be added to solder joints only. Wire may not be bent at any angle so as to constitute a brace. Wire may not be soldered to anything else other than the component it is parallel to.
2. No floating pans.
3. Brass and lead may be used for weight.
  - a) Weights must be solid, rigidly attached, and not used as a brace. All weight may only be attached to the front and/or to any existing weights. Weight may not be soldered to the center rail or to the side rails.
  - b) Weights may extend no more than one (1) inch (25.3 mm) back from the center of the guide hole.
  - c) No modifying or bracing of chassis will be considered to be legal weight.
  - d) Weights may be soldered to the bottom of the chassis if the chassis and attached weight clear the track by 1/16 inch (13.05 mm) at all times.
4. A lead wire retainer may be added.
5. A motor support tube or wire may be added, not to exceed 1-1/2 inches (38.1 mm) in total length behind the motor. Motor must be soldered to this brace or it will be considered an illegal chassis brace. Chassis may have steel pillow blocks and motor brace.
6. May solder or glue oilites in place.

#### **E. Prohibited Modifications:**

1. Tie wire.
2. Changes in size, dimension, shape, or location of any component.

#### **F. Lightweight Components**

Since the GP-12 class is intended to be an entry-level class, many of the rules are designed to discourage the use of complicated, state of the art, or expensive components. Therefore, special lightweight components are specifically prohibited, including:

Magnet wire or magnet type wire as a substitute lead wire.  
Hollow or special lightweight axles.

## **G. Gears**

Any gear ratio or pitch is allowed. Drilled gears are permitted.

## **H. Axles**

1. Axles retailing for US\$5.99 or less may be used.
2. Axles with flats are allowed.
3. Axles must be a minimum of 3/32 inch in diameter.

## **I. Wheels**

Front and rear wheels may be drilled.

## **J. Bearings**

No ball, roller, or other frictionless bearings are allowed. No proposals to modify this restriction will be accepted in the future, as voted in at the 2005 Wing Car general meeting.

## **K. Weight**

Minimum weight for GP-12 cars is 72 grams at all times while racing.

# **INTERNATIONAL 15**

**International 15** will be contested in both Amateur and Expert Driver Classifications. See Amateur Driver Classification on pg. 16 regarding the "Move Up" Policy. All General Rules also apply.

## **A. Motor**

1. Can must be mass produced, and commercially-available, as defined in the Bylaws Article X (pg. 15). Cut outs and machine work are allowed.
2. Can inside dimension minimums are defined as not less than:  
Length - No restrictions.  
Width - .835 inches (21.21 mm).  
Height - No restrictions.
3. Magnets must be ceramic. Magnets containing rare earth materials (defined as elements with atomic weights 58 through 71) are not allowed.  
No neodymium magnets or materials allowed.
4. Ball bearings are allowed.

## **B. Armature**

(Note: the reference regarding machine winding was eliminated in 2006.)

1. See Armature Technical Specifications table (pg. 46) for specifications.
2. Must be commercially available, as defined in the Bylaws Article X (pg. 15).
3. USRA Maximum Retail Price applies (pg. 43).

## **C. Chassis**

1. No chassis restrictions. Any material may be used.
2. Racer-constructed chassis are specifically allowed.
3. Ball bearings are allowed.

## **D. Axles, Wheels, Tires, and Gears**

Axles must be a minimum of 3/32 inch in diameter.

Must comply with USRA General Technical Rules, otherwise no restrictions.



## **E. Bodies**

Must be commercially available, as defined in the Bylaws Article X (pg. 15).

# **COBALT 12**

**Cobalt 12** will be contested in both Amateur and Expert Driver Classifications. See Amateur Driver Classification on pg. 16 regarding the "Move Up" Policy. All General Rules apply.

## **A. Setup**

1. No restrictions.
2. Ball bearings are allowed
3. May use single, quad (4), or six (6) magnet motors only.

## **B. Armature**

1. See Armature Technical Specifications table on pg. 46 for Specifications.
2. Must be commercially available, as defined in the Bylaws Article X (pg 15).
3. USRA Maximum Retail Price applies (pg 43).

## **C. Chassis**

1. No chassis restrictions. Any material may be used.
2. Racer-constructed chassis are specifically allowed.
3. Ball bearings are allowed.

## **D. Axles, Wheels, Tires and Gears**

1. Axles must be a minimum of 3/32 inch in diameter.
2. Must comply with USRA General Technical Rules, otherwise no restrictions.

## **E. Bodies**

Must be commercially available, as defined in the Bylaws Article X (pg. 15).

# **GROUP 27 LITE**

This class is open to any competitor, regardless of driver ranking or classification. The National Championship race will run using spray glue. The raceway owner/race director/USRA BoD will collectively determine the formula and application of the spray glue. Qualifying will be done at race voltage (14.3v max) in a single session of 1 minute. Cars will be impounded after qualifying and brought to the starting line after the seeding process is complete. The racer will be allowed to put the lane sticker in place but not perform any work on the car. All General Technical Rules apply.

## **A. Motors**

1. Cobalt magnet singles only - .400" tall X .440" long (+/- 5%).
2. Ball bearings allowed in can and endbell.
3. No restrictions on can and endbell.

## **B. Armature**

1. See Armature Technical Specifications table for armature specs (pg. 46).
2. Timing may be adjusted to allow for factory variations.
3. Must be commercially available, as defined in the Bylaws Article X (pg. 15).

### **C. Chassis**

1. USRA Approval Required; may be submitted to USRA as a kit; must be Commercially Available; will have a Maximum Retail Price as listed in the table on pg. 44.
2. Chassis must be made of steel with a minimum thickness of .047"; must be one continuous piece from the guide mount to the rear axle centerline, to which the rear pillow blocks and rear pillow blocks are attached.
3. Basic chassis cannot be modified; and must remain as submitted with regard to rail widths, including slots for pillow blocks, etc. Any commercially available pillow blocks may be used.
4. Minimum length is 4.100" as measured from the center of the guide flag hole to the center of the axle.
5. Pin tubes may be brass or steel; maximum 5/8" length; additionally a 1/2" length of pin tubing or maximum .035" piano wire brace to the pin tube may be used.

### **D. Axles, Wheels, Tires, & Gears**

1. Axles must be a minimum of 3/32" in diameter.
2. Must comply with General Technical Rules; otherwise no restrictions.

### **E. Bodies**

Must be commercially available, as defined in the Bylaws Article X (pg. 15).

### **F. Race Format - All Main**

1. Two motors allowed for race including qualifying. May change motors during the race and switch back (A-B-A).
2. Qualifying positions 1-32 will be seeded into four (4) Mains using the serpentine method. Refer to the Quarterfinals chart on pg. 22. The remainder of the field will be seeded into as many mains as necessary using the same serpentine method without using a Round-Robin Format. The mains will be run in reverse alphabetical order with the A Main being run last.
3. Racer with the largest lap total is the winner, regardless of which Main he/she races in.
4. Mains will be 4 minutes on and 3 minutes off.
5. The standard marshaling process will be followed (A will marshal D and H will marshal E).

## **GROUP 27**

**Group 27** will be contested in both Amateur and Expert Driver Classifications. See Amateur Driver Classification on pg. 16 regarding the "Move Up" Policy. All General Rules also apply.

### **A. Set-up**

No restrictions.

### **B. Armature**

1. See Armature Technical Specifications table on pg. 46 for armature specs.

2. Timing may be adjusted to allow for factory variations.
3. Must be commercially available as defined in the Bylaws Article X (pg. 15).

**C. Chassis**

No restrictions.

**D. Axles, Wheels, Tires, & Gears**

1. Minimum axle diameter is 3/32".
2. Must comply with General Technical Rules; otherwise no restrictions.

**E. Bodies**

Must be commercially available, as defined in the Bylaws Article X (pg. 15).

## **ONE MOTOR OPEN (OMO)**

This class is open to any competitor, regardless of driver ranking or classification. All General Technical Rules apply.

**A. Motor**

1. No restrictions to setup or armature.
2. Motor Definition – A “Motor” when quoted in relation to One Motor Open racing shall include can, endbell, armature, can bearing, endbell bearing, and endbell hardware.
3. The armature, can, endbell, and magnets cannot be changed at any time during the race. Changing of brushes, springs, and shunt wire is permitted. In the case of a motor no longer being able to run under its own power, the car is no longer allowed on the track, i.e. the car is now black-flagged.
4. Entrants may only use one (1) motor per race.
5. All motors shall be marked before the start of a series race in a way where it is possible to tell if the motor has been opened after the race. If a racer needs to open their motor during the race it must be opened and worked on under the guidance of the tech director or his/her appointee, then re-sealed. If paint/nail polish is to be used, a different type should be used for each race, and care must be taken to ensure that the number of motors marked equals the number of racers entered.
6. Random checks should be carried out during the race to ensure that only marked motors are in the cars.
7. If a racer is found with a non-marked motor in his/her car at any time during the race he/she shall be disqualified immediately.

**B. Chassis**

No restrictions.

**C. Bodies**

Must comply with General Technical Rules, otherwise no restrictions.

**D. Axles, Wheels, Tires, & Gears**

1. Minimum axle diameter is 3/32".
2. Must comply with General Rules, otherwise no restrictions.

## **E. Race Format - All Main**

1. One round of 30-second qualifying using race power. Cars will be impounded after qualifying and brought to the starting line after the seeding process is complete. The racer will be allowed to put the lane sticker in place but not perform any work on the car.
2. Qualifying positions 1-32 will be seeded into four Mains using the serpentine method. Refer to the Quarterfinals chart (pg. 22). The remainder of the field will be seeded into as many mains as necessary without using a Round-Robin Format. The mains will be run in reverse alphabetical order, with the A Main being run last.
3. Racer with the largest lap total is the winner, regardless of which Main he/she races in.
4. All races regardless of format will be 4 minutes on, 3 minutes off.
5. Qualifying and race voltage will be 14.3 volts maximum unloaded.
6. Marshaling will go as follows:
  - a) The standard marshaling process will be followed (A will marshal D and H will marshal E).
  - b) All other racers will race their Main, then marshal the following Main.

## **GROUP 7/OPEN (UNLIMITED)**

All General Rules also apply.

### **A. Motor**

No restrictions on setup or armature.

### **B. Chassis**

No restrictions.

### **C. Bodies**

Must comply with General Technical Rules; otherwise no restrictions.

### **D. Axles, Wheels, Tires, & Gears**

1. Minimum axle diameter is 3/32".
2. Must comply with General Technical Rules; otherwise no restrictions.

# Approved Components for GP-12

## C-Can Motors & Setups

<b>Cahoza</b>	230 / 230S 231 / 231S 232 / 232S
<b>Camen/Kamen</b>	K100 K102
<b>GT1</b>	277 T-5 magnets (flat tipped)
<b>Kelly &amp; Red Fox</b>	1001 Ultra Lite plated can 1150 1152 1153 Ultra Lite plated can (new hardware) 1154 G-2 1155 G-2 thin can 1160 Ultrafast plated 1170 Silver Bullet thin New endbell for all Kelly motors KE253 C1X magnets Red Fox Boxstock magnets
<b>Koford</b>	M504A Super Feather M504B (12) Spec 12 motor M527A Ultra Feather Gp-12 motor M508 set-up M547A Ultra set-up M604, M605, M606, M607, & M630 magnets
<b>Mura</b>	1212 1213P 1215P
<b>Parma</b>	455
<b>Pro Slot</b>	PS-723-VIP Gp 12 motor PS-723-SRS Gp 12 motor PS-728 (12) Spec 12 motor PS-750VIP Gp 12 setup PS-750SRS Gp 12 set-up

## Armatures - All Classes

<b>Camen</b>	GP-12 Intl-15 C12 27
<b>Koford</b>	M468-15 (Spec-15) M468-15A (Intl-15) M467-12-B&C (C-12) M467-15 (Intl-15)

<b>Koford, con't</b>	M468 Box (GP-12)
	M467-27A
<b>Mura</b>	2012
	2013
	2015
<b>Pro Slot</b>	206 (Intl-15)
	207 (C-12)
	211 (27)
	701 Series (GP-12)
	702 (Spec-15)
	<b>GP-12 Chassis</b>
<b>FX</b>	79 Fast Eddy chassis
<b>GTO</b>	Grp12A & B
<b>JK</b>	27041
<b>Kamen</b>	750
<b>Kelly</b>	1501 wire chassis
	1504 G3
	1518 G25
	1507 G4
	1511 G3 short
	1515 Wedge
<b>Koford</b>	M451
	M451T
	M490A
	M500A
	M503
	M511A Superspeedway Beuf
	M512A Short Superspeedway Beuf
	M513A Short Beuf Express
	M530A, M530C, M530E Ultra Beuf Express
<b>Mack</b>	Boxstock 12
<b>Pro Slot</b>	PS-317-08 Perimeter 4.430" long
	PS-317-12 Perimeter 4.330" long
	PS-318-08 Tripod
	319 Spec 12
<b>Red Fox</b>	07-W
	07-P
	RFL
<b>Slick 7</b>	243E
	473D
	543A
	548A
	614
	7243C .055"
	7243C .062"

<b>Slick 7, con't</b>	7243D
	7473B
	7541
	7543
	7273C

## Approved Components for 27 Lite

	<b>27 Lite Chassis</b>
<b>B-52</b>	27 Lite (4.375")
<b>Camen</b>	2050.410 (4.100")
	2050.415 (4.150")
	2050.420 (4.200")
	2050.425 (4.250")
	2050.430 (4.300")
	2100.425 Emerson Wedge (4.250")
<b>GTO</b>	Madman V (4.600")
<b>Koford</b>	M610B kit (4.300")
	M610D kit with gear guard (4.300")
	M610F kit (4.250")
	M610H kit (4.600")
	M610J kit with gear guard (4.600")
	M610L kit (4.250")
	M610N kit (4.200")
	M610P kit (4.150")
	M610R kit (4.100")
<b>N-R Slot Racing</b>	G-27L (4.350")
<b>Red Fox</b>	270 narrow motor box (4.300")
	RF27/12 (4.180")
<b>Slick 7</b>	S7-650A kit (4.230)
	S7-650B kit (4.150)
<b>Speed Tech</b>	ST1-EX (4.115")
<b>Wrightway</b>	270 wide motor box (4.200")

### Bodies for Wing Car Classes

<b>Alpha</b>	420 Jaguar
	460 Toyota
	470 Shadow
	472 Griffin
	476 Nissan
	478 RL1
<b>Camen</b>	GTO II with rib
	GTO II without rib
	GTO III
	Supro
	Supro with rib

<b>Camen, <i>con't</i></b>	Supro dimple
	Supro dimple with rib
	Carrera
	Venom
	Lotus
<b>Hi-Speed Products</b>	001/001R Hurricane
	002/R Cyclone
	003/R Typhoon
	005/R AL-1
	006/R Venom
	007/R Mirage
	008/R Panoz
	HSP009* Hypercane
	HSP009R* Hypercane with rib
<b>JK Products</b>	K020 Audi
	K030 Porsche
	K041 Stratos
<b>Kamen Kelly</b>	Charger
	804 Taz
	1700A Stalker
	1701 Fox Tail
	1805 Bat
	1806 T-Bird
	1802 Fox
	1803 Firestorm
	1807 Bat, with rib
	1808A Bullet
	1809 BK
	M214G Porsche
	M214H Mercedes
	M214I Peugeot
	M214J Ferrari
<b>Koford</b>	M214J Tesla
	M214J Tesla with rib
	028 Tiga
	029 Royale
	029R Royale, with rib
	029AW Royale SE
	030 Vette
	030R Vette, with rib
	041 Infinity
	041R Infinity, with rib
	052 Viper
	052R Viper, with rib
	053 Cobra
	053R C-2, with rib
<b>Outisight</b>	



<b>Outisight, con't</b>	054 Avenger
	054R Avenger, with rib
	055 Probe, with rib
	056 Banshee
	057 Viper, short
	057 Viper, short, with rib
	058 Reaper
	100 Asp
	101 Serpent
	101N Serpent without rib
	102 Royale 2K2
	103 Vette 2K2
	106 V3
	107 V5 Viper
	108 Charger
	108R Charger, with rib
	109
	110
	111R Fugya
	112R Fugu
<b>Parma</b>	70503 Phantom
	70507 Demon with rib
	70511 Demon
<b>Proformance</b>	7100 Z-28
	7100-2 Z-28 without rib
	7100-3
	7100-4
	7101 Secco
	7102 Elroy
	7103 Outrider
	7104 Endor
	7105 Skywalker
	7106 Ormond
	7107 Excalibur
	7108 Quest
	7109 Falcon
	7109-2 Falcon with rib
	7110 Vanquish with rib
	7110-2 Vanquish without rib
	7111 Hype
	7112 Red Five
<b>Pro Products</b>	Pro 101 Carrera
	Pro 102 Pontiac GTO
	Pro 103 Lotus
	Pro 104 Supra with rib
	Pro 104N Supra without rib

**Pro Products, *con't***

Pro 105 Daytona  
Pro 106 Venom  
Pro 107 Skype  
Pro 108 Royale-7  
Pro 117 Fierro

**Red Fox**

001 Shadow  
001A Shadow with rib  
002 Tyfon  
003 G-2 Scorp  
004 Renault  
005 Storm  
006 Fulda  
007 RFL  
Devil  
Stock1  
Barracuda (no part number given)  
Fat Fox  
R10  
Fox Tock B 101

## 2013 Maximum Retail Prices for USRA Approved Products

Spec 12 motor	\$58.90
Group 12 motor	\$58.90
Group 11/GTP motors: Challenger/Contender/Competitor/Sportsman	\$58.90
16D set-up	\$23.72
16D set-up with aluminum spring cups	\$23.72
Intl-15 armature	\$41.43
C12 armature	\$42.19
Group 12 (GP-12 & GT-12) armature	\$38.77
GTP armatures: Wasp/Hornet/Super 16C/Super 16D	\$31.21
Group 11/GTP armatures: Challenger/Contender/Competitor/Sportsman	\$28.80
27 Light chassis kit	\$82.75
Group 12 chassis	\$52.17
Spec 12 chassis	\$52.17
GT-12 chassis kit	\$65.72

## C-CAN MOTOR SPECIFICATIONS

### A. General

1. Motors must be commercially available, as defined in General Rules, Section IX, and must be specifically approved for the GP-12 class on an “as-submitted” basis. Approved motors are listed in the Approved Components for GP-12 listing.
2. Can and endbell must be mass-produced, full-dimensioned can type (full top, bottom, and two sides, without cheater tabs or other artificial attempts to meet dimensional specifications) without modification. No aluminum endbells allowed. Inside can dimensions are defined as not less than:
  - a) Length - .925 inches (23.50 mm)
  - b) Width - .835 inches (21.21 mm)
  - c) Height - .560 inches (14.22 mm)
3. Aftermarket components that are not identical replacements of original parts as approved are not allowed. This means endbells, hardware, cans, etc., must be original for that brand and type of motor, with the following exceptions:

- a) Approved single-piece magnets may be interchanged. Any magnet approved for use in any manufacturer's motor may be used in any other manufacturer's setups.
  - b) Manufacturers selling super magnets, or other components above the cost of original equipment replacement parts, are not allowed. A super magnet at higher cost and identical in appearance may not be detectable in a car, hence manufacturers selling identical-looking components at higher cost will lose approval for their motor (this would not rule out "matched" pairs of approved magnets).
4. Any motor set-up retailing for the USRA Group 12 motor maximum price or less (see USRA Price Limit Table, pg. 43) may be used.
  5. Anodized spring cups are allowed.

	Scale	Expert Wing	Amateur Wing	Spec-12
<b>Magnet Adhesive</b>	No Restriction	No Restriction	No Restriction	No Restriction
<b>Unrestricted Honing of Magnets by Racers</b>	Yes	Yes	Yes	No
<b>Air Gap</b>	No Restriction	No Restriction	No Restriction	0.528 Minimum
<b>Interchangeable Endbells and Hardware</b>	Yes	Yes	Yes	No
<b>Shunt Wires and Spring Insulation</b>	Yes	Yes	No	No
<b>Can End Ball Bearing</b>	Yes	Yes	Yes	Yes
<b>Brush Springs</b>	No Restriction	No Restriction	3 Coil	3 Coil

## B. Magnets

1. Magnet dimensions plus or minus 10% are as follows:
  - a) Length - .500 inches (12.70 mm)
  - b) Width - .150 inches (3.81 mm)
  - c) Height - .550 inches (13.97 mm)
1. Magnets must be commercially-available through major distributors.
2. No quad magnets allowed. Magnets must be single-piece ceramic only.
3. Magnets may not contain "rare earth" materials (defined as elements with atomic weights 58 through 71).

## C. Can Modifications

Anything not listed here is not permitted or allowed.

1. Use of can end ball bearing is allowed in all Scale C-can classes.

2. Can bushing may be soldered in place but may not be reversed or moved from original position. Diameter of bushing locator hole may be altered to allow the stock size bushing to be centered.
3. Outside diameter of bushing (excluding flange) may not be altered.
4. See table for adhesive rules. Need not retain magnet clips.
5. Magnet zapping is permitted.
6. Only single, one-piece magnets. No quad or multiple-piece magnets allowed.
7. Motor brushes and springs may be replaced and spring tension may be adjusted. See table for spring rules.
8. A 1/4" long x 1/8" wide x 1/8" deep notch may be cut in the can and magnet for axle clearance.
9. Prohibited modifications:
  - a) Cut-outs or machine work on can or endbell.
  - b) See C-Can Motor Specs table (pg. 44) for shunt wire rules.
  - c) Adding endbell heat sinks.
  - d) Drilling holes in can or endbell.
  - e) Armatures and magnets may be intermixed between approved manufacturers. Spec-15 motors must use the original can, endbell, and hardware. See table for mixing of other parts.
10. Definition of can shall not include surface treatment. If a manufacturer introduces a plated can they need not go through the submission process again. Plated can must sell for the same price as unplated version.

### **USRA Armature Specifications**

- 1) Armatures must be commercially available as defined in General Rules, Section IX, and must be specifically approved for the class they are being used in, unless class rules specify otherwise.
- 2) Armatures must meet any price limits as defined in the USRA Price Limit Table, (pg. 43).
- 3) No split-stack/lamination arms allowed.
- 4) Only round copper wire can be used. Litz wire may not be used.
- 5) Armatures may be balanced.
- 6) Armatures may have factory commutator tie-wrap.
- 7) Armatures may be reconditioned which includes cleaning, dyeing, commutator re-truing, and re-balancing.
- 8) See Armature Stack Length in the General Technical Rules (pg. 28) for clarification.
- 9) Armatures must be tagged according to the Armature Technical Specifications table (pg. 46) indicating they were produced by a USRA-approved manufacturer in compliance with these rules.

Armature Technical Specifications							
Armature Type	Classes	Minimum Diameter	Maximum Diameter	Minimum Stack Length	Wire Size (minus insulation)	Min # series-wound turns per pole	Tag
<b>Group 12 (Spec 12)</b>	GP-12 GT-12	.513" (13.03mm)	GP-12 = .518" (13.16mm) GT12 = .540" (13.72mm)	0.350" (8.89mm)	AWG #29 Gauge (0.0112-0.0114")	50	At least '12' or '15'
<b>International 15</b>	Int. 15			0.440" (11.18mm)	AWG #29 Gauge (0.0112-0.0114")	50	'15'
<b>Cobalt 12</b>	C12/15 C12-E			0.350" (8.89mm)	AWG #29 Gauge (0.0112-0.0114")	50	'12' or '15'
<b>Group 27 27 Light</b>	Group 27			0.440" (11.18mm)	AWG #27 Gauge (0.0141-0.0143")	38	'27'
<b>Wasp Hornet</b>	GTP	.513" (13.03mm)	.540" (13.85mm)	0.350" (8.89mm)	AWG #30 Gauge (0.0099-0.0101")	60	Super Wasp ('S-Wasp') Hornet ('HRT')
<b>Challenger Contender Competitor Sportsman Group 11</b>	LMP GTP	.513" (13.03mm)	.540" (13.85mm)	0.440" (11.18mm)	AWG #30 Gauge (0.0099-0.0101")	55	Group 11 Challenger ('CH') Competitor ('COM', 'COMP') Contender ('CONT', 'CTR') Sportsman ('SP')
<b>Super 16C</b>	GTP	.513" (13.03mm)	.540" (13.85mm)	0.490" (12.45mm)	AWG #28 Gauge (0.0125-0.0127")	55	'S16C' 'Super 16C'
<b>Super 16D</b>	GTP	.513" (13.03mm) (Coating may be removed)	.560" (14.36mm)	0.490" (12.45mm)	AWG #28 Gauge (0.0125-0.0127")	60	'S16D' 'Super 16D'
<b>16D</b>	Group 10 Stock Car	.513" (13.03mm)	.560" (14.36mm)	0.600" (15.24mm)	AWG #30 Gauge (0.0099-0.0101")	70	'16D'

## D-CAN MOTOR SPECIFICATIONS

### Motors (Stock 16D)

#### A. General

Must be commercially-available, meet all USRA manufacturing specs, and be approved for use in this class by the USRA. A minimum number of 500 pieces is required for approval, and must be available through distributors and or raceways by Oct. 1 prior to the National Event.

## **B. Set-ups**

1. Stock 16D style set-ups only. Must be commercially-available. Setup must retail for the USRA 16D Setup maximum price or less (see USRA Price Limit Table pg. 43). Setups sold with aluminum spring cups must retail for the USRA 16D Setup with Aluminum Spring Cups maximum price or less (see USRA Price Limit Table pg. 43) may compete.
2. 16D set-ups are to be submitted and sold as ready to run. Set-ups should be ready to install armature, brushes, spacers, springs with no further assembly work needed. Set-ups will have the magnets installed and retained using clips, can fingers folded over, and/or super glue. Can-end ball bearing is allowed; may solder in place. Endbell fully assembled and drilled for can screws. Parts kits are not acceptable as set-ups.

## **C. Modifications**

No modifications allowed except as follows:

1. Racer may add can screws.
2. May add spacers to limit endplay.
3. May dye armature.
4. May re-true commutator.
5. May zap magnets.
6. Magnets may be shimmed
7. May glue magnets in place. Any adhesive may be used.
8. May change brushes and may use any three-coil springs.
9. No polishing or honing of magnets is allowed.
10. Balancing is allowed.
11. Armature may be reconditioned; coating may be removed.
12. There is no minimum air gap in 16D motors, beginning in 2008.
13. May interchange parts between manufacturer's set-ups.
14. Ball bearing allowed in can end only; may be soldered in place.
15. May use any USRA-approved C-can or D-can endbell hardware as replacement hardware. Aluminum or brass spring cups may be used as replacements.
16. May solder and/or glue endbell hardware together and to endbell.

## **D. Cans**

1. Must be made from metal, and have no cutouts or metal removed from sides of can. The only allowable cutouts are the axle notches. Only one hole is allowed on the top and bottom of can. No strap-type cans allowed. Cans must have a full top and bottom. No cheater tabs on cans allowed.
2. Must meet the following minimum inside dimensions:
  - Height - .600 inches (15.24 mm)
  - Width - .875 inches (22.23 mm)
  - Length - .950 inches (24.13 mm)
3. Definition of can shall not include surface treatment. If a manufacturer introduces a plated can they need not go through the submission process again. Plated can must sell for the same price as the unplated version.

4. Cans submitted for product approval after January 1, 2005, must be no lighter than the lightest approved can commercially-available on January 1, 2005. This is a manufacturer specification, not a racer specification. The minimum weight is 2.1 grams.

#### **E. Magnets**

Must be stock one piece single (no quads) ceramic magnets as found in the production motor, and meet the following minimum dimensions:

- Height - .570 inches (14.48 mm)
- Length - .650 inches (16.51 mm)
- Thickness - .145 inches (3.68 mm)

#### **F. Armatures**

See Armature Technical Specifications on pg. 46 for armature specs.

## **GENERAL SCALE COMPETITION REGULATIONS**

### **I. Driver Classification (Scale Division)**

#### **A. Driver Classifications**

##### **1. *Amateur Division***

- a) Racers with average driving or technical ability and newer racers.
- b) At the National Championships, Amateur Division racers will use hand-out motors for all classes (except Amateur GT-12).
- c) Junior class is for those 13 years of age and younger.

##### **2. *Expert Division***

- a) All drivers with exceptional driving or technical ability.
- b) Any driver sponsored by a major manufacturer must race in this Division.
- c) Any racer 14 years of age or older who has won in any Amateur class at the Scale Nationals must race Expert Division in all classes at any future Nats. BoD may apply this clause to champions from other divisions and associations after a review.

### **II. Scale Race Procedures**

#### **A. Race Format** (except 1/32, 1/24, and F1 Eurosport classes)

1. All scale races will utilize Multiple Mains Formats.
2. All D-2 Classes (GP10-Eurosport) will have a 1 minute "warm-up" session.
3. Mains will be seeded by qualifying.
4. Qualifying order will be determined by fastest lap achieved during the specified qualifying period.
5. All Main events will be 8 x 3 minutes with 2-minute lane changes.
6. All scale races will be run under USRA spray glue conditions as described in section VIII.B (pg. 18).



## **B. Eurosport Race Procedure**

1. Qualifying order will be determined by a random draw. Each driver will receive one minute of qualifying time to establish his/her single fastest recorded lap time. Each racer will race in a Preliminary Qualifying race of eight 4 minute heats (no round robins). Seeding will be according to qualifying with 1-8 in the "A", 9-16 in the "B", 17-24 in the "C" and 25-32 in the "D" Race, etc. All races will be equal in number of cars as possible with the extra cars being seeded from the top down; example with 33 entries, A-B-C will have 7 cars; D-E will have 6 cars.
2. The top eight racers in total laps from the Preliminary Qualifying race will advance to the Main Event race of eight 5 minute heats. The European lane rotation system will be used. Lane changes will be one (1) minute between heats with no work allowed on the cars during this period. However, drivers or pit personnel are not permitted to work on the track at any time.

## **C. Lane Changes**

Limit work between heats to adjust braid, push in body pins, straighten body and change lane sticker.

1. No tools can touch the car during a lane change. Oil and braid juice allowed.
2. Allow tires changes ONLY under green flag racing conditions.

## **D. Payouts & Prizes**

1. Amateur and Expert race merchandise certificates and/or cash payouts will be at least 50% of the total entry fees for each race, and will be paid to at least the top eight finishers.
2. 1/24 Eurosport and 1/32 Eurosport will be Cash Payout. All other payouts should be merchandise certificates.

# **III. Scale General Technical Rules**

## **A. Drivers and Interiors**

1. All scale classes must use three-dimensional vacuum-formed interiors. No paper, flat, or thingie type interiors allowed.
2. Drivers must include at least head/helmet, shoulders, torso, arms and steering wheel.
3. Drivers/interiors must be appropriate size and scale for the class.
4. Drivers/interiors must be detailed using at least three colors and must be opaque.

## **B. Bodies**

1. Must be commercially available and approved for use in the class.
2. Bodies must be fully painted, including sides of the body.
3. May reinforce body with tape and/or Lexan.
4. No air control devices allowed.
5. No alterations or additions to the manufacturer's dimensions are permitted.
6. Any cut-outs or openings must be the same as on the actual car.

7. Body must cover entire chassis when viewed from above.
8. All windows must be clear.
9. Front wheel wells may be cut out or left clear.
10. No cutting into the top of fenders is allowed.
11. Must have three decal or painted numbers on the car in appropriate positions.
12. Chassis or track may not be visible through windows.

### **C. Wheels, Tires, & Axles**

#### **1. Rear Wheels & Tires**

- a) Scale classes may only run black rear tires. No dyed tires are allowed.
- b) Maximum rear tire width is .815 inches (20.7 mm) unless class rules specify another width.
- c) Where .062" clearance is used, there is no minimum tire diameter.
- d) Where .032" clearance is used, there is no minimum tire diameter.

#### **2. Rear Axles**

- a) 3/32 inch axles may be used.
- b) No hollow or other lightweight axles may be used.

### **D. Clearance**

1. Clearance will be measured under the rear of the car, directly under the rear axle and between the rear wheels, with the car at rest on a flat tech block with the guide in the tech block slot.
2. Clearance will be checked at the beginning of the race, with no check at the end. If a car is suspected to be dragging on the track during racing, the race director, at his discretion may check clearance. Any car found to be dragging the track will be repaired during green flag racing conditions.
3. For banked tracks clearance will be .062 inches for all stamped-steel chassis classes.
4. On banked tracks when using .062" clearance, a clearance check may be carried out by the tech director/race controller at the beginning of any heat of any race. Any car found with clearance less than .044 inches at the beginning of any heat (except the first heat) will have to change tires and have the clearance rechecked under green flag racing conditions.
5. For flat tracks clearance will be .032 inches for all stamped steel chassis classes.
6. See class rules for additional clearance rules.

# SCALE CAR SPECIFICATIONS

## Stamped Steel Chassis Regulations

### 1. Chassis

- a) Must be a commercially-available approved chassis.
- b) Must be made of stamped and formed metal. The portions to which the motor attached must be steel. Floating pans may be steel, aluminum, or brass.
- c) May use lightweight replacement pans and center sections.
- d) May interchange parts from a single manufacturer; such as Flexi and Flexi-2 parts, JK long or short center sections, and heavy or light pans on JK chassis.
- e) Chassis may have a maximum of three chassis parts consisting of one solid center section and maximum of two separate pans. No additional pans or two-piece center sections allowed.
- f) No modifications except for the following:
  - g) May solder or glue motor, axle oilites, and front wheel retainers.
  - h) May add lead weight and tape to chassis.
  - i) May file holes in motor bracket to allow better gear mesh, but must retain a portion of motor bracket.
  - j) No oilite modifications allowed. May use offset oilites.
  - k) May add spacers between pan and center section.
  - l) May add a 1-inch (25.4 mm) long motor brace and a maximum of two upright braces (one for each upright).
  - m) The original manufacturer's plating may be removed only in areas to be soldered.
  - n) May add pin tubes. Pin tubes may be either solid or floating. May add lead wire retainer.
  - o) May solder on steel guide tongue reinforcement such as Slick 7 but the original tongue may not be removed, modified, or moved.
- p) No other-modifications, soldering, cutting grinding or bracing allowed.
- q) May use any guide, nut, spacers, lead wire and clips.
- r) May perform reasonable filing of rear oilite chassis holes to allow for axle alignment.

## GROUP 10 STOCK CAR

**Single driver classification** (no amateur/expert split). The Nats Host Raceway discretion: flat or banked track. All Scale General Technical Rules apply.

### A. Chassis

See Stamped Steel Chassis Regulations.

**B. Motors**

Hand-out 16D motor similar or equal to Parma 501 or SpeedFX. Every effort possible will be made to rotate the choice between manufacturers equally. However, the USRA BoD in conjunction with the Nats Host owner(s) will make the choice based on performance, reliability, availability, cost, etc., to insure the best quality racing possible.

**C. Bodies**

1. Any type/style of USRA Approved Commercially-Available body allowed. Body choice will be the Nats Host Raceway discretion and will be announced in conjunction with the Nats Schedule.

**D. Gears**

Any gear ratio allowed.

**E. Axles, Tires, & Wheels**

1. See Scale General Technical Rules – Wheels, Tires, & Axles section (pg. 50).
2. Front wheel minimum-diameter is .500 inch (12.7 mm).
3. Sticker front wheels allowed.
4. May use drill blank axles front and rear. Axles must be steel. No hollow or other lightweight axles allowed.

**F. Clearance**

For flat tracks clearance will be .032 inches for all stamped steel chassis classes. This regulation also applies to Eurosport classes.

## **PRODUCTION 4-1/2 STOCK CAR**

**Single driver classification** (no amateur/expert split). The Nats Host Raceway will retain discretion for contesting this class or 1/24 scale JRL/Indy Car class. All Scale General Technical Rules apply.

**A. Chassis**

See Stamped Steel Chassis Regulations.

1. Must be a commercially-available, stamped and formed chassis with a 4-1/2 inch wheelbase and be approved for competition.
2. If using extenders, must use original manufacturer's extenders on the chassis they were designed for. May solder extender to chassis. May remove front wings for extender/front wheel clearance only.

**B. Motor**

See D-Can Motor Specifications, A. Motors (Stock 16D), pg. 46.

**C. Bodies**

See Stock Car Body Specifications (pg. 53).

**D. Gears**

Any gear ratio allowed.

## **E. Axles & Tires**

1. See Scale General Technical Rules – Wheels, Tires, & Axles section (pg. 50).
2. Minimum front and rear axle diameter is 3/32 inch. Steel axles only. No hollow or other lightweight axles. Drill blank axles are allowed.
3. Tires front and rear must be composed of black foam rubber only. No dyed tires allowed. May add nail polish to front tires.
4. Front tire minimum diameter is .675 inch (17.15 mm). Minimum front tire width 0.400 inch (10.16 mm). Minimum rear tire diameter is .790 inch (20.07 mm). Maximum rear tire width is .815 inch (20.7 mm).
5. Independent rotating front wheels are allowed.
6. Solid, one-piece front axles only; no stubbies. Axle must pass through both front uprights. Front axles may be soldered to uprights, but front wheels must rotate. Axle hole in front uprights may be enlarged to allow .675 inch front tires to touch track but 4-1/2 inch wheelbase must be maintained.

## **F. Clearance**

See Scale General Technical Rules – Clearance Section (pg. 50).

# **STOCK CAR BODY SPECIFICATIONS**

## **A. Rules applying to both Group 10 (4”) & 4-1/2” Stock Car**

1. See Scale General Technical Rules – Bodies section (pg. 49).
2. No air control devices allowed. No alterations or additions to the manufacturer’s dimensions are permitted. Body must cover entire chassis when viewed from above.
3. May reinforce body with tape or Lexan.
4. Bodies must be fully-painted and all window areas must be left clear.
5. Body must have full Stock Car interior (Parma #809 or similar) properly-painted, and installed in the correct position, and completely covering interior. Chassis or track must not be visible when viewed from above.
6. Front wheel wells may be cut out or left clear. No cutting into the top of the fenders.
7. Must have three decal or painted numbers placed on body, one on each door and one on roof. Bodies should be painted to resemble real stock cars.
8. No wedging of bodies.
9. Tech Director reserves the right to allow or disallow any cars or bodies and his decision is final.

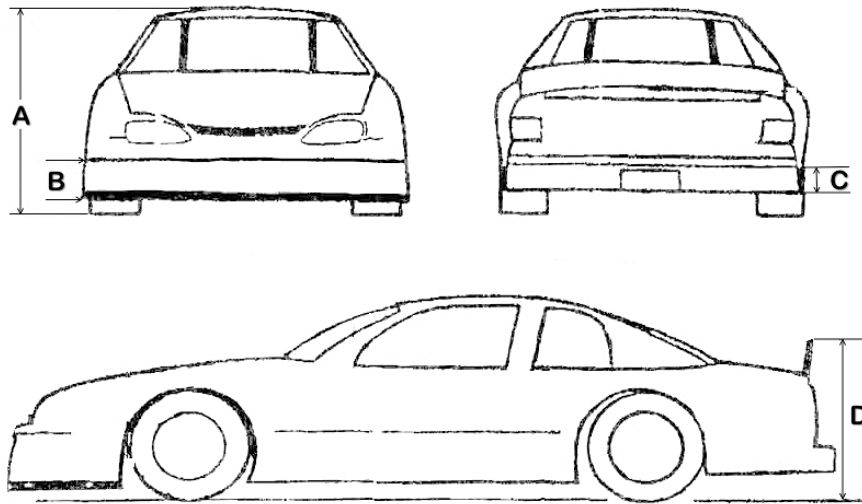
## **B. Dimensions/rules applying to Group 10 (4”) Stock Car Only**

1. 4-inch Stock Car bodies will be used. Should represent the full-size car. Only Stock Car body styles will be permitted. Bodies must have front and rear bumpers.
2. See Stock Car dimension diagram below for measurement points (A-C):
  - a) Front Bumper: Minimum 1/8 inch (3.18 mm) measured from the top of bumper down.
  - b) Rear Bumper: Minimum 1/8 inch (3.18 mm) measured from top of bumper down.

- c) Rear Spoiler Height: Maximum height 1-1/2 inches (38.43 mm) measuring from tech block.
- 3. For manufacturer specifications, please refer to the USRA website at [www.usraslots.com](http://www.usraslots.com).
- 4. Must retain a minimum of 5/8 inch (15.86 mm) rear valance measured from the trunk lid down. Rear bumper may be included in the measurement, but must also be minimum 1/8 inch (3.18 mm). May not cut out or put holes in rear portion of bodies.

### C. Dimensions and rules applying to 4-1/2" Stock Car Only

- 1. Bodies must be 1/24 scale 4-1/2 inch wheelbase stock car bodies that are commercially-available and approved for USRA competition. Minimum length 7-1/2 inches (190.5 mm). Only body styles resembling Stock Cars will be permitted.
- 2. See Stock Car dimension diagram for measurement points (A-D):
  - a) Front Bumper - Minimum 1/4 inch (6.35 mm) measured from the top of bumper down.
  - b) Rear Bumper - Minimum 1/8 inch (3.18 mm) measured from top of bumper down.
  - c) Spoiler height - Maximum 1-5/8 inches (41.28 mm) height measured from tech block to top of spoiler.



- 3. For manufacturer specifications, please refer to the USRA website at [www.usraslots.com](http://www.usraslots.com).
- 4. Cars must have front and rear bumpers. Front bumper must be at least 1/4 inch (6.35 mm) tall, measuring from top of bumper down. Rear bumper must be at least 1/8 inch (3.18 mm) tall, measuring from top of bumper down.

5. Car must retain a minimum of 1-3/16 inches (30.16 mm) rear body valance. This will be measured from trunk lid down. Rear bumper may be included in the measurement, but must also be a minimum 1/8 inch (3.18 mm). May not cut out or punch holes in rear of the body.
6. Rear spoilers with a maximum height of 1-5/8 inches (41.28 mm) measuring from tech block to top of spoiler.
7. No additions or alterations to the manufacturer's dimensions are allowed.
8. No cutting into top of body or fenders allowed. No part of the chassis or tires may be visible when viewed from above. Maximum of 1/8 inch (3.175 mm) of tire may be visible as viewed from above.
9. Front wheel wells must be cut out.

## **GTP**

**Single driver classification** (no amateur/expert split). All Scale General Technical Rules also apply.

### **A. Chassis**

See Stamped Steel Chassis Regulations (pg. 51).

### **B. Motor**

Must be commercially available, meet all USRA manufacturing specs, and be approved for use in this class by the USRA. One of the following motors may be chosen:

1. **D-Can:** Refer to D-Can Specifications (pg. 46). Super 16D armature must be used.
2. **C-Can:** Refer to C-Can specifications (pg. 43). Armature must be Super 16C, Super Wasp, or Group 11.

### **C. Armature**

Armatures must be commercially available as defined in the USRA Bylaws Article X (pg. 15) and must be specifically approved for the class. Approved armatures types are Super Wasp, Hornet, GP-11 (Challenger, Contender, Competitor, and Sportsman), Super 16D, and Super 16C. See Armature Technical Specifications for specs (pg. 46).

### **D. Bodies**

1. See Scale General Technical Rules – Bodies section (pg. 49).
2. Maximum height of body is 1-5/8 inches (41.28 mm).

### **E. Gears**

Any gear ratio and any gears may be used. May solder pinion to shaft.

### **F. Axles, Tires, & Wheels**

1. See Scale General Rules – Wheels, Tires & Axles section (pg. 50).
2. Minimum Front Tire diameter is .500 inches (12.7 mm).
3. Sticker front wheels allowed.

### **G. Clearance**

See General Scale Rules – Clearance Section (pg. 50).

## **LMP**

**Single driver classification** (no amateur/expert split). All Scale General Technical Rules apply. Nats Host Raceway discretion: flat or banked track.

### **A. Chassis**

See Stamped Steel Chassis Regulations (pg. 51).

### **B. Motor**

Hand-out mini motors similar or equal to Hawk 7, Falcon 7, Pro Slot (Chinese arm), Slick 7, Demon 9, or Evil 9. Every effort possible will be made to rotate the choice between manufacturers equally. However, the USRA BoD in conjunction with the Nats Host owner(s) will make the choice based on performance, reliability, availability, cost, etc., to insure the best quality racing possible.

### **D. Bodies**

1. See Scale General Technical Rules – Bodies section (pg. 49).
2. Maximum rear height is 1-5/8 inches (41.28 mm).
3. Bodies do not need to be cut on the cut-line. The front of the body must maintain some vertical surface. “Blade” bodies will not be allowed.

### **E. Gears**

Any gear ratio is allowed and any gears may be used.

### **F. Axles, Tires, & Wheels**

1. See Scale General Rules – Wheels, Tires, & Axles section (pg. 50).
2. Minimum front tire diameter is .500 inches (12.7 mm).
3. Sticker front wheels allowed.

### **G. Clearance**

See Scale General Technical Rules – Clearance Section (pg. 50).

## **GT-12**

All Scale General Technical Rules apply.

### **A. Chassis**

1. Must be a USRA- approved GT-12 chassis; may be submitted to the USRA as a kit; must be Commercially Available; will have a Maximum Retail Price as listed in the table (pg. 43). Manufacturers are required to provide the USRA with one assembled chassis for technical reference purposes as a part of the approval process.
2. Chassis may be constructed using any materials.
3. Chassis kits must be assembled identically to the submitted chassis.
  - a) All parts must be in stock location.
  - b) May add lead weight.
  - c) May add a rear motor brace and an upright brace.
  - d) No other modifications are allowed.



4. Manufacturer must provide an assembly instruction sheet. The instructions must explain how to assemble the chassis like the assembled submitted chassis. Subject to the approval of the Scale Division Tech Director, the instructions may include minor modifications to the chassis.
5. Axle ball bearings are allowed.

## **B. Motors & Armatures**

C-Cans and X12 armatures are used. Refer to C-can specifications. Refer to X12 armature specification in table (pg. 46).

## **C. Bodies**

1. Amateur Bodies
  - a) Amateurs will use GTP bodies.
2. Expert Bodies
  - a) Experts will use LMP bodies.
  - b) Bodies do not need to be cut on the cut line. The front of the body must maintain some vertical surface. "Blade" bodies will not be allowed.
  - c) Maximum rear body height is 1-5/8 inches (41.288 mm).
  - d) Cut line does not need to be maintained along the sides of the body.
  - e) The front skid plate of the chassis may protrude up to 1/16 inch outside of the body on each side. The rest of the chassis must be covered by the body when viewed from above.
  - f) The body may be reasonably cut to allow clearance of the skid plates at the front.

## **D. Gears**

No restrictions.

## **E. Wheels, Tires, & Axles**

1. Black rear tires only. Rear tire diameter is unrestricted. Maximum tire width is .815 inches (20.7 mm).
2. Front wheel minimum diameter is .500 inches (12.7 mm).
3. Sticker front wheels allowed.
4. No hollow or other lightweight axles. May use 3/32 inch rear axles.

## **F. Clearance**

Same as 1/24 Eurosport.

# **1/24 SCALE EUROSPORT**

All ISRA Rules apply. Refer to [www.isra-slot.com](http://www.isra-slot.com) 2012 ISRA rules. Changes have been added to the following text. A recessed tech block (guide and rear wheels) is used when measuring the car dimensions except ground clearance.

## **A. Dimensions**

1. Car
  - a) Maximum height at rear wing is 35.0 mm.
  - b) Maximum width excluding body pins and tape is 83.0 mm.
  - c) Minimum vertical edge at front is 1.0 mm.

- d) Minimum ground clearance under rear axle and between rear tires is 0.8 mm.

## **2. Wheels & Axles**

- a) Maximum rear tire width is 20.7 mm.
- b) Minimum rear tire diameter is 15.0 mm.
- c) Minimum front wheel diameter is 12.7 mm.
- d) Minimum front wheel width is 0.8 mm.
- e) Minimum front wheel track is 72.0 mm.

## **3. Chassis**

Maximum length; center of rear axle and guide pivot hole is 125.0 mm.

## **B. Chassis**

Chassis are unrestricted except for the dimensions and the following limitations: The front wheels must be positioned in the correct wheel arch position in relation to the body approved at the time. Only one guide flag device per car is allowed.

## **C. Body**

- 1. Eurosport 1/24 is a single body class. Must be USRA approved.
- 2. Legal body is Red Fox (Brazil) ISRA Audi R10 thru 2013.
- 3. The body must not deviate from its shape as produced by the manufacturer. The body must cover the entire chassis, including the rear axle and guide flag, in at least one unforced position. It can be fixed to the chassis with pins or cellophane tape.
- 4. Body decoration is unrestricted, but must be made in at least two different colors. The body must be completely opaque. Windows must be left clear. All four wheels must be completely visible when viewed from the side (see E. Front Wheels on pg. 59). Pin striping and/or bodyline detailing is mandatory.
- 5. Numbers must be displayed in at least three (3) different positions.
- 6. All cars must contain a painted and 1/24 scale three-dimensional interior with the driver's helmet, shoulders, arms and the steering wheel mounted in the original cockpit position. No portion of the chassis must be seen through the cockpit area when viewed from above. Body cutting must maintain every detail of the real car (i.e. lights, wheel position, etc.).
- 7. Two bodies per car are permitted, provided that they are painted, trimmed and mounted identically. The extra body is kept in the enclosed park and made available on the return of the other. During a service break both bodies are available to the driver.

## **D. Motor**

No restrictions.

## **E. Front Wheels**

Sticker front wheels allowed; must be placed in correct wheel arch position for body being used.

In lieu of sticker fronts, chassis mounted front wheel/tires may be used; must be completely visible.

## **F. Rear Tires**

The rubber portion of the tire contacting the track surface must be black.

# **1/32 SCALE EUROSPORT**

All ISRA Rules apply. Refer to [www.isra-slot.com](http://www.isra-slot.com) 2012 ISRA rules. Changes have been added to the following text. A recessed tech block (guide and rear wheels) is used when measuring the car dimensions except ground clearance.

## **A. Dimensions**

### **1. Car**

- a) Maximum height at rear wing is 32.5 mm.
- b) Maximum width excluding body pins and tape is 64 mm.
- c) Minimum vertical edge at front is 1.0 mm.
- d) Minimum clearance under rear axle and between tires is 0.8 mm.

### **2. Wheels and axles**

- a) Maximum rear tire width is 16.0 mm.
- b) Minimum rear tire diameter is 15.0 mm.
- c) Minimum front wheel diameter is 12.7 mm.
- d) Minimum front wheel width is 0.8 mm.
- e) Minimum front wheel track is 56.0 mm.

### **3. Chassis**

- a) Maximum length; center of rear axle and guide pivot hole is 105.0mm.

## **B. Chassis**

- 1. Chassis are unrestricted except for the dimensions and the following limitations: The front wheels must be positioned in the correct wheel arch position in relation to the body approved at the time. Only one guide flag device per car is allowed.

## **C. Body**

- 1. Eurosport 1/32 is a single body class.
- 2. Legal body is Red Fox (Brazil) ISRA Audi R10 thru 2014.
- 3. The body must not deviate from its shape as produced by the manufacturer.
- 4. The body must cover the entire chassis, including the rear axle and guide flag, in at least one unforced position. It can be fixed to the chassis with pins or cellophane.
- 5. Body decoration is unrestricted, but must be made in at least two different colors. The body must be completely opaque. Windows must be left clear. All four wheels must be completely visible when viewed from the side (see E –Front Wheels, pg 60). Pin striping and/or bodyline detailing is mandatory.
- 6. Numbers must be displayed in at least 3 different positions.
- 7. All cars must contain a painted and 1/32 scale 3D interior with the driver's helmet, shoulders, arms and the steering wheel mounted in the original cockpit position. No portion of the chassis must be seen through the cockpit

area when viewed from above. Body cutting must maintain every detail of the real car (i.e. lights, wheel position, etc.).

8. Two bodies per car are permitted, provided that they are painted, trimmed and mounted identically. The extra body is kept in the enclosed park and made available on the return of the other. During a service break both bodies are available to the driver.

#### **D. Motor**

No restrictions.

#### **E. Front Wheels**

1. Sticker front wheels allowed; must be placed in correct wheel arch position for body being used.
2. In lieu of sticker fronts, chassis mounted front wheel/tires may be used; must be completely visible.

#### **F. Rear Tires**

The rubber portion of the tire contacting the track surface must be black.

## **FORMULA 1/32**

All ISRA Rules apply. Refer to [www.isra-slot.com](http://www.isra-slot.com) 2012 ISRA rules changes have been added to the following text.

#### **A. Chassis**

Chassis are unrestricted except for the following limitations:

1. The motor must be mounted in the chassis in the "inline" position (i.e. in a 90-degrees angle to the rear axle).
2. The chassis must have a maximum length of 110 mm (4.330 inches) as measured from the center of the guide pivot to the center of the rear axle.
3. The chassis portion of the car must have a maximum width of 52 mm (2.047 inches). This portion (the "pans"), must have a maximum length of 68 mm (2.677 inches).
4. The part of the chassis ahead of the pans must have a maximum width of 34 mm (1.340 inches), excluding the front axle and its support(s).
5. The part of the chassis to the rear of the pans, including the supports for the rear axle, must also have a maximum width of 34 mm (1.340 inches).
6. Only one guide flag device per car is allowed.

#### **B. Body**

1. Formula 1/32 is a single body class.
2. Legal body is Red Fox (Brazil) 2010 McLaren thru 2013.
3. Bodies must be accurate copies of the samples sent to USRA for approval.
4. The body must not deviate from its form as produced by the manufacturer.
5. The paint scheme must represent an actual F1 car during the last 10 years.
6. The major engine cover and side pod sponsors logo/name must be present.
7. The body must cover the entire chassis including the guide flag but excluding the axles, wheels and the support(s) for the front axle.

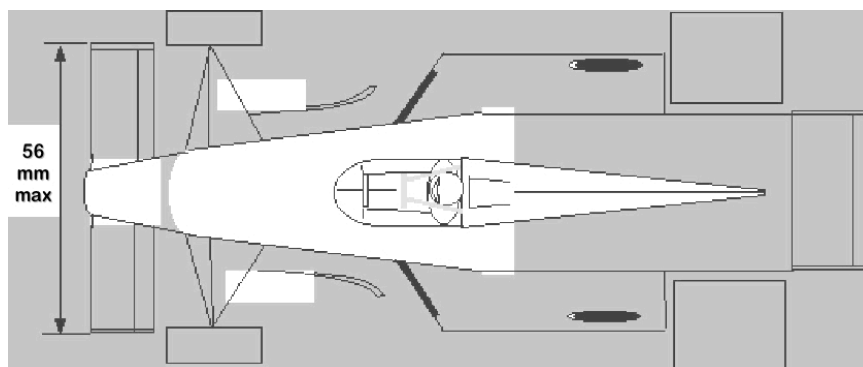
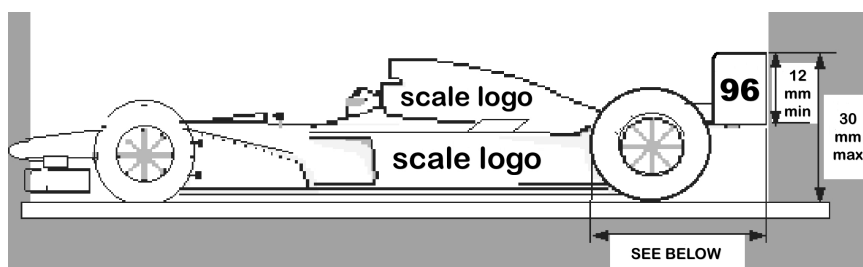
8. The body must be completely opaque. The additional exception is the rearward portion of the chassis pans not covered by the body. The chassis portion in this area must be painted black.
9. Numbers must be displayed in at least three (3) different positions.
10. All cars must contain a painted and scaled three-dimensional interior with driver's helmet, shoulders, arms, and steering wheel mounted in the original cockpit position.
11. No portion of the chassis must be seen through the driver area when viewed from above.
12. Pin striping and/or bodyline detailing is mandatory. Below are drawings illustrating the maximum front and rear wing dimensions allowed, and where the scale logos must be positioned.

### C. Motor

No restrictions.

### D. Front wheels

1. The front wheels must have a minimum diameter of .550 inches (14 mm) and a minimum width of .157 inches (4 mm) to a maximum width of .400 inches (10 mm).





2. Rear ground clearance must be a minimum of .032 inches (.8 mm) at the start of qualifying and each main, the clearance being measured between the rear tires and under the rear axle.
3. The clearance under the front axle and its support(s) must be a minimum of .032 inches (.8 mm). This is the area between the front wheels and the sides of the front of the chassis.
4. There is no minimum clearance required at the front of the chassis (the portion of the chassis ahead of the pans).

## **1/24 SCALE IRL/INDY CAR**

The D-2 (Scale) Host Raceway may choose to run 1/24 Scale IRL/Indy Car in lieu of 4-1/2" Stock Car. However, under no circumstances will both classes be run as official classes at a Nats Event. All USRA General Rules apply. Single driver classification; no Amateur/Expert split.

### **A. Chassis**

1. May use the following chassis: Mossetti, FX78 & FX 87, Clark, Mack F1, HNR, Parma Flexi 1 853 (may substitute Flexi 2 center 595B), JK - JRL Indy car/F1 chassis 2690 and 2692, JK Cheetah 2511, JK Cheetah 7 F1 chassis, Champion Turbo Flex, Champion Astro Flex with narrow pans.
2. FX87 (older version) chassis allowed modifications: top suspension piece optional, guide tongue may be shimmed by up to .032".
3. A total length of 3" of .063" piano wire may be used for any chassis bracing.
4. Pin tubes may be added.
5. Axle ball bearings allowed.
6. Pan movements may be increased or restricted.
7. No other modifications will be allowed.

### **B. Body**

1. Any 1/24 scale Indy/F1 production body.
2. Chassis must be completely covered when viewed from above; except for the front wheel assembly and rear wheels, axles, tires, and gear.

### **C. Motor**

1. USRA approved C-Can setup (See list of Approved Components for GP-12, pg. 37 & C-Can Motor Specifications, pg. 43).
2. Must use USRA approved Super Wasp, Hornet, Challenger, Contender, Competitor, or Sportsman Armature (See Armature Tech Specs pg 46 and Scale Division List of Approved Components).
3. Aftermarket aluminum endbells with ball bearing allowed for 2013. After 2013 will need to be part of an approved C-Can setup to meet Commercial Availability requirements.

### **D. Gears**

Any gears may be used. May solder pinion to armature shaft.

### **E. Wheels, Tires, & Axles**

1. See General Scale Technical Rules (pg. 50).

2. Front wheels must be .600" min. in diameter and .300" min. wide.
3. May use drill blank axles front and rear; no lightweight axles allowed.
4. Front axles may be soldered to the uprights but front wheels must rotate.

## **F. Clearance**

See General Scale Technical Rules – Clearance Section (pg. 50).

# **SCALE DIVISION APPROVED COMPONENTS**

**For approved Group 12 C-Can motors, arms, and components refer to list beginning on pg. 37.**

## **Group 10 Motors - 16D**

<b>Fast Ones</b>	260SU Twistr
<b>Kelly</b>	580 G2 16D set-up with new or old hardware
	581 G2 thin
	731 G2
	732 G2
	2000 16D motor
	2004 16D and S16D motor set-up
	270 D1X magnets
<b>Pro Slot</b>	2000 16D
	2004 16D & S16D motor set-up
<b>Parma</b>	Rotor
	498IX
	499IX
	Deathstar

## **Group 10 Armatures - 16D**

<b>Mura</b>	2216
<b>Parma</b>	72013
	72015
<b>Pro Slot</b>	706
	16D M2 blank
	706B 16D .520-.560" dia.

## **GT1 Armatures**

(May also be used for GTP racing)

<b>Champion</b>	Sportsman
<b>Koford</b>	Competitor
<b>Mura</b>	Challenger
<b>Pro Slot</b>	Contender
	705 Contender M2 blank
	705B Contender .520-.540" dia.



## **GTP Armatures – Super 16C**

<b>Mura</b>	Super 16C
<b>Pro Slot</b>	Super 16C
	700C Super 16C arm M2 blank
	700C-B Super 16C .520-.540" dia.

### **Super 16D**

<b>Kelly</b>	2001 S16D motor
<b>Parma</b>	S16D
<b>Pro Slot</b>	S16D
	700 Super 16D arm M2 blank with coating
	2001 S16D motor
	700B S16D .520-.560" dia.

### **Hornet/Wasp/12**

<b>Koford</b>	M468-SW Super Wasp
<b>Mura</b>	Super Wasp
<b>Pro Slot</b>	Super Wasp
	704 Super Wasp arm M2 blank
	704B Super Wasp arm .520-.540" dia.

### **Group 10 Chassis**

**(Also used with LMP and GTP)**

<b>Champion</b>	Turbo Flex
	Astro XE
<b>JK Products</b>	Scorpion II
	Cheetah
	Scorpion III
	Scorpion III with heat-treated pan
	2909 pan
	2909H
	2901S
	2501S
	25027 Cheetah 7 .025"
	25017 Cheetah 7 .030"
	25017R Cheetah 7, 4-inch
	25027R Cheetah 7, 4-inch
	25047 Cheetah 7, 4-inch .030" pans
	25047 Cheetah 7, 4-inch .025" pans
	25047AL Cheetah 7, 4-inch aluminum pans
	250112C Cheetah 11, .025" C-can chassis
	25011C Cheetah 11, .030" C-can chassis
	25012 .030" C & D pans
	25013C .030" C-can center section

<b>JK Product, con't</b>	250122 .025" C & D pans
	250132C .025" C-can center section
	25021 Cheetah X21
	X24 Cheetah 11 two-piece
	X25 Cheetah 25
	X24PA 4-inch aluminum pans
<b>Parma</b>	Flexi Kar
	Flexi 2
	Flexi 3
	605 Flexi 5
<b>Pro Slot</b>	5000 SpeedFX C-can chassis
	5000C C-Can center section
	5001 SpeedFX D-can chassis
	5001C D-can center section
	5002 standard pans
	5003 medium pans
	5004 light pans

### **4-1/2 Stock Car Chassis**

<b>Champion</b>	Turbo Flex
	Astro SE
<b>JK Products</b>	Scorpion II
	25231S
	2532 Cheetah 7, 4-1/2 inch .030"
	2533 Cheetah 7, 4-1/2 inch .030" center
	25047 Cheetah 7, 4-1/2 inch .030" pans
	25057 Cheetah 7, 4-1/2 inch .025" pans
	25047AL Cheetah 7, 4-1/2 inch alum. pans
<b>Parma</b>	2916S
	Flexi 2
	Flexi 3

### **GT-12 Chassis**

<b>B Slotcar Performance</b>	BSP GT12-06
	BSP GT-12-10
<b>FX Racing Products</b>	FX77
	79
	89
<b>Mack</b>	Bull Dog GT-12
	Stinger GT-12
	Bulldog-2
	Bulldog-3
	Stinger-2
<b>PMP</b>	Tazer
	GT-12

<b>Red Fox</b>	RFGT12A, RFGT12U unassembled kit
	GT12 brass & wire
<b>Slick 7</b>	446C ASP 4 kit (3 options listed below)
	1 - Bite bar tubing with upstop
	2 - No bite bar tubing with pan upstop & pan downstop
	3 - No bite bar tubing, no pan upstop or downstop
	447 ASP 4
	496A GTC-II C12E & GT-12 kit
	497A GTC-II C12E & GT-12 assembled
	498A K-2 GT-12 kit
	499 K-1 assembled
	499A K-2 GT-12 assembled
	576 GTX GT-12
	643 hybrid GT kit
	644 hybrid GT assembled
	648 hybrid GT blueprinted
	645 GTXL kit
	646 GTXL assembled
	648 GTXL blueprinted

#### **4 Inch Stock Car Bodies (Group 10)**

<b>JK Products</b>	70529 '09 COT stock car body
<b>Kelly</b>	1747 Taurus
	1748 Pontiac
	1717 Camry
<b>Parma</b>	1033 1/24 '06 Ford Fusion HD
	1127 1/24 '06 Charger
	1035 1/24 '08 COT Stock Car
<b>Outisight</b>	354 2K8 stock car
<b>Red Fox</b>	RFSC38C Camry

#### **4-1/2 Inch Stock Car Bodies (Group 10)**

<b>JK Products</b>	73179 '09 COT stock car body
<b>Parma</b>	1082 Monte Carlo
	1055 '09 COT stock car body
<b>Red Fox</b>	RFSC39C Fusion
<b>Outisight</b>	250 Monte Carlo

#### **LMP/Pro GT-12 BODIES**

<b>JK Products</b>	JKP-7182 Audi R8C
	JKP-7183 Mercedes CLR
	JKP-7184 BMW V12 LMR

<b>Parma</b>	1048U Dome GT-1
	1083U 1/24 MG EX 257
<b>Outisight</b>	296 Audi R-18
<b>Red Fox</b>	RFSC Ferrari Concept
	RFSC99C Peugeot 908
	RFSC100C Audi R18

### **GTP/Am & GT-12 Bodies**

<b>G-Force</b>	GF-013 333 GTP
	GF-011A Stinger GTP
	GF-010A Caddy GTP
<b>JK Products</b>	70141 Peugeot
	70701 Ultimate Peugeot open cockpit
<b>Outisight</b>	066 Mercedes Ultimate
	343 Acura GTP
	069 Bentley Ultimate
<b>Parma</b>	70525 Caddy
	70526 Caddy HD
	70516 Storm
<b>Red Fox</b>	RFSC41LC Fighter HD
	RFSC41SC Fighter HD / Short

### **1/24 Eurosport Bodies**

<b>Red Fox</b>	ISRA Audi R10 1/24 scale (thru 2012)
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### **1/32 Eurosport Bodies**

<b>Red Fox</b>	ISRA Audi R10 1/32 scale (thru 2014)
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### **F1/32 Body**

<b>Red Fox</b>	Red Fox (Brazil) 2010 McLaren (thru 2013)
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### **1/24 F1/Indy Bodies**

<b>G-Force</b>	GF-022 narrow Indy
<b>JK Products</b>	6101 - JRL
	6118 - IRL
	61116 Champ car
<b>Outisight</b>	336 F1
	337 Indy
<b>Red Fox</b>	RFSC35C 1/24 Indy
	RFSC29C 1/24 F1

## **Notes**

Dear USRA Members,

Please join me in expressing my appreciation to the following members that have served as officers for the 2012-13 Season.

And also to all the former officers that gave time to answer questions, etc., and to our Member Manufacturers, for their support. Without them my job would be impossible.

DIVISION I (Wing)

Director..... Shelby Thomas  
Tech Director..... James Grinstead  
Asst Tech Director..... Derek Velez

DIVISION II (Scale)

Director ..... George Russell  
Tech Director ..... Michael Mazur  
Asst. Tech Director ..... Jason Hooper

Past National Director/BoD Member .... Doug Bauer  
Webmaster ..... Paul Kassens  
USRA Rule Book .....Greg Wells  
USRA Forums ..... OWH & Slotblog

Sincerely,  
Milton L. Gamble,  
National Director 2012-2014

**PLEASE VISIT OUR WEBSITE**

**<http://www.usraslots.com>**

**USRA 1/24 Scale Eurosport Champions**

1989	Luis 'Gugu' Bernardino	Wichita, KS
1990	Jon Laster	Fayetteville, GA
1991	Luis 'Gugu' Bernardino	Orlando, FL
1992	Luis 'Gugu' Bernardino	Riverdale, NJ
1993	Jon Laster	Resada, CA
1994	Jan Limpach	Marietta, GA
1995	Luis 'Gugu' Bernardino	Montgomeryville, PA
1996	Tracy Chin	Chicago, IL
1997	Paul Gawronski	Rodeo, CA
1998	Paul Ciccarello	Newark, OH
1999	Paul Gawronski	Boise, ID
2000	Paul Ciccarello	Buena Park, CA
2001	Paul Gawronski	McHenry, IL
2002	Paul Gawronski	Anderson, SC
2003	Paul Gawronski	Mineral Ridge, OH
2004	Paul Gawronski	Portland, OR
2005	Paul Ciccarello	Palmyra, PA
2006	Paul Gawronski	Rohnert Park, CA
2007	Greg Gilbert	Palmyra, PA
2008	Herman James	Rohnert Park CA
2009	Paul Gawronski	Montgomery, IL
2010	George Russell	Ashland, VA
2011	Paul Gawronski	Downers Grove, IL
2012	Roy Hood	Rohnert Park, CA

**USRA Group 7 National Champions**

1971	Dan Bloodworth	Cleveland, OH
1972	Jan Limpach	Cleveland, OH
1973	Joel Montague	Elyria, OH
1974	Jan Limpach	San Antonio, TX
1975	Don Barber	San Antonio, TX
1976	Bob Crane	Greenbelt, MD
1977	Joel Montague	Buena Park, CA
1978	Jan Limpach	Houston, TX
1979	Steve Bogut	New York, NY
1980	Ernie Provetti	Cincinnati, OH
1981	Paul Pfeiffer	Milwaukee, WI
1982	Paul Pfeiffer	Inman SC
1983	Paul Pfeiffer	Centerville, OH
1984	Csaba Szekelyhidi	Clovis, CA
1985	Henry Pena	Houston, TX
1986	P. A. Watson	Detroit, MI
1987	Bob Morton	Chicago, IL
1988	Mike Swiss	Kent, WA
1989	P. A. Watson	Wichita, KS
1990	Mike Swiss	Fayetteville, GA
1991	P. A. Watson	Orlando, FL
1992	Jon Laster	Riverdale, NJ
1993	P. A. Watson	Reseda, CA
1994	Ralph Morella	Marietta, GA
1995	Martin Gramman	Montgomeryville, PA
1996	Paul Ciccarello	Chicago, IL
1997	Paul Ciccarello	Manchester, NH
1998	Rande Marshall	Butler, PA
1999	Paul Ciccarello	Boise, ID
2000	Paul 'Beuf' Pedersen	Buena Park, CA
2001	Mario 'MSP' Shone	Coram, NY
2002	Paul 'Beuf' Pedersen	Buena Park, CA
2003	Mikael Silén	Gaithersburg, MD
2004	Paul 'Beuf' Pedersen	Tulsa, OK
2005	Paul 'Beuf' Pedersen	Buena Park, CA
2006	Paul 'Beuf' Pedersen	LaGrange, IL
2007	Joe 'Chubbie' Salzman	Gaithersburg, MD
2008	Joe 'Chubbie' Salzman	Katy, TX
2009	Paul 'Beuf' Pedersen	Farmingville, NY
2010	Paul 'Beuf' Pedersen	Dallas, TX
2011	Paul 'Beuf' Pedersen	Ashland, VA
2012	Paul 'Beuf' Pedersen	Buena Park, CA