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USRA

United Slot Racers Association

1971-2023

Over 50 Years of
Slot Car Racing
National Championships

2023

**Division 1
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 **not** to bring any legal actions against the USRA or any of its officers.*

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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. General Members and Commercial 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 \$25.00 for General Membership at the national level and \$50.00 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 and a \$300 compensation for working the National race. All monies are U.S. funds.

D. VOTING MEMBERS

All members will be entitled to vote in the Online Vote for Bylaws. Members attending the National Championships will vote on the National director, Divisional Officers, and the National Championship site during the General Meeting. The voting for Division Officers will be done by paper ballot or a show of hands.

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 in “Emergency Situations” only. 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.
 - b) Board of Directors: The USRA BOD will be filled by the following officers: Current National Director, Current Div 1 Director, Current Div 1 Tech Director, Current Div 2 Director, Current Div 2 Tech Director, Outgoing National Director.
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 two--year term; he/she can succeed once (two consecutive term limit) and will remain on the BoD as a past ND for two years following the expiration of the elected term.

Beginning in 2013 the Division Director will be elected to a term of two years; he/she can succeed once (two 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 two 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 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 Committee 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 by-law proposals will be reviewed by the USRA Board of Directors as applicable. The BOD will decide if the by-law proposals should be placed on the respective online voting ballot.

1. Voting on technical/class rules/general rules proposals for individual classes will be conducted in a Drivers Meeting prior to qualifying for the individual classes on the days those individual classes are raced at either the Division 1, or Division 2 Nats. Only those members entered in the National Championship Race/class will be allowed to vote. Amendments to technical specifications, class rules, or general rules of the USRA require a simple majority vote of the membership present at the Nats individual class meetings or general meeting.
2. The deadline for submitting Technical/Class/General Rules Proposals will be July 1 for Division 1 (Wing Car). The respective Division Officers and the National Director will review the proposals to insure continuity and validity per the Division they were proposed to.
3. The submitting member does not have to be present at the race/class/general meeting for the proposal to be brought to the floor for voting. Paper ballots will be used in lieu of a show of hands.
4. All USRA Bylaws proposals MUST be submitted in

writing by the close of the USRA Wing Car National Championship and can be submitted by any current D-1 member or Manufacturer member to any current USRA Officer. The member does not have to be present and the by-law proposal can be submitted electronically.

ONLINE VOTING

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, USRA Facebook page, and Old Weird Herald. 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 the by-laws of the USRA require a simple majority vote of the membership through an annual online vote.

FORMAT OF PROPOSED RULE CHANGES

- 1.** By-laws 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 BOD Member will review the proposal with the person submitting the proposal for clarity/definition and for the intent/meaning prior to it being submitted to the full BOD for consideration of being placed on the Online By-laws ballot.
- 2.** Technical/Class/General rules proposals must include an explanation of how they will impact the current rules in each Division and/or classes and must be submitted by the deadlines in Article VI #2. An applicable USRA Division BOD member/Officer will

review the proposal with the person submitting the proposal for clarity/definition and for the intent/meaning prior to it being submitted to the applicable Division BOD for consideration of being placed on the ballot to be voted on at that Divisions National Championship Event/Race/Class per Article VI #1 and #3.

3. The USRA National Director and/or the respective USRA Division Director and/or their designee shall be present at the respective Divisional class and General meetings as well as all pre-meetings for the purpose of announcing the proposals, discussion of proposals and counting votes.
4. The next year's rulebook for both divisions and by-laws 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 outlined 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 a 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 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 pay-- outs, 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 raceway desiring to bid will make its presentation available online via a link on the USRA website by 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 ensure 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 have 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 USRA map shall be used to define areas.

No raceway can host the USRA Wing Car National Championship Event twice within a three-year period, unless there are no other tracks bidding for the Wing Car National Championship Event.

F. Wing Car Nats Schedule

Classes contested are as follows: Grp F, One Motor Box 12, HillBillyBox, Group 27 Lite, Two Motor Open, Group 7 Pro. Start the races on Wednesday and end on the following Saturday or Sunday. An Open warm and Geezer Grp 7 races are optional.

G. 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 July 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 Article X, 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 three (3) 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 2023 are 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 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 three years after production ceases. For motors and armatures specifically, this time is extended to five years. Manufacturers must notify the National Director in writing when a USRA approved product ceases production.

Article XI – TIRES

1. All Tires in the Wing Division Tagged Armature classes must be purchased through the raceway at the National Event. All Tires will be marked by the raceway owner and/or tech director. Tires will be checked at tech, during mid race techs and at any time the tech director deems necessary. Any racer found to be racing non marked tires during racing will have to change to marked tires during green flag conditions, on the first infraction. The second infraction will result in immediate disqualification from the class.

2. All Tires sold to hosting raceway must be sold at “Normal Industry Discount” (No short discounts) and meet retail requirements for applicable classes that have retail requirements.

GENERAL COMPETITION REGULATIONS (Wing Car)

I. DRIVER CLASSIFICATION

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.

C. Pro Group 7

1. Those racers with exceptional driving and/or technical abilities, any racer that is Sponsored.
2. Any racer who was classified as a Pro and that has not competed in the National Championship in five years may apply to the Board to have their racer status changed from Pro to Amateur. 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.

D. Senior Open (Geezer)

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

Class	Amateur	Pro
Group F	X	
OMB	X	
HillBilly Group 12	X	X
27 Lite	X	X
Cobalt 12	X	X
Senior Open (if racer qualifies according to class rules)	X	X
Two Motor Open	X	X
Pro Group 7	X	X

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.

1. Amateur and Pro Race prize payout will be in merchandise certificates and/or trophies.
2. Payout will be in cash to Pro Group 7, Senior Open, and Sponsored Pros.

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 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 all classes except for Pro Group 7, will qualify on race voltage of 14.3v max. For Pro Group 7, 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 smudged or smoothed past zone and through turn with glue sludger 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.

IX. QUALIFYING

See individual classes starting on for additional qualifying specifics.

A. Order

1. All Classes: Determined by tech entry, as in, first in last to qualify.

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. Grp F, OMB, HBBox, Cobalt 12, and 27 Lite will run a single one-minute qualifying round.
2. The first qualifier will receive a one---minute glue break period. Pro Group 7 ONLY!
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. Consi's --- 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 Consi's, Heats, Quarterfinals, Semifinals, and Finals depending on the number of entries.
- 2.** All races designated as Consi's 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 goes into 1 Quarter, and 6 move--- up to Semis.

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

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

20: Top 12 Qualifiers go into Semis, 8 remaining goes 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 1 or 2. Then 2 Semis and a Main.

55---64: Top 16 into Quarters. 17---32 into consi's. Remaining into four sub---consi's 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 consi's. Qualifiers 32---48 into sub---consi's. Qualifiers 49---80 into sub---sub---consi's. All consi's 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.
In moving racers up from Consi's, 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.
6. 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.
7. 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.
Racers are seeded into the appropriate Semis, Quarterfinals, or Consi's according to the following pattern (example given for Semis and Quarterfinals; Consi's same pattern as Quarterfinals).
8. Heats, Consi's, and Quarterfinals are run: D, C, B, A.
9. Semis are run: B, A.

24 or fewer entries

Qualifier #

	Semi--- A	Semi--- B
	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

25 or more entries

	Semi---A		Semi---B	
	Quarter A or B winner w/most Quarter C or D winner w/ most other winner of Quarter A or B		Other winner of Quarter C or D	
	Second place from Quarter with first pick			
Qualifier	Quarterfinal---A	Quarterfinal---B	Quarterfinal---C	Quarterfinal---D
#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

Second place from Quarter with second pick Continue alternating for remaining picks

XII. DURATION OF RACES

<i>Race</i>	<i>Heats</i>	<i>Heat Length</i>	<i>Lane Change</i>
Mains			
1. Pro Group 7	8	5 minutes	5 minutes
2. Group 27 Lite & TMO	8	4 minutes	4 minutes
3. All other Wing Car	8	3 minutes	4 minutes
Semis			
A. Pro Group 7	8	3 minutes	4 minutes
Quarterfinals			
1. Pro Group 7	8	2 minutes	3 minutes
Consis & Sub--- Consis			
A. Pro Group 7	4	3 minutes	3 minutes

XIII. MISCELLANEOUS PROCEDURES (Div. 1 & 2)

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 un-marshallable 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-marshallable 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 track 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.

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.

1. Any racer in a USRA-sanctioned race whose motor is protested and then refused 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.
2. 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 decide 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\$5.00 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.
 - 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.

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. 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.

2. "Buy a look" proceeds go to the protested party, if not applied to a formal protest.
3. 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. 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 Wing 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. No rear tire minimum diameter. 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.

IV. CLEARANCE

For all classes, the minimum track clearance of chassis, gear, and motor is .032" inches (.80 mm) prior to the beginning of the race unless specified otherwise. Once the race begins, a minimum rear clearance of .032 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. Any cars found to have less than .032" clearance during race tech, must be correct and retech-ed before going back on the track during green flag racing.

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: Wing Car bodies must have windshield "lines" molded into the bodies to be approved. Windshields must be proportionate to the scale of the 1/24 body.
When painted and presented for tech, a minimum of 50% of the windshield opening must be left clear and interior/driver must be visible. Bodies cannot have any clear areas outside the original molded windshield lines of the body.
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

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.

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.

Litz and/or flat 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

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.

Speed type rubber may be used for qualifying in Pro Grp 7 classes only.

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.

WING CAR SPECIFICATIONS

Group F

Grp F is open to any racers not racing Grp 7 (Open) class. Once a racer has won in the Group F class and he/she is over the age of 14 they may not compete in this class again.

Glue: The National Championship race will run using **spray glue** only. The raceway owner/race director/USRA BOD will collectively determine the formula and application of the spray glue. One minute qualifying with no bye round. The National Race will run an all main format. Mains will be seeded according to qualifying order.

Motors

1. Only the ProSlot 4002USRAFK is allowed.
2. Springs and brushes may not be changed.
3. Motors must remain sealed
4. May solder can bushing and glue end bell busing if you wish.
5. May trim Armature Shaft Both Sides Can and Endbell.
6. May straighten endbell hardware but may not remove it at any time.

Chassis

1. Any current, legal USRA Grp 12 chassis. Chassis may not be modified except the pans may be removed.

Bodies

1. Any USRA---approved body may be used.

Tires

1. 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.

Gears & Axle

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

Bearings

Ball, roller, or other frictionless bearings are allowed

Weight

No minimum weight for Group F

One Motor Group 12 (OMB)

All General Rules also apply.

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

One Motor Group 12 (OMB) will be run an all main format.

One minute qualifying with no bye round.

Mains will be seeded according to qualifying order.

Motors

1. Any commercially available cans, magnets and endbells will be allowed.
2. This includes Cahoz and Diamond Head, Plastic endbells ONLY!
3. Ball bearings and shunts are allowed

Chassis

Any current, legal USRA Grp 12 chassis. Chassis may **NOT** be modified except the pans may be removed.

Bodies

Any USRA---approved body may be used.

Tires

Any tires will be marked by the USRA prior to sale to racer and must be purchased from the raceway at the event.

Gears & Axle

1. Any gear ratio or pitch may be used. Drilled gears are permitted.
2. Only solid axles. May have flats.
3. Axles must be a minimum of 3/32 inch in diameter.
4. No Speed Spurs.

Bearings

Ball, roller, or other frictionless bearings are allowed.

Weight

No minimum weight for OMB

Hillbilly Box 12

Hillbilly Box 12 Will be run as all mains
One minute qualifying with no bye round.
Mains will be seeded according to qualifying order.

Glue

1. Spray Glue Only

Motor

1. Any commercially available cans, magnets and endbells will be allowed.
2. This includes Cahoz and Diamond Head, Aluminum endbells are allowed.
3. Ball bearings and shunts are allowed.

Arms

1. Arms must be tagged 12/ X-12 / Or H-12. Arms must meet Diameter & Length specificationa.

Chassis

1. Any commerciality available steel box stock chassis is allowed, pan may be removed.
2. Modifications are allowed.
3. Ball, roller or other frictionless bearings are allowed.
4. No minimum weight for HB-12

Gears & Axles

1. Any gear ratio pitch may be used, drilled gears are permitted.
2. Hollow and ground axles are allowed
3. Axles must be a minimum of 3/32 inch in diameter

Bodies

1. All commercially available bodies are allowed

Tires

1. Must have front wheels
2. Rear tires must be purchased from the raceway at the National Championship event as per USRA Bylaws. Any tire being offered by the hosting raceway are legal.

INTERNATIONAL 15

International 15 will be contested in both Amateur and Expert Driver Classifications. See Amateur Driver Classification on regarding the "Move---up" Policy. Amateur and Expert will be run using spray glue. All General Rules also apply.

A. Motor

1. Can must be mass produced, and commercially--- available, as defined in the Bylaws Article X. 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 tab for specifications.
2. Must be commercially available, as defined in the Bylaws Article X.
3. USRA Maximum Retail Price applies.

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 General Technical Rules otherwise no restrictions.

Rear tires/wheels used may have a MAXIMUM Outside Wheel Diameter of .650" or smaller. Any wheel(s) that are .650" O.D. or similar MUST be used.

Bodies

Must be commercially available, as defined in the Bylaws Article X.

COBALT 12

Cobalt 12 will be contested as Expert Driver Classifications.

C12 will be run using spray glue. 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 for Specifications.
2. Must be commercially available, as defined in the Bylaws Article X.

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.
3. Rear tires/wheels used may have a MAXIMUM Outside Wheel Diameter of .650" or smaller. Any wheel(s) that are .650" O.D. or similar MUST be used.

E. Bodies

Must be commercially available, as defined in the Bylaws Article X.

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.
4. NO MOTOR BRUSH CHANGING or ANY COMPONENT
5. No MOTOR BRUSH CHANGES AT ALL once the car is in tech for the race, during racing or lane changes. Components include, set up, armature, endbell, magnets, can, brushes, springs and bearings

B. Armature

1. See Armature Technical Specifications table 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.

C. Chassis

1. USRA Approval Required; may be submitted to USRA as a kit; must be Commercially Available.
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 regarding rail widths, including slots for pillow blocks, etc. Any commercially available pillow blocks may be used.
4. No Minimum Length.
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.

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.

F. RaceFormat --- AllMain

1. Two motors allowed for race including qualifying.
May change motors during the race and switch back (A--B---A).
Main seeded by qualifying positions 1st--8th A Main, 9th -16th B Main. A and B Main with odd number in the Higher of the two mains A and B. 17th - 24th C Main, 25th-32nd D Main.
No round robins. The mains will be run in reverse alphabetical order with the A Main being run last.
2. Racer with the largest lap total is the winner, regardless of which Main he/she races in.
3. Mains will be 4 minutes on and 4 minutes off.
4. The standard marshaling process will be followed (A will marshal D and H will marshal E).
5. Spare motors must be teched in with the car. The spare motor will be marked and impounded. When the racers wish to change motors, they must get the motor from the race or tech director.

GROUP 27

Group 27 will be contested in Expert Driver Classifications. See Amateur Driver Classification on regarding the "Move--up" Policy. All General Rules also apply.

A. Set--up

No restrictions.

B. Armature

1. See Armature Technical Specifications table 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.

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.

TWO MOTOR OPEN (TMO)

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. NO MOTOR BRUSH CHANGING or ANY COMPONET CHANGES AT ALL once the car is in tech for the race, during racing or lane changes. Components include, set up, armature, endbell, magnets, can, brushes, springs and bearings.
4. Entrants may only use two (2) motors 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. Mains seeded by qualifying positions 1st--8th A Main, 9th -16th B Main. A and B Main with odd number in the higher of the two mains A and B.

2. No round robins. 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, 4 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.

E. Clearance

The minimum tech height for Group 7/Opens for qualifying is .032". There is no minimum tire diameter for Group 7/Opens during qualifying, .032" only applies during qualifying.

Approved Components for GP--12

C-Can Motors & Setups

Approved Components for GP-12

C-Can Motors & Setups

Cahoza	230 / 230S 231 / 231S 232 / 232S 275 277 278 All C-Can Hardware is Legal
Camem	K100 K101 K102 K050 Motor
Koford	M504A Super Feather M504B (12) Spec 12 Motor M527A Ultra Feather GP-12 Motor M508 Setup M547A Ultra Setup M604, M605, M606, M607 & M630 magnets
Mid-America Products	Diamond Head C can setups + magnets
ProSlot	PS723-VIP GP 12 Motor PS723-SRS GP 12 Motor PS728 (12) Spec 12 Motor PS750VIP GP 12 Setup PS750SRS GP 12 Setup
Red Fox	1001 Ultra Lite Plated Can 1153 Ultra Lite Plated Can (New Hardware) 1154 G2 1155 G2 Thin Can 1160 Ultrafast Plated 1170 Silver Bullet Thin New Endbell for all Red Fox Motors Red Fox GP 12 Magnets flat tipped

Armatures - All Classes

Camem	GP-12 Intl-15
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	C12 27
Koford	M468-15 Legal thru 2019 M467-12-B&C (C-12) M467-15 (Intl 15) M468 Box (GP 12) M467-27A M468-H12
ProSlot	206 (Intl 15) 207 (C-12) 211 (27) 701 Series (GP 12) 702 (Spec 15)
Valiko	X-12 (Arm MUST be Tagged X-12 no other tag allowed)

GP-12/Grp F Chassis

James Barnett & Mike Swiss	Chicago Land Raceway-CR088
Camen	750
Chicagoland Raceway	Box 12 - No Part Number
Factory Racing Al Chuck	H061 HB/OMB/GPF (4.05")
Koford	M500A M503 M511ASuperspeedwayBeuf M512A Short Superspeedway Beuf M513A Short Beuf Express M530A M530C M530E Ultra Beuf Express M530I Group F M530L 4.355 long Grp 12 w/o pans. Kit M530N 4.405 long Grp 12 w/o pans. Kit. M530 P 4.12 Assembled M530 O 4.12 Kit M530R-4.070-omb/HB M530T-3.995-omb/HB M530U assembled 3.995 narrow M530V kit 3.995 narrow M746F-4.340 kit M746E-4.340 assembled M746A -4.120 Assembled M746B-4.120 kit M746C-4.610 Assembled

	M746D-4.610 kit
Mid-America Raceway	MAR-200 MAR-201 MAR-205 MAR-207
ProSlot	PS-317-12 Perimeter 4.330" long PS-318-08 Tripod PS-319 Spec 12
Red Fox	07-W 07-P RFL OMB narrow chassis

Approved Components for 27 Lite

27 Lite Chassis

Camen

2050.410 (4.100")
2050.415 (4.150")
2050.420 (4.200")
2050.425 (4.250")
2050.430 (4.300")
2051.410 (4.10") Wedge
2060.410 (4.100") Arrow
2100.425 Emerson Wedge (4.250")
2060,450 Arrow
2095.410 Pyramid
2085.410 Zoid Sans
2090.410 Pyramid
2070.410 Skinny
2080.410 Zoid

Koford

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)
M610T kit (4.120")
M610U (4.120")
M610Y 4.119 long 27 Lite Kit.
M610Z 4.450 long 27 Lite. Kit

M709D 3.85" Long Narrow
 M709E 3.85" Long Narrow
 M709C 3.85" Long Narrow
 M709B 3.85 Long Quad Rail
 M709A 3.85" Long Wide

Red Fox	270 narrow motorbox (4.300") RF27/12 (4.180") RF 27/15 (4.120") RF27L-1 (3.75")
Rosenberg Racing	RR27LU
Speed Tech	ST1 EX (4.100")
Chubby/StupidFast	SF27L-1 (3.75")

27 Lite Armatures

Koford	M467-27-C
Pro-Slot	PS211

Bodies for Wing Car Classes

B52	7100 Z-28 7100-2 Z-28 without rib 7100-3 Z-28 dimple with rib 7100-4 Z-28 dimple without rib 7101 Secco 7102 Elroy 7103 Outrider 7104 Endor 7105 SkyWalker 7106 Ormond 7107 Excalibur
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	7108 Quest 7109 Falcon 7109-2 Falcon with rib 7110 Vanquish with rib 7110-2 Vanquish without rib 7111 Hype 7112 Red Five
Camden	GTO II with rib GTO II without rib GTO III Supro Supro with rib Supro Long with rib Supro dimple Supro dimple with rib Supro dimple with rib long Carrera Venom Lotus Stirling 5220 Stirling with rib 5225 Wallman Dusti 1025 Dusti 1025 with rib Zinon 5325 Zinon with rib Mustang Sutra 5280 Sutra 2 5300.005 Veloxa
Hi-Speed Products	001 Hurricane 001R Hurricane with rib 005R AL1 009 Hypercane 009R Hypercane with rib 010 Burin 010R Burin with rib 5290 Mustang with rib 5000 Vyper 5005 Vyper with rib
Koford	M214G Porsche M214H Mercedes M214I Peugeot M214J Ferrari M214J Tesla M214J Tesla with rib M214 M55 Aero M214L5 Peugeot M214N-5 Narrow Teck

Red Fox	001 Shadow 001A Shadow with rib 002 Tyfon 003 G---2 Scorp 004 Renault Foxtail Foxtail with rib Foxtail 2015 ver Foxstock Foxstock with rib Fat Fox Pantera-Dimples & rib Pantera-Dimples& long rib Pantera-Narrow& rib Foxtock-Dimples&long rib Fox-with rib Fat Fox- long rib Shadow-Dimples& long rib Tri Teck-Long rib+ribs 3 rib shadow Wide tri tech Narrow ZY-Tech Wide ZY-Tech Sting Ray Shadow Dimpled
Outisght	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 054 Avenger 054R Avenger, with rib 055 Probe, with rib 56 Banshee 57 Viper, short 57 Viper, short, with rib 58 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 ZR1 109R ZR1 with rib Outisight 110 Saleen 110R Saleen with rib 111R Fugya 112R Fugu

-CAN MOTOR SPECIFICATIONS

A. General

Motor setups 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. 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)
2. 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 manufacturersselling identical---looking components at higher cost will lose approval for their motor (this would not rule out “matched” pairs of approved magnets).
3. Anodized spring cups are allowed.

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).

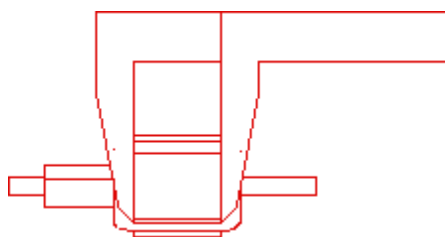
C. Can Modifications

Anything not listed here is not permitted or allowed.

1. Use of can and end ball bearing is allowed in all Scale, OM Box and Expert Grp 12 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.
Only single, one--piece magnets. No quad or multiple---piece magnets allowed.
Motor brushes and springs may be replaced and spring tension may be adjusted. See table for spring rules.
6. A 1/4" long x 1/8" wide x 1/8" deep notch may be cut in the can and magnet for axle clearance.
7. Prohibited modifications:
Cut---outs or machine work on can or endbell.
See C---Can Motor Specs table for shunt wire rules.
Adding endbell heat sinks.
Drilling holes in can or endbell.
Armatures and magnets may be intermixed between approved manufacturers. See table for mixing of other parts.
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.

	Scale	Expert Wing	Amateur Wing	Group F
Magnet Adhesive	No Restriction	No Restriction	No Restriction	NA
Unrestricted Honing of Magnets by Racers	Yes	Yes	Yes	NA
Air Gap	No Restriction	No Restriction	No Restriction	NA
Interchangeable Endbels and Hardware	Yes	Yes	Yes	No
Endbel Ball Bearing	Yes	Yes	No	No
Shunt Wires and Spring Insulation	Yes	Yes	No	No
Can End Ball Bearing	Yes	Yes	Yes	No
Brush Springs	No Restriction	No Restriction	3 Coil	3 Coil

Measuring the stack of an armature



Armature Technical Specifications

Armature Type	Classes	Minimum Diameter	Maximum Diameter	Minimum Stack Length	Wire Size (minus insulation)	Min # series-wound	Tag
Group 12	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"
Int 15	I15			0.440" (11.18mm)	AWG #29 Gauge (0.0112- -0.0114")	50	„15"
C 12	C12/15			0.350" (8.89mm)	AWG #29 Gauge (0.0112- -0.0114")	50	„12" or „15"
Grp27 27 Lite	Grp 27			0.440" (11.18mm)	AWG #27 Gauge (0.0141- -0.0143")	38	„27"
Wasp Hornet	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")
Contender Competitor	JRL GTP	.513" (13.03mm)	.540" (13.85mm)	0.440" (11.18mm)	AWG #30 Gauge (0.0099- -0.0101")	55	Competitor („COM", „COMP") Contender („CONT", „CTR")
Super 16C	GTP	.513" (13.03mm)	.540" (13.85mm)	0.490" (12.45mm)	AWG #28 Gauge (0.0125- -0.0127")	55	„S16C" „Super 16C"
Super 16D	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"
16D	Group 10 Stock Car	.513" (13.03mm)	.560" (14.36mm)	0.600" (15.24mm)	AWG #30 Gauge (0.0099- -0.0101")	70	„16D"

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 Maximum Retail Prices.
- 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---tuing, and re---balancing.
- 8)** See Armature Stack Length in the General Technical Rules for clarification.
- 9)** Armatures must be tagged according to the Armature Technical Specifications table indicating they were produced by a USRA--- approved manufacturer in compliance with these rules.