

USRA

UNITED SLOT RACERS ASSOCIATION

1971-2007

**RACING INTO OUR
4TH DECADE OF
NATIONAL CHAMPIONSHIPS**

2007

RULE BOOK

NATIONAL CHAMPIONSHIPS – SCALE DIVISION

hosted by: Keystone Modelcar Raceway, (707) 795-4156,
www.keystoneraceway.dynu.com

race location: The Ramada Inn, 76 Industrial Highway,
Essington, PA 19029
(610) 521-9600

Monday, April 9	Track Set-up, Practice
Tuesday, April 10	Practice
Wednesday, April 11	Practice
Thursday, April 12	Expert & Amateur LMP (road course)
Friday, April 13	Expert & Amateur GTP (flat track)
Saturday, April 14	Junior Gp 10, Expert & Amateur Gp 10 (road course)
Sunday, April 15	Expert & Amateur 4-1/2 Stock Car (road course), General Meeting
Monday, April 16	Expert & Amateur GT-12
Tuesday, April 17	1/32 F-1 Eurosport, 1/32 Eurosport
Wednesday, April 18	C-12E, 1/24 Eurosport Amateur Group 10, 4-1/2, LMP, GTP, GT-12, and Junior Group 10 classes will use hand-out motors.

NATIONAL CHAMPIONSHIPS – WING-CAR DIVISION

The Track, 16806 Oakmont Ave., Gaithersburg, MD 20877-4110
(301) 549-3178

Saturday, August 4	Spec-15
Sunday, August 5	Amateur GP-12
Monday, August 6	Expert GP-12
Tuesday, August 7	Intl 15 & Cobalt 12
Wednesday, August 8	Practice, General Meeting, Senior Group 7
Thursday, August 9	One Motor Open
Friday, August 10	Amateur & Expert Group 27
Saturday, August 11	Semi-Pro Group 7
Sunday, August 12	Pro Group 7

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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 action 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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UNITED SLOT RACERS ASSOCIATION

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.

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 US\$10.00 for General Membership at the national level, US\$25.00 for Raceway membership, and US\$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.

D. VOTING MEMBERS

Each member will be entitled to one vote on each matter submitted to a vote of the members.

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 readmittance. Length of suspensions will be decided by the Board of Directors 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 in the presence of the Regional Director and at least one member of the Board of Directors.

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

A. 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. Assistant Directors
 - a) One Director for each Division of racing
3. Communications Directors
 - a) One Director for each Division of racing
4. Treasurer

5. Technical Directors
 - a) One Director for each Division of racing
6. Assistant Technical Directors
 - a) Three Directors for each Division of racing
7. Webmaster

B. SELECTION OF OFFICERS

The officers will be elected annually by vote of the general membership of the Association at the national meeting. Each officer will remain in office until a successor to such office has been elected and qualified. The change-over date will be on October 1 for the Wing-Car Division. The Scale Division change-over date will be June 1.

C. NATIONAL DIRECTOR

The National Director will chair the general membership meeting, and will have full and final authority to make decisions on technical matters which 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 rule book procedures. He/she has the responsibility of ensuring that the rule book 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 products used in USRA racing.

D. ASSISTANT 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 products used in USRA racing.

E. COMMUNICATIONS DIRECTOR

The Communications Directors will be the custodians of the Association records, will give all notices as required by law, or by these bylaws, or which may be assigned from time to time by the National Director. It shall be the responsibility of the Communication Directors to publish all the following in accordance with the rules and in a timely manor: current rulebook, decisions by committees, committee memberships, voting proposals, voting results, contact info for regional representatives (as available) and National Championship results. All other material on the USRA official website is subject to the approval of the National Director.

F. 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.

G. 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 products used in USRA racing.

H. WEBMASTER

The Webmaster will be appointed by the Board of Directors and will be responsible for the maintenance and operation of the official USRA website. All content must be approved by the National Director.

ARTICLE V – COMMITTEES

A. OFFICIAL COMMITTEES

The Association may create certain committees which will have and exercise specific prescribed authority in the management of the Association. These committees shall include, but not be limited to, the following:

Board of Directors - This committee will consist of the National Director, the Immediate Past National Director, the Wing-Car Director, the Scale Director, the Wing-Car Tech Director, and the Scale Tech Director. The Board of Directors will be charged by the USRA to make decisions outside of the normal rule change voting procedures defined in the current rulebook. Any ties in votes will be broken by the National Director. The Board of Directors may overturn or change any decision made by any other USRA committee.

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.

Nationals Committee;

Product Approval Committee - This committee will consist of a minimum of three (3) members;

Ethics Committee - This committee will consist of a minimum of ten (10) members;

Publicity Committee.

B. COMMITTEE MEMBERSHIP

Members of these committees will be appointed by the Board of Directors and approved by a majority of all Directors. The Product Approval Committee will consist of three (3) members who are not manufacturers, owners, or employees of any company manufacturing or distributing products used in USRA 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. However, the Association may pay reasonable compensation to members or officers for expenses incurred on behalf of the USRA.

ARTICLE VI – AMENDMENT & MODIFICATION OF BYLAWS AND TECHNICAL RULES

A. Online Voting

1. Annual Post Scale Nats Online Vote

- a) Any rule changes affecting the Scale Division shall be voted on in this online vote.
- b) Proposals for this online vote must be submitted before the end of the Scale Nats.
- c) Proposals shall be reviewed by the Board of Directors and posted on the USRA website within 6 weeks of the end of the Annual Scale Nats.
- d) Voting shall commence once the proposals are posted for a period of not more than 2 weeks.

2. Annual Post Wing Nats Online Vote

- a) Any rule changes affecting the Wing Car Division shall be voted on in this online vote.
- b) The National Director shall be elected through this online vote.
- c) Changes to the Bylaws of the USRA shall be voted on in this online vote.
- d) Proposals that affect more than one division of racing shall be voted on in this online vote.
- e) Nominations for National Director shall close at the end of the Annual Wing Nats.
- f) Proposals for this online vote must be submitted before the end of the Wing nats.
- g) Proposals shall be reviewed by the board of Directors and posted on the USRA website within 6 weeks of the end of the Annual Wing Nats.
- h) Voting shall commence once the proposals are posted for a period of not more than 2 weeks.

B. Online Voting procedures

1. 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.

2. Paid up members will be notified of the online voting by email sent to the email address they provided when signing up to the USRA. Final results will also be sent via email to each member.
3. Each fully paid member is entitled to one vote, providing the vote is recorded before the published end of voting.
4. Votes without a current membership number and matching name will not be counted.
5. Any ties will be broken by a vote of the Board of Directors.

C. 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.

D. Format of Proposed Rule Changes

1. Rule proposals must include an explanation of how they will impact the current rule book. Proposals that do not fully and clearly state how the proposal, if passed, will change the rule book will not be considered for voting by the membership.
2. Proposals may not be changed once brought to the vote of the general membership. A printed ballot will be handed out and no changes will be allowed to the ballot once the meeting begins. At the annual wing meeting the wording of a proposal may be changed either for clarity/definition or for the intent/meaning of proposal as long as the person who submitted it is in attendance and “OK’s” the changes.
3. The USRA Director or his designee shall be present at the General Meeting and all pre-meetings for the purpose of announcing the proposals and counting votes. The voting results, including exact counts, shall be made public within 30 days of the General Meeting.
4. The next year’s rule book for both divisions must be publicly available via the USRA Website no later than December 1st following the Nats.

ARTICLE VII – ORGANIZATION

- A. For various administrative purposes, the 48 contiguous states, Hawaii, Alaska, and Canada shall be geographically divided into 5 areas:
 1. West
 2. Intermountain
 3. Midwest
 4. South
 5. EastRefer to Article XII section E for the definition of areas.
- B. Each area will be headed by a Director appointed by the National Director. It will be his/her responsibility, by working with the respective regional and neighboring area directors where appropriate, to coordinate series events within the various regions to avoid, to the greatest degree possible, conflicts

of race dates. Further responsibilities include publication of this race schedule, and responding to requests by members for same. He/she will also serve as arbitrator of disputes at the regional level, consulting the other Area Directors, and National Director as required.

- C. Any number of regional associations may be organized within the geographic areas. In addition to the executive duties at the regional level, the Directors of these regions shall make up the competition committee at the national level, with responsibilities to include National Event site selection, and setting of the agenda for the national general meeting.
- D. Regional Associations are encouraged to organize and promote annual series championships for each division in accordance with the National Rules.
 - 1. Wing-Car Division: traditional Group & Open racing classes, various Wing Cars.
 - 2. Scale Division: non-glue classes, various Scale Cars.
- E. To apply for consideration as a USRA regional entity, the following procedures and limitations must be observed:
 - 1. The prospective region must have a minimum of 20 (twenty) regional dues-paying members.
 - 2. The prospective region must file a list of officers and a projected race schedule with the appropriate Division Director by October 31st of each year and co-ordinate schedules with the Division Director by November 30 each year.

This list is to be published by the USRA by December 31st each year for both divisions.
 - 3. A region that wants to be part of more than one division must register their region with each appropriate USRA Division Director. Before a region will be accepted by a Division Director it must satisfy the Division Director that it does regularly run races for that division.

This can be established by looking at memberships lists for more than the last year as well as race results and championship standings. The final decision rests with the Division Director.
 - 4. The prospective region must have organized and run a race series utilizing rules conforming to the National USRA rules (with minimal modifications permitted) for at least one season.
 - 5. The regional racing series must include events scheduled for at least three separate raceways. The Division Director may waive this requirement in special circumstances (usually geographical) on the condition that the series will meet the requirement should those conditions change.

ARTICLE VIII - PURPOSE OF COMMITTEE

- A. *Rules/Technical Committees:* The Rules/Technical Committee for each Division which will review, recommend, and update proposed rule changes. Prior to any rule change becoming final, it must be voted on by the Board of Directors with final publication in the National Rule Book.

- B. Nationals Committee:** It shall be the duty of the Nationals Committee to plan, organize, and oversee the National Championship events, to include publishing a Nationals booklet, establishing race entry fees, soliciting and distributing race prizes, and conducting the registration, technical inspection, and operation of the events.
- C. Ethics Committee:** The Ethics committees will have the responsibility for monitoring the compliance of Commercial Members with the USRA rules and bylaws. There shall be one committee for each division. Any member of the USRA may bring an item to an Ethics Committee for consideration. Decisions of any Ethics Committee become recommendations first for the divisional director and then the Board of Directors to consider, and are not binding until passed by a vote of the Board of Directors.
- D. Site Selection Committee:** This Committee will be comprised of the Regional Directors and the National Director and will have the responsibility of determining the site for the USRA National events.
- E. Publicity Committee:** It shall be the responsibility of this Committee to promote the USRA through all forms of media available. This Committee will further have the responsibility of contacting commercial sponsors for sponsorship of slot racing events in all divisions.

ARTICLE IX – 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. DIRECTORS MEETING

An open work session will be conducted prior to each General Meeting to discuss issues with Regional Directors. All USRA officials and USRA Regional Directors should attend this meeting along with their guests. Commercial members are invited to this meeting for advice on technical matters. Matters raised and voted on by Regional Directors or their authorized surrogates will be passed to the Board of Directors for consideration.

C. CLASS MEETING

There shall be a meeting for each class following qualifying or at another appropriate time, and rules relating specifically to that class shall be decided at that time.

ARTICLE X –EQUIPMENT APPROVALS

- A.** 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.
- B.** Manufacturers must submit one piece of each component for which they seek approval to the respective Divisional Director by August 1 for evaluation and inspection.
- C.** Each Divisional Director will report their findings and decisions directly to the USRA National director.
- D.** Each manufacturer must notify in writing all distributors and raceways of any and all new products by Sept. 1 each year.
- E.** Before being approved for USRA competition the product must be commercially available at distributors and/or retailers by October 1.
- F.** The director will notify the manufacturers of approval or non-approval for the following year's Wing-Car or Scale National Championships.
- G.** 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*.
- H.** 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.
- I.** When submitting new products to the USRA, manufacturers must fill out a Product Submission Form and submit this form along with the product to the appropriate USRA official. Once approved all products will be assigned a USRA Product Approval Number (UPAN) by the National Director. The completed UPAN information (a scan of the form if possible) plus photographs of all approved products are to be posted on the USRA website once approved, and each product's UPAN number added into the rulebook.

ARTICLE XI – RCAER SPONSORSHIP

- A.** Any racer who receives merchandise directly from any manufacturer at less than retail price is considered a sponsored racer.
- B.** Should there be any clarification about a racers sponsorship status the Board shall determine the racers status after relevant discussion and investigation.

ARTICLE XII – 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 Wing-Car National Championship Race shall be held on a date within the last two weeks of July and the first two weeks 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. **SCALE DIVISION SITE SELECTION** The following voting procedure will be used at the annual meeting of the Scale division. All fully-paid up members of the USRA present at the annual meeting are entitled to vote for the site of the next years National Championships in that division. A written ballot will be used for all voting. There will be one vote to reduce the number of sites to two from the nominated list. Should there be a tie in this first vote, a complete re-vote will be held. Results will be announced and recorded immediately at the conclusion of the voting, including actual numbers of votes for each site. The voting papers will then be destroyed. Once the two sites are identified, another written ballot will be held to select the site for the next year's National Championship. Results will be announced and recorded immediately at the conclusion of the voting, including actual numbers of votes for each site. The voting papers will then be destroyed.
2. **WING DIVISION SITE SELECTION** The following voting procedure will be used during the annual Wing Nats. All fully-paid up members of the USRA present at the National Championship are entitled to vote for the site of the next years 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 which 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.
3. If the raceway which 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 president 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 which 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 which have hosted well-attended events will receive preference in the selection process.
2. If it is desired to submit a bid for a USRA National event, a raceway must notify the USRA Director of its intentions to do so. This must be accomplished in writing no later than ninety (90) days prior the current year's National Event.
3. Each bid for the USRA Nationals will be accompanied by a refundable deposit of US\$500.00 (cashiers check or money order). Deposits will be returned promptly to the unsuccessful bidders after the Nats site determination is made. The deposit for the successful bid will be 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 treasurers report.
4. The bids for the next National Events are presented at the General Meeting during the current year's Nationals. Presentations should include:
 - a) 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) Presentations should be submitted in book form (such as a photo album) for all interested parties to view. Two or more copies of the presentation would be advantageous.
 - h) 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:

a) 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. Warm up race entry fees

5. Cost of track time

6. Any other fees or costs racers will incur

b) A mock race schedule of dates and times and activities for each day of the National Event.

E. SITE ELIGIBILITY AND AREA ROTATION

In order to encourage participation by racers nationwide, the National Championships 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 the following page shall be used to define areas.

F. HAND-OUT MOTOTS

Bids from USRA member manufacturers for supplying handout motors for an event will close 3 months before the event. The Board of Directors will decide the winning bid, taking into consideration the overall terms of the bid. The winning bidder and all unsuccessful bidders are to be informed in writing no later than 2 months before the event, earlier if possible.

G. 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.

H. WING NATS SCHEDULE

Run the program during the week as follows Spec, Boxstock, Int-15, C-12, OMO, Semi-Pro, Am 27, Pro 27, and Pro 7. Start the races on Saturday and end on the following Sunday. Have an open practice day on Wednesday.

GENERAL COMPETITION REGULATIONS

I. DRIVER CLASSIFICATION (Wing-Car Division)

A. Amateur

1. Sponsored racers may not race as an Amateur.
2. Any racer who has raced Group 7 Pro at the last 5 Nats may not enter any Amateur class, i.e. at the 2007 nats anyone who has not raced Pro Group 7 at the '06, '05, '04, '03, or '02 Nats would be eligible to race as an Amateur once again.
3. Spec 15 racers may only race Spec 15 and Amateur Group 12.
4. Any racer who wins an Amateur class may continue through that Nats as an Amateur, but must race either Expert/Semi Pro or Pro in the class they won and all lower classes at future nats.

B. Expert/Semi Pro

1. Any racer who has won a USRA Wing Championship in any Amateur division may only compete in the Expert/Semi Pro or Pro divisions in the same and any lower class.
2. Sponsored racers may race as an Expert/Semi Pro racer.
3. No racer may run Pro Group 7 at the same event if he/she raced in the Semi Pro Group 7 Event.
4. No racer shall be forced to move to Pro status, even if they win in Expert/Semi Pro classes.

C. Pro

1. Sponsored racers may race as a Pro racer.
2. Pro racers may not race as an Expert/Semi Pro or Amateur racer.
3. Pro racers may apply to the Board to have their racer status changed from Pro to Expert/Semi Pro.

D. SENIOR OPEN

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

E. 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 with at least 50% payback to the top 8 finishers in a particular class.
3. Race prize 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. COMMERCIAL AVAILABILITY

- A.** 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.
- B.** “Commercially-available” means that the product must be “readily available” through at least six (6) retailers across the country and/or three (3) Commercial Distributors by October 1 of the year prior to the USRA National Event (or other USRA competition event in which they will be used). “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 manufacturers products.
Manufacturers must provide a list of distributors and retailers where their

A. Classes to be raced at the National Event The following are the only eligible racers who may compete in each class at the Wing Nats.			
Class	Amateur	Expert/ Semi Pro	Pro
Spec 15*	X		
Amateur Group 12*	X		
Expert Group 12		X	
International 15 (1 combined race)	X	X	
Cobalt 12 (1 combined race)	X	X	
1 Motor Open (1 combined race)	X	X	X
Senior Open (If racer qualifies according to class rules)	X	X	X
Amateur Group 27	X		
Pro/Expert Group 27		X	X
Semi Pro Group 7	X	X	
Pro Group 7			X
* Spec 15 racers may only race Spec 15 and Amateur Group 12			

products can be found to the USRA official handling the product submissions for the relevant division before October 1.

- C. The number of pieces required to be available for a product to be considered commercially-available is 250 pieces for GP-12/15 motors, tagged armatures, restricted chassis, any other restricted component, and bodies.
- D. A product will be considered to be no longer commercially-available after production has ceased. Products in this status which 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.
- E. 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 include: Group 12, 15, and 27 armatures, and GP-12 chassis.

III. 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 drivers 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. ACKNOWLEDGMENT

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.

IV. NO SMOKING

Smoking is prohibited within the raceway at all USRA events.

V. 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.

VI. DRIVERS MEETING

It is suggested that a drivers meeting 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.

VII. TRACK PREREQUISITES

In all USRA events, qualifying voltage for all classes will be limited to a maximum of 16.0 volts, and race voltage will be limited to a maximum of 14.0 volts. This voltage is to be measured, unloaded, without the 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 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 insure adequate safety!

IX. QUALIFYING

A. ORDER

1. Pro Group 7: Determined randomly, such as by blind draw.
2. Other classes:
 - a) Limited glue - Qualifying will be in reverse order of registration.
 - b) Spray Glue - Qualifying will be in order of registration.

B. FORMAT

1. Time - A two minute run is allowed to establish the fastest single timed lap. Back up times will be recorded to break ties. Spec-15 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 one extra minute qualifying time.
3. Byes - A racer may take one bye for any reason (may abort initial qualifying attempt and re-attempt during the bye round).
 - a) Thirty seconds will be deducted from the racers remaining time as a penalty for using a bye.
 - 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

- A. USRA events will follow the European or staggered system. The rotations for tracks marked with American Model Raceways colors are as follows:
 1. **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.
 2. **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

- A.** All entrants will contest a series of Consis, Heats, Quarterfinals, Semifinals, and Finals depending on the number of entries.
- B.** 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).
- C.** All other races will be contested over 8 lanes.
- D.** 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.
 - 17-23:* top eight qualifiers move to semis, all others divide into 2 heats moving up 4 most lap totals from each. Then run 2 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. The 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 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.

- E. Lane choice will be determined first by qualifying position then by lap total and position from previous heat.
- F. 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.
 1. 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.
 2. 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.
- G. 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).

24 or fewer entries	Semi-A	Semi-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

25 or more entries	Semi-A	Semi-B
	Quarter A or B winner w/most laps	Quarter C or D winner w/most laps
	Other winner of Quarter A or B	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	

Quarterfinal-A	Quarterfinal-B	Quarterfinal-C	Quarterfinal-D
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

- H. Heats, Consis, and Quarterfinals are run: D, C, B, A.
- I. Semis are run: B, A.

XII. DURATION OF RACES

Race	Segments	Segment Length	Lane Change
A. Mains			
1. Pro/Semi-Pro Group 7	8	5 minute	4 minute
2. Group 27/Pro 27	8	4 minute	4 minute
3. All other Wing-Car Divs	8	3 minute	4 minute
B. Semis			
1. Pro/Semi-Pro Group 7	8	3 minute	3 minute
2. Group 27/Pro 27	8	2 minute	3 minute
3. All other Wing-Car Divs	8	2 minute	3 minute
C. Quarterfinals			
1. Pro/Semi-Pro Group 7	8	2 minute	3 minute
2. Group 27/Pro 27	8	2 minute	3 minute
3. All other Wing-Car Divs	8	2 minute	3 minute
D. Consis & Sub-Consis			
1. Pro/Semi-Pro Group 7	4	3 minute	3 minute
2. Group 27/Pro 27	4	2 minute	3 minute
3. 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 unmarshalleable car
 - f) Car in wrong lane (rider)

In both the 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 unmarshalleable car, racers may con-

tinue 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 the 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 maybe prohibited from future USRA events.

G. PROTEST

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. This protest fee will be held by the race director.
 - 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 protestee. 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.
 - d)** 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.
 - e)** 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.



USRA CHAPTERS

Florida (Scale)	http://www.floridadivision2.com/
Great Plains	www.geocities.com/gpusra/
Mid-Atlantic	Jeff Muller, 856-464-1382 jeff_08051@yahoo.com
North Central	www.raceclub.us/NorthCentral
Northern California	www.slick7.com/USRAindex.htm
Mid-South (Wing-Car)	Dennis Strickland, 704-878-0792 dastrickland@bellsouth.net
Mid-South (Scale)	Carroll Bailey, 846-895-3191 batazboy47@aol.com
Penn/Jersey	Jay Kisling, 610-779-5629 jkdir2pres@cs.com
Southern California	www.socalusra.com
Tri-State Oval Series	Ken Green, 317-535-0680 Ron Hershman, fastIron@yahoo.com
Yankee	www.modelvillehobby.com/images/yankee_usra.htm

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. **Any rule that is in question or is being interpreted improperly will be clarified by the National Director and/or the Rules Committee.**

I. SCALE

The scale to which the cars must be built is 1/24th of the size of an actual race car. For the 1/32nd Eurosport and Formula 1/32 classes, cars must be built to 1/32nd 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.

- A. Rear tire minimum diameter is 0.750 inches (19.05 mm), unless otherwise specified. Rear wheels maximum width is 0.810 inches (20.57 mm), unless otherwise specified.
- B. Front tire minimum diameter is 0.500 inches (12.7 mm), unless otherwise specified.
- C. Front wheels, or one-piece wheel/tire units, must rotate on their axles.
- D. 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) unless specified otherwise. 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.

- A. 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.

- B. Numbers:** All cars must display three numbers of reasonable size and position, 1/4 inch (6.35 mm) minimum.
- C. Interior:** All cars must contain a suitably painted, 1/24th 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.
- D. 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.
- E. Wheel Wells:** Wheel wells must be transparent, or cut to the horizontal center line 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.
- F. 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)

- A.** No part may exceed 2.5 inches (63.5 mm), measured from the tech block surface. No air control devices can be opaque.
- B. Side Dams** may be a maximum of 2.5 inches (63.5 mm) high behind the rear wheel center line and continue on a taper making them a maximum of 2.0 inches (50.8 mm) high at a point 3.75 inches (95.25 mm) forward of the rear wheel center line. The same taper may continue ahead of the front wheels.
- C.** 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.
- D.** May affix any decals or markings on any air control surface (including spoiler) but air control surfaces cannot be opaque.
- E.** Diaplane maximum length is 0.500 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 immediately. All replacement parts must conform to the rules of the class.

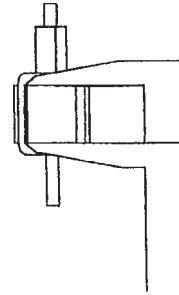
IX. GENERAL TECHNICAL SPECIFICATIONS

A. ARMATURE 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 lamina-

tion 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 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.

WING-CAR SPECIFICATIONS

SPEC-15

All *General Rules* also apply.

Spec-15 is intended to introduce entry level racers to glue-type racing. To that end the specifications for this class will never be changed. No rules proposals to change any of the Spec-15 rules will be considered.

Drivers: This class is *only* open to Amateur drivers. Drivers may *only* compete in Spec 15 and Amateur Group 12. Once a racer has won in the Spec 15 class he/she 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 limited glue. (Regional races may opt to race under spray glue conditions.)

A. Motors

1. Motors must be commercially available, as defined in *General Rules, Section IX*, and must be specifically approved for the Spec-15 class on an “as-submitted” basis.

2. Can and endbell will be the same as in the Amateur GP-12 motor rules. See page 33.
3. Any motor retailing for the USRA Spec 15 Motor maximum price or less (see USRA Price Limit Table) may be used.
4. All motor manufacturers are encouraged to make Spec-15 motors. Motors for the Nats will be handout motors determined by a random draw by USRA officials. 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.

B. Magnets

1. See *C-Can Motor Specifications*, page 44.

C. Armature

See *Armature Technical Specifications* table on page 47 for armature specs, and *Approved Components for GP-12* page 38 for approved armatures.

D. Can Modifications

See *C-Can Motor Specifications*, page 44.

E. Chassis

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 racer 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 under chassis weight allowed. All body mounts to be left in original position. (No floating of rear body mounts.) See USRA Price List Table for Spec 15 chassis maximum retail price.

F. Bodies

Any USRA-approved body may be used.

G. Tires

Tires to be handed-out by USRA along with handout motor. Local option could be handout also, or determined by regional director. It is strongly suggested that only a single tire brand be utilized for all racers.

H. 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.

I. Bearings

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

J. Weight

Minimum weight for Spec-15 cars is 72 grams at all times while racing.

GP-12

All *General Rules* also apply.

A. Motors

See *C-Can Motor Specifications*, page 44.

B. Armature

See *Armature Technical Specifications* table, page 47, for armature specs. X-12 or GP-15 armatures may be used.

C. Chassis

1. 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) 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* on page 38 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 RTR 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 so long as 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:

1. Magnet wire or magnet type wire as a substitute lead wire.
2. 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.

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

All *General Rules* also apply.

A. Motor

1. Can must be mass produced, and commercially-available, as defined in the *General Rules, section IX*. Cut outs and machine work are allowed.
2. Can inside dimension minimums are defined as not less than:
 - a) Length: No restrictions.
 - b) Width: 0.835 inches (21.21 mm).
 - c) 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

1. Must be tagged with at least the number 15, and mass produced by a USRA-approved manufacturer.
2. Must be machine wound with a minimum of 50 series-wound turns of AWG #29 wire per pole. AWG #29 wire, excluding insulation, is 0.0112–0.0114 inches in diameter.
3. Must be commercially available, as defined in *General Rules, Section IX*.
4. Armature stack lamination length shall be a minimum of 0.440 inches (11.18 mm). See *Armature Stack Length* section for clarification.
5. Armatures retailing for the USRA I15 armature maximum price or less (see USRA Price Limit Table) may be used.

C. Chassis

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

COBALT 12/15

All *General Rules* also apply.

A. Setup

1. No restrictions.
2. Ball bearings are allowed
3. Amateur C-12 racers may use single or quad magnets only.
4. Where a combined Amateur/Expert/Semi Pro race is run racers may use single, quad (4), or six (6) magnet motors only.

5. From 01/01/2010 all magnet restrictions shall be removed from all Cobalt 12/15 racing.

B. Armature

1. See *Armature Technical Specifications* table on page 47 for armature specs, and *Approved Components for GP-12* on page 38 for approved armatures.
2. Timing may be adjusted to allow for factory variations
3. Must be tagged with at least the number 12 or 15, and be mass produced by a USRA approved manufacturer.

C. Chassis

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

GROUP 27

All *General Rules* also apply.

A. Set-up

No restrictions.

B. Armature

1. See *Armature Technical Specifications* table on page 47 for armature specs.
2. Timing may be adjusted to allow for factory variations
3. Must be a tagged Group 27 armature, and be mass produced by a USRA-approved manufacturer.

C. Chassis

No restrictions.

D. Wheels, Tires, & Gears

Must comply with *General Rules*; otherwise no restrictions.

E. Bodies

Must be commercially-available and approved for use in restricted classes.

ONE MOTOR OPEN

All *General Rules* also apply. This class is open to any competitor, regardless of driver ranking/classification.

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 Rules*, otherwise no restrictions.

D. Wheels, Tires, & Gears

Must comply with *General Rules*, otherwise no restrictions.

E. Race Format

1. One round of 30-second qualifying using race power.
2. All racers seeded into Mains according to qualifying time as equally as possible without creating round-robin mains (A, B,C, D Main format).
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. All One Motor Open races will be run with the same race power as all other classes at the Nats.

GROUP 7/OPEN (UNLIMITED)

All *General Rules* also apply.

A. Motor

No restrictions to setup or armature.

B. Chassis

No restrictions.

C. Bodies

Must comply with *General Rules*; otherwise no restrictions.

D. Wheels, Tires, & Gears

Must comply with *General Rules*; otherwise no restrictions.

APPROVED COMPONENTS FOR GP-12

(New Parts for 2007 are in **Bold Type**)

C-CAN MOTORS

B52	B52-131
Best O' the West	214-M 229B
Cahoza	230 231 232
Fast Ones	FO2000
Kamen	K100 Set-up K101 K102 Old can new endbell K050 Motor
Kelly	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
Koford	M408 (vertical) M408J (horizontal) M408K (Spec-15) M504A Super Feather GP-12 motor M504B Super Feather Spec-15 motor M527A Ultra Feather GP-12 motor
Mura	1212 1213P 1215P
Parma	455
Proslot	723 723-VIP 728 (Spec-15) 728-SRS New cans with Mega 3 magnets
Viper Engineering	505 506 507 thin can 590 (Spec-15) GP-12 Motor

ARMATURES

Best O' the West	200 (GP-12) 200C (C-12) 207 (27) 215 (Intl-15)
Camen	GP-12 Intl-15 C-12 27
Fast Ones	FO390 (X-12) .513 FO391 (X-12) .518 FO470 (Intl-15) FO480 (C-12) FO490 (27)
Koford	M468-15 (Spec-15) M468-15A (Intl-15) M467-12-B&C (C-12) M467-15 (Intl-15) M468 Box (GP-12) M467-27A
Mura	2012 2013 2015
Proslot	206 (Intl-15) 207 (C-12) 211 (27) 701 Series (GP-12) 702 (Spec-15)
Viper Engineering	901 (GP-12) .513, 38 deg 901B (GP-12) .518 901X (GP-12) .513 903B (C-12) 903B-32 (C-12) 906B (GP-12) .518 new blank 907B-38 (27) 912B (Intl-15) 912B-38 (Intl-15) 990 (Spec-15) Va 9-1 (GP-12) Va 10-1 (GP-12)

GP-12 CHASSIS

Ace Products	143 Group-12 chassis 144 Group-12 chassis
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FX	79 Fast Eddy Chassis 97 98
GTO	Grp12A&B
JK	27041
Kamen	750
Kelly	1501 Wire Chassis 1504 G-3 1518 G-25 1507 G4 1511 G3 Short 1515 Wedge
Koford	M451 M451T M490A M500A M503 M511A Superspeedway Beuf M512A Short Superspeedway Beuf M513A Short Beuf Express M530A, M530C, M530E Ultra Beuf Express
Parma	70013
Red Fox	07-W, 07-P GP-12 chassis
Proformance	201 201A 201B 202
Proformance	202A 202B 203 203A 203B 204 204A 204B 205 GP-12 chassis, all steel 205A 206 207 208
Pro Slot	317 317-04 Perimeter 318 317-06 318-04 Tripod

Pro Slot, con't	319
	320
Red Fox	RFL
Slick 7	243E
	473D
	543A
	548A
	7243C .055
	7243C .062
	7243D
	7473B
	7541
	7543
	7273C
Zap	100
	101

BODIES

Alpha	410 Jaguar XJR
	420 Jaguar
	450 Spice, with rib
	460 Toyota
	470 Shadow
	472 Griffin
	474 Valkyrie
	476 Nissan
	478 RL-1
Best O' the West	301 Mirage
	302 Panoz
	303 Venom
	304 Hawk
Hi-Speed Products	001/001R Hurricane
	002/R Cyclone
	003/R Typhoon
	005/R AL-1
	006/R Venom
	007/R Mirage
	008/R Panoz
JK Products	KO20 Audi
	KO30 Porsche
	KO41 Stratos
Kamen	Charger
Kelly	804 Taz
	1700A Stalker
	1701 Fox Tail

Kelly, con't	1805 Bat	
	1806 T-bird	
	1802 Fox	
	1803 Firestorm	
	1807 Bat, with rib	
	1808A Bullet	
	1809 BK	
	Koford	M214G Porsche
		M214H Mercedes
		M214I Peugeot
Outisight	M214J Ferrari	
	028 Tiga	
	029 Royale	
	029R Royale, with rib	
	029AW Royale SE	
	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	
	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 V-3	
	107 V-5 Viper	
	108 Charger	
108R Charger, with rib		
Parma	70515 Stinger	
	70503 Phantom	
	70507 Demon, with rib	
	704651 966, with rib	
	70500 955	
	70511 Demon	
	70499 Cobra	

Proformance

7100 Z-28
7100-2 Z-28 without rib
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

Red Fox

001 Shadow
001A Shadow, with rib
002 Tyfon
003 G-2 Scorp
004 Renault
005 Storm
006 Fulda
007 RFL

ZAP

Z-1 Lola
Z-2 Ferrari
Z-3 Lotus
Z-4 Ferrari

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 on page 38.
2. Can and endbell must be mass-produced, of full-dimensioned can type (full top, bottom, and two sides, without cheater tabs or other artificial attempts to meet the dimensional specifications) without modification. No aluminum endbells allowed. Inside can dimensions are defined as not less than:
 - Length - 0.925 inches (23.50 mm)
 - Width - 0.835 inches (21.21 mm)
 - Height - 0.560 inches (14.22 mm)

Maximum Retail prices for USRA Approved Products	
Spec 15 Motor	\$48.43
Group 12 (GP 12 & GT12) Motor	\$48.43
LMP Motor Challenger / Contender / Competitor / Sportsman / Group 11	\$48.43
16-D Setup	\$19.50
16-D Setup with Aluminum Spring Cups	\$19.50
Spec 15 Armature	\$31.86
I15 Armature	\$33.60
C12 Armature	\$35.28
Group 12 (GP 12 & GT12) Armature	\$31.87
GTP Armatures: Wasp / Hornet / Super 16-C /Super 16-D	\$25.67
LMP Armatures: Challenger / Contender / Competitor / Sportsman / Group 11	\$25.12
Group 12 Chassis	\$42.89
Spec 15 Chassis	\$42.89
GT 12 Chassis	\$55.66
C-12E Chassis (Cobalt 12 Eurosport)	\$88.80

3. Aftermarket components which 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 retailing for the USRA Group 12 motor maximum price or less (see *USRA Price Limit Table* on page 44) may be used.

B. Magnets

1. Magnet dimensions plus or minus 10% are as follows:
 - a) Length: 0.500 inches (12.70 mm)
 - b) Width: 0.150 inches (3.81 mm)
 - c) Height: 0.550 inches (13.97 mm)
2. Magnets must be commercially-available through major distributors.

	Scale	Expert Wing	Amateur Wing	Spec-15
Magnet Adhesive	No Restriction	No Restriction	No Restriction	Clear cyanoacrylates
Unrestricted Honing of Magnets by Racers	Yes	Yes	Yes	No
Air Gap	No Restriction	No Restriction	No Restriction	0.528 Minimum
Interchangeable Endbells and Hardware	Yes	Yes	Yes	No
Shunt Wires and Spring Insulation	Yes	Yes	No	No
Can End Ball Bearing	Yes	Yes	Yes	Yes
Brush Springs	No Restriction	No Restriction	3 Coil	3 Coil

3. No quad magnets allowed. Magnets must be single-piece ceramic only.
4. Magnets may not contain “rare earth” materials (defined as elements with atomic weights 58 through 71).

C. Can Modifications

Anything not listed here is illegal.

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 1/8 inch (3.18 mm) notch may be cut in the can for axle clearance.
9. Prohibited modifications:
 - a) Cut-outs or machine work on can or endbell.
 - b) See table on page 45 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

- a) 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.
- b) Armatures must meet any price limits as defined in the *USRA Price Limit Table* on page 44.
- c) No split-stack/lamination arms allowed.
- d) Only round copper wire can be used. Litz wire may not be used.
- e) Armatures may be balanced.
- f) Armatures may have factory commutator tie-wrap.
- g) Armatures may be reconditioned which includes cleaning, dyeing, commutator re-truing, and re-balancing.
- h) See *Armature Stack Length* on page 30 in the *General Technical Rules* for clarification.
- i) Armatures must be tagged according to the armature technical specifications table below indicating they were produced by a USRA-approved manufacturer in compliance with these rules.

D-CAN MOTOR SPECIFICATIONS

A. Motors (Stock 16-D)

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.

Armature Technical Specifications							
<i>Armature Type</i>	<i>Classes</i>	<i>Minimum Diameter</i>	<i>Maximum Diameter</i>	<i>Minimum Stack Length</i>	<i>Wire Size</i>	<i>Min # series-wound turns per pole</i>	<i>Tag</i>
Group 12	GP-12 GT12	.513" (13.03mm)	.518" (13.16mm)	0.350" (8.89mm)	AWG #29 Guage (0.0112- 0.0114" minus insulation)	50	At least '12' or '15' Only 'X-12' may be used in GT12
Spec 15	Spec 15	.513" (13.03mm)	.513" (13.03mm)	0.440" (11.18mm)	AWG #29 Guage (0.0112- 0.0114" minus insulation)	50	'Spec-15'
Cobalt 12	C12/15 C12-E	NO MINIMUM	-	0.350" (8.89mm)	AWG #29 Guage (0.0112- 0.0114" minus insulation)	50	'12' or '15'
Group 27	Group 27	NO MINIMUM	-	0.440" (11.18mm)	AWG #27 Guage (0.0141- 0.0143" minus insulation)	38	'27'
Wasp Hornet	GTP	.513 (13.03mm)	-	0.350" (8.89mm)	AWG #30 Guage (0.0099 - 0.0101" minus insulation)	60	Super Wasp (S-Wasp) Hornet (HRT)
Challenger Contender Competitor Sportsman Group 11	LMP GTP	.513 (13.03mm)	-	0.440" (11.176m- m)	AWG #30 Guage (0.0099 - 0.0101" minus insulation)	55	Group 11 Challenger (CH) Competitor (COM), 'COMP') Contender (CONT', 'CTR') Sportsman (SP)
Super 16C	GTP	.513 (13.03mm)	-	0.490" (12.45mm)	AWG #28 Guage (0.0125- 0.0127" minus insulation)	55	'S16C' 'Super 16C'
Super 16D	GTP	.513 (13.03mm) (Coating may be removed)	-	0.490" (12.45mm)	AWG #28 Guage (0.0125- 0.0127" minus insulation)	60	'S16D' 'Super 16D'
16D	Group 10 Stockcar	.513 (13.03mm)	-	0.600" (15.24mm)	AWG #30 Guage (0.0099 - 0.0101" minus insulation)	70	'16D'

1. Stock 16-D style set-ups only. Must be commercially-available. Setup must retail for the USRA 16-D Setup maximum price or less (see *USRA Price Limit Table* on page 44). Setups sold with aluminium spring cups must retail for the USRA 16-D Setup With Aluminium Spring Cups maximum price or less (see *USRA Price Limit Table*) may compete.
2. No modifications allowed except as follows:
 - a) Racer may add can screws.
 - b) May add spacers to limit end play.
 - c) May dye armature.
 - d) May re-true commutator.
 - e) May zap magnets.
 - f) May glue magnets in place. Any adhesive may be used.
 - g) May change brushes and may use any three-coil springs.
 - h) No polishing of magnets allowed.
 - i) No shimming or honing of magnets.
 - j) Balancing is allowed.
 - k) Armature may reconditioned; coating may be removed.
 - l) Minimum air gap is 0.575 inches (14.61 mm).
 - m) May interchange parts between manufacturer's set-ups.
 - n) Oilite may be soldered in place.
 - o) May use any USRA-approved C- or D-can endbell hardware as replacement hardware. Aluminum or brass spring cups may be used as replacements.
 - p) May solder and/or glue endbell hardware together and to endbell.
3. **Cans (16-D)**
 - a) 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.
 - b) Must meet the following minimum inside dimensions:
 Height: 0.600 inches (15.24 mm)
 Width: 0.875 inches (22.23 mm)
 Length: 0.950 inches (24.13 mm)
 - c) 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.
 - d) 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.
4. **Magnets (16-D)**
 Must be stock one piece single (no quads) ceramic magnets as found in the production motor, and meet the following minimum dimensions:
 Height: 0.570 inches (14.48 mm)
 Length: 0.650 inches (16.51 mm)
 Thickness: 0.145 inches (3.68 mm)

5. Armatures

See *Armature Technical Specifications* on page 47 for armature specs.

6. Set-ups (16-D)

16-D set-ups are to be submitted and sold as ready to run. Set-ups should be ready to install a armature, brushes, spacers, springs with no further assembly work needed. Set-ups would have the magnets installed by using magnet clips or can fingers folded over and/or super glue used to retain magnets. Can oilite pressed or soldered in place. End bell fully assembled and drilled for can screws. Air gap should be set to at least the minimum figure for the class. Parts/kits are not acceptable as set-ups.

GENERAL SCALE COMPETITION REGULATIONS

I. Driver Classification Scale Division

A. Eurosport and GT-12

All drivers are encouraged to enter these classes regardless of ranking.

B. Driver Divisions

All classes except Eurosport and Junior will be divided into Amateur and Expert divisions.

1. Amateur Division

- a) Racers with average driving or technical ability and newer racers.
- b) C-12E class will be for Amateur racers only. Any racer who has finished in the top 8 in 1/24th Eurosport at any Nats may not compete in C-12E.
- c) At the National Championships, Amateur Division racers will use hand-out motors for all classes except C-12E.
- d) Junior class is for those 14 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 who has won in any Amateur class at the Scale Nationals must race Expert Division in all classes at any future Nats.

II. Additional General Scale 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 manufacturers 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 .810 inches (20.57 mm) unless class rules specify another width.
- c) Where .062 clearance is used, minimum rear tire diameter is .750 inches (19.05 mm).
- 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.

3. *Front Wheels & Tires*

- a) Front tires must be made of rubber mounted on separate metal rims, and mounted on front axles.
- b) Front wheels and tires must rotate.

4. *Front Axles*

- a) Front axle minimum diameter is .047 inches (1.19 mm).
- b) Front axle may be bent.
- c) May use piano wire or drill blank axle.
- d) Front axle may be soldered to the chassis.

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.

III. National Championship Procedures

- A. Amateur classes, not including C-12E, shall use handout motors.
- B. Amateurs and experts shall race on each day of the Nats.

C. Race Format

1. All scale races apart from 1/32nd Eurosport, 1/24th Eurosport, and C-12E will follow the race format as set out in section XI. Australian Race Format, except that there will be no qualifying for any races. Initial heats will be seeded in a random manner.
 2. For all Eurosport classes refer to the Eurosport Race Procedure Section
 3. For scale races with more than 24 entries (to unlimited number) there shall be four Round-Robin Quarterfinals, two Semifinals, and a Final. Top four out of each Quarter move to the Semis, top four out of each Semi move to the Final.
 4. All main events will be 8 x 3 minutes with 2 minute lane changes. Semifinals and Quarterfinals will be 8 x 2 minutes with 2 minute lane changes. All consis and lower will be 4 x 2 minutes with 2 minute lane changes. For Eurosport race duration refer to Eurosport Race Procedure Section.
 5. To save time 1/32 Eurosport and F1-32 should run together. i.e. tech both classes together, then qualify/race F1-32 followed immediately by qualifying/racing for 1/32 Eurosport.
- D. All scale races will be run under USRA Spray Glue conditions as described in section VIII.B.

IV. Litz wire may not be used in any class with armature wire specifications.

V. 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 8 finishers.
2. 1/24th Eurosport and 1/32nd Eurosport will be Cash Payout. All other payouts should be merchandise certificates.

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 manufacturers; 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

All *General Rules* also apply.

A. Chassis

See *Stamped Steel Chassis Regulations* on page 52.

B. Motors

See *D-Can Motor Specifications* on page 48, A. Motors (Stock 16-D).

C. Bodies

See *Stock Car Body Specifications* on page 54.

D. Gears

Any gear ratio allowed. May only use 64 or 48 pitch gears.

E. Axles, Tires, & Wheels

1. See *General Scale Rules – Wheels, Tires, & Axles* section
2. The car must have a single one-piece front axle that passes through both uprights.
3. Front wheel minimum-diameter is 0.500 inch (12.7 mm).
4. May solder front retainers to front axle. May solder front axle where it passes through chassis. Front axles may be bent.
5. May use drill blank axles front and rear. Axles must be steel. No hollow or other lightweight axles allowed.

F. Clearance

See *General Scale Rules – Clearance* Section

PRODUCTION 4-1/2 STOCK CAR

All *General Rules* also apply.

A. Chassis

See *Stamped Steel Chassis Regulations* on page 52.

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* on page 48, A. Motors (Stock 16-D).

C. Bodies

See *Stock Car Body Specifications* on page 54.

D. Gears

Any gear ratio allowed. May only use 64 or 48 pitch gears. May solder pinion onto armature shaft.

E. Axles & Tires

1. See *General Scale Rules – Wheels, Tires, & Axles* section.
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 0.675 inch (17.15 mm). Minimum front tire width 0.400 inch (10.16 mm). Minimum rear tire diameter is 0.790 inch (20.07 mm). Maximum rear tire width is 0.810 inch (20.57 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 0.675 front tires to touch the track but 4-1/2 inch wheelbase must be maintained.

F. Clearance

See *General Scale Rules* – Clearance Section.

STOCK CAR BODY SPECIFICATIONS

A. Rules applying to both Group 10 (4”) & 4.5” Stock Car

1. See *General Scale Rules* – Bodies section.
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 the 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.

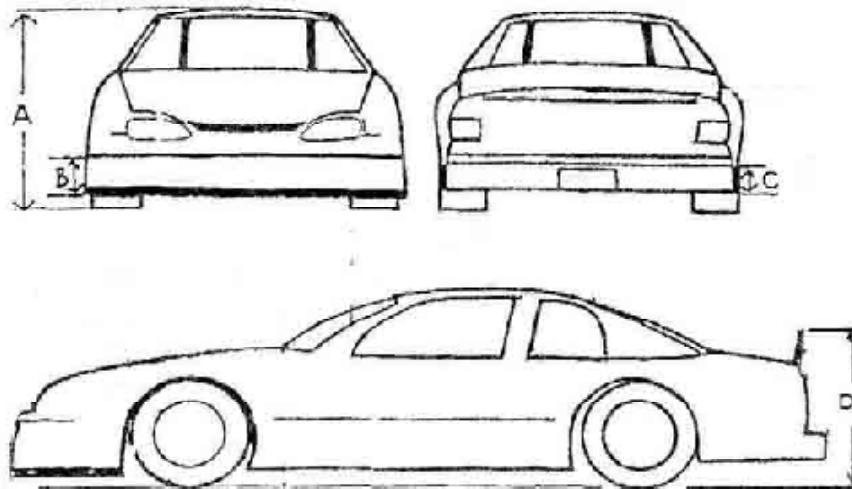
B. Dimensions and rules applying to Group 10 (4”) Stock Car Only

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 on page 55 for measurement points (A-D):
 - A** = Roof Height: 1-1/2 inches (38.10 mm) measured from the track to the center of roof; roof ribs not included. Car to have legal clearance while measuring body height.
 - B** = Front Bumper: Minimum 1/8 inch (3.18 mm) measured from the top of bumper down.
 - C** = Rear Bumper: Minimum 1/8 inch (3.18 mm) measured from top of bumper down.
 - D** = Rear Spoiler Height: Maximum height 1-3/8 inches (34.93 mm) measuring from test block.

3. For manufacturer specifications, please refer to the USRA website at www.usra.us.
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.
5. Rear spoiler to be blade type only with a maximum height of 1-3/8 inch (34.93 mm) measured from tech block to the top of the spoiler. Spoilers are to have no side dams/plates, no radius or fillets between the trunk lid and blade/spoiler.

C. Dimensions and rules applying to 4.5" Stock Car Only

1. Bodies must be 1/24th 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 on page 55 for measurement points (A-D):
 - A = Roof Height: 1-7/8 inches (47.63 mm) measured from the track to the center of roof; roof ribs not included.
 - B = Front Bumper: Minimum 1/4 inch (6.35 mm) measured from the top of bumper down.
 - C = Rear Bumper: Minimum 1/8 inch (3.18 mm) measured from top of bumper down.
 - D = 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.usra.us.



4. Cars must have a minimum roof height of 1-7/8 inch (47.63 mm) measured from tech block. Roof height is to be measured at the center of roof, and does not include roof ribs. Height will be measured with car on tech block or track with legal clearance.
5. 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.
6. 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.
7. Rear spoilers are to be blade-type only with a maximum height of 1-5/8 inches (41.28 mm) measuring from tech block to top of spoiler. Rear spoilers are to have no side dams/plates, no radius, or fillets between the trunk lid and blade spoiler.
8. No air control devices allowed. No additions or alterations to the manufacturer's dimensions are allowed except for the following:
 - a) Rear spoiler maximum height is 3/8 inch (9.53 mm) measuring the actual blade/chord length. May add Lexan to meet this measurement.
 - b) Rear spoiler maximum width is 3-1/4 inches (82.55 mm). Lexan may be added to meet this measurement.
 - c) No "Gurney Lip" or additional bends in the spoiler allowed.
9. 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.
10. Front wheel wells must be cut out.

GTP

All General Rules also apply.

A. Chassis

See Stamped Steel Chassis Regulations on page 52.

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* on page 48. Super 16-D armature must be used.
- 2) **C-Can:** Refer to *C-Can specifications* on page 44. Armature must be Super 16-C, Super Wasp, or Group 11.

C. Armature

Armatures must be commercially available as defined in General Rules,

Section IX, and must be specifically approved for the class. Approved armatures types are Super Wasp, Hornet, GP-11 (Challenger, Contender, Competitor, and Sportsman), Super 16-D, and Super 16-C. See *Armature Technical Specifications* on page 47 for specs.

D. Bodies

- 1) See *General Scale Rules* – Bodies section.
- 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 *General Scale Rules* – Wheels, Tires & Axles Section.
- 2) Minimum Front Tire diameter is 0.600 inches (15.24 mm).

G. Clearance

See *General Scale Rules* – Clearance Section.

LMP

All *General Rules* also apply.

A. Chassis

See *Stamped Steel Chassis Regulations* on page 52.

B. Motor

1. Refer to *C-Can Specifications* on page 44.
2. Motors retailing for the USRA LMP Motor maximum price or less (see USRA Price Limit Table) are allowed, but must meet all specifications for this class.

C. Armature

1. Must be tagged Group 11, Challenger (CH), Competitor (COM, (COMP), Contender (CON or CTR), or Sportsman (SP).
2. Refer to *Armature Technical Specification* table on page 47 for specs.

D. Bodies

1. See *General Scale Rules* – Bodies section.
2. Maximum rear height is 1-5/8 inches (41.28 mm). Body must be cut on manufacturer's cut line.

E. Gears

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

F. Axles, Tires, & Wheels

1. See *General Scale Rules* – Wheels, Tires & Axles section.
2. Minimum front tire diameter is 0.600 inches (15.24 mm).

G. Clearance

See *General Scale Rules* – Clearance Section.

GT-12

A. Chassis

1. Chassis must be commercially-available, and approved for USRA competition.
2. Chassis may be constructed using any materials.
3. Chassis must be available in assembled RTR form.
4. Chassis kits are allowed as long as they are assembled identically to approved RTR chassis. All parts must be in stock location.
 - a) May add lead weight.
 - b) May add a rear motor brace and an upright brace.
 - c) No other modifications are allowed.
5. Chassis meeting these specifications and retailing for the USRA GT 12 chassis maximum price or less (see *USRA Price Limit Table on page 44*) are allowed.
6. 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.

B. Motors & Armatures

C-Cans and X-12 armatures are used. Refer to *C-Can specifications* on page 44. Refer to X-12 armature specification in table on page 47.

C. Bodies

1. Amateur Bodies

- a) Amateurs will use GTP bodies.

2. Expert Bodies

- a) Experts will use LMP bodies.
- b) The cut line must be visible across the front of the body.
- 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 by the body.
- 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 .810 inches (20.57 mm).
2. Front wheels and tires must rotate. Minimum diameter is 0.600 inches (15.24 mm). Axles must be mounted to chassis.

3. Front tires must be mounted approximately perpendicular to the track; axles may be adjusted to allow this.
4. No hollow or other lightweight axles. May use 3/32 inch rear axles.

F. Clearance

Same as 1/24 Eurosport.

C-12E

A. Chassis

1. Any chassis approved for racing in the scale division retailing for the USRA C-12E Chassis maximum price or less (see *USRA Price Limit Table* on page 44) may be used. See approved list for C-12E chassis.
2. Ball bearings allowed.
3. 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.

B. Setup

1. May use single or quad (4) magnets only.
2. No other restrictions.
3. Ball bearings allowed.

C. Armature

1. See USRA Armature Specifications table for C-12 armature specs, and approval list for approved armatures.
2. Timing may be adjusted to allow for factory variations
3. Must be tagged with at least the number 12 or 15, and be mass produced by a USRA approved manufacturer.

D. Bodies

Same as GTP.

E. Race Procedure

Same as 1/24 Eurosport.

1/24 SCALE EUROSPORT

All *General Rules* also apply.

A. Chassis

No restrictions, except for the following: guide length maximum is 5.140 inches (130.56 mm). Measurement is to be made from front of guide post to rear of rear axle.

B. Motor

No restrictions on motor, magnets, armatures, and/or motor cans.

C. Bodies

Same as LMP bodies.

1. Bodies do not need to be cut on the cut line.
2. Maximum rear body height is 1-5/8 inches (41.28 mm).
3. The front of the body must maintain some vertical surface. "Blade" bodies will not be allowed to run.
4. The front skid plate of the chassis may protrude up to 1/16" outside of the body on each side. The rest of the chassis must be covered by the body when viewed from above by the body.

D. Gears & Axles

No restrictions.

E. Tires & Wheels

1. Minimum front tire diameter is 0.600 inches (15.24 mm).
2. Front tires must rotate on their axles.
4. Front tires must be mounted approximately perpendicular to the track.
5. Rear Tires maximum width is 0.900 inches (22.86 mm).

F. Clearance

1. Clearance will be checked at the beginning of the race with no check at the end of the race. However if the car is dragging 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.
2. Clearance shall be 0.032 inches (.81 mm) in rear. This is not recommended for tracks with banking. When racing on banked tracks, a higher clearance (.062 inches, 1.57 mm) should be specified.
3. Gear may not extend below chassis.

1/32 SCALE EUROSPORT

All *General Rules* also apply.

A. Chassis

1. No restrictions, except for the following: guide length maximum 4.275 inches (108.59 mm). Measurement is to be made from front of guide post to rear of rear axle.
2. Maximum width is 2.519 inches (63.98 mm).

B. Motor

No restrictions on motor, magnets, armatures, and/or motor cans.

C. Bodies

1. Bodies must be commercially-available and approved for competition.
2. All interiors must be of correct scale.
3. Maximum rear spoiler height is 1-3/8 inches (34.93 mm).

D. Gears & Axles

No restrictions.

E. Tires & Wheels

1. Minimum front tire diameter is 0.500 inches (12.7 mm).
2. Front tires must rotate on their axles.
4. Front tires must be mounted approximately perpendicular to the track.
5. Maximum rear tires width is 0.650 inches (16.51 mm).

F. Clearance

Same as 1/24 Eurosport.

FORMULA 1/32

All *General Rules* also apply.

A. Chassis

Chassis are unrestricted except for the following limitations:

1. The motor must be mounted in the chassis in the “in-line” position (i.e. in a 90-degree 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. See *F1/32 Body List* on page 72. Only these USRA-approved bodies are permitted.
2. Bodies must be accurate copies of the samples sent to USRA for approval.
3. The body must not deviate from its form as produced by the manufacturer.
4. The paint scheme must represent an actual F1-team’s car during the last 10 years.
5. The major engine cover and sidepod sponsors logo/name must be present.
6. The body must cover the entire chassis including the guide flag but excluding the axles, wheels and the support(s) for the front axle.
7. 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.
8. Numbers must be displayed in at least three (3) different positions.
9. 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.

- 10. No portion of the chassis must be seen through the driver area when viewed from above.
- 11. 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

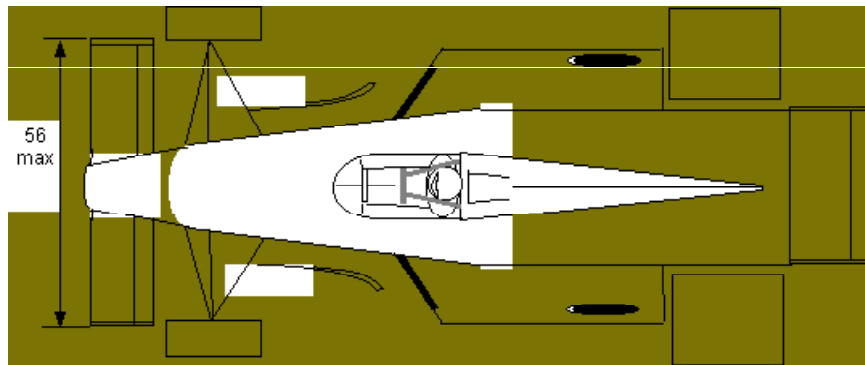
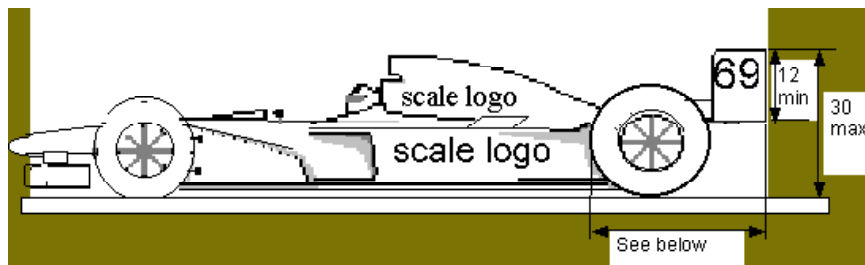
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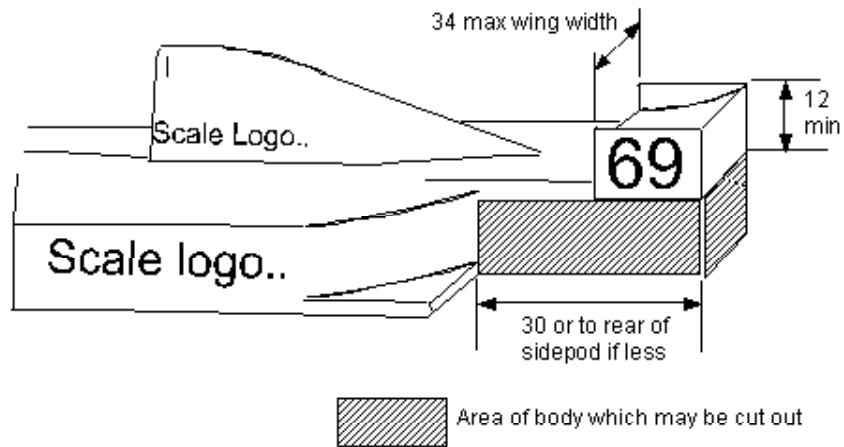
D. Front wheels

- 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 0.400 inches (10 mm).
- 2. The minimum front wheel track (width) must be 2.44 inches (62 mm).
- 3. They must turn on their center at 90 degrees to the track surface and have a black rubber/plastic perimeter.
- 4. The loss of a front wheel during the course of racing will be considered an infraction and must be repaired/replaced immediately.

E. Rear tires

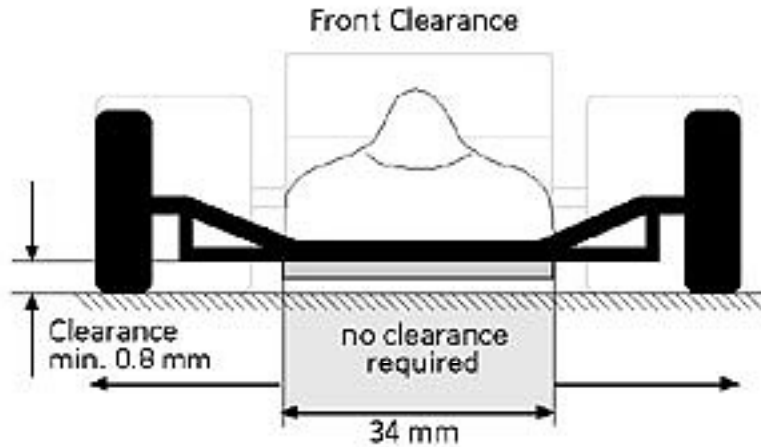
- 1. The rear wheels must have a minimum diameter of .590 inches (15 mm) and a maximum width of .630 inches (16 mm).
- 2. The rubber portion of the tire contacting the track surface must be black.





F. Dimensions

1. The car must have a maximum overall width of 2.677 inches (68 mm).
2. Rear ground clearance must be a minimum of .032 inches (0.8 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 (0.8 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).



EUROSPORT RACE PROCEDURE

A. Qualifying

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. Qualifying times are used to seed multiple mains. Top eight into A main, next eight into B main, and so on. In the event of an odd number of cars needing Round Robins, the extra car(s) will be added evenly throughout the mains. If this is not possible the extra car will be added to the higher main. Example: Seventeen cars into two mains. Nine in A main and eight into B main.

B. Racing

Racing segments will be comprised of 8 x 5 minute heats. The European lane rotation system will be used. Lane changes be two (2) minutes between heats with work allowed on the cars during this period. However, drivers or pit personnel are not permitted to work on the track at any time. Finishing position to be determined by the total laps completed in all mains. Race winner can come from any main.

SCALE DIVISION APPROVED COMPONENTS

For approved C-Can motors and X-12 arms refer to page 38.

(New Parts for 2007 are in **Bold Type**)

GROUP 10 MOTORS - 16-D

Fast Ones	Twistr FO260DC FO273B FO260 With flat tip magnets in Twistr set-up FO260-FT Twistr 16-D set-up with flat tip magnets FO260-SF Silver Foxx 16-D set-up
Kelly	KE575 Blackmax/Silver Bullet KE580 G2 16-D Setup with new or old hardware KE2000 16-D motor KE2004 16-D and S16-D motor set-up
Parma	Rotor 498IX 499IX Deathstar
Viper Engineering	541

GROUP 10 ARMATURES - 16-D

Best O The West	212 212B .560 dia. arm
Fast Ones	D-Spec 351 .518 dia. arm 350 16-D arm
Mura	2216
Parma	72013 72015
Proslot	706 706 16-D M2 blank 2000 16-D motor 2004 16-D & S16-D motor set-up
Viper Engineering	5-1 16-D 922B .518 dia. arm 946B 16-D .518 dia. arm

GT1 ARMATURES

(May also be used for GTP racing.)

Best O The West	216 Contender
Champion	Sportsman
Fast Ones	Contender 360 Contender arm .514 dia. 361 Contender arm .518 dia.

Koford	Competitor
Mura	Challenger
Proslot	Contender
	705 Contender M2 blank
Viper Engineering	2-1 Contender
	998B Contender arm .518 dia.

GTP ARMATURES

– SUPER 16-C

Best O The West	210C Super 16-C
Fast Ones	370 Super 16-C arm .513 dia.
	371 Super 16-C arm .518 dia.
Mura	Super 16-C
ProSlot	Super 16-C
	PS700C Super 16-C arm M2 blank
Viper Engineering	3-1 Super 16-C
	926B
	947B

– SUPER 16-D

(Coating no longer required.)

Best O The West	210B Super 16-D arm .560 dia.
Fast Ones	355
Kelly	2001 S16-D motor
Koford	M468-SW Super Wasp arm
Parma	S16-D
Proslot	S16-D
	700 Super 16-D arm M2 blank with coating
	2001 S16-D motor
Viper Engineering	4-1 Super 16-D
	919B

– HORNET/WASP

Best O The West	219 Stinger
Fast Ones	365 Hornet arm .514 dia.
	366 Hornet arm .518 dia.
Mura	Super Wasp
ProSlot	Super Wasp
	704 Super Wasp arm M2 blank
Viper Engineering	1-1 Hornet arm
	994B Hornet arm .518 dia.

GROUP 10 CHASSIS

(Also used with LMP and GTP.)

Champion	Turbo Flex
	Astro XE

JK Products	Scorpion II Cheetah Scorpion III Scorpion III w/heat-treated pan 2909 pan 2909H 2901S 2501S 25027 Cheetah 7 0.025 25017 Cheetah 7 0.030 25017R Cheetah 7, 4-inch 25027R Cheetah 7, 4-inch 25047 Cheetah 7, 4-inch 0.030 pans 25047 Cheetah 7, 4-inch 0.025 pans 25047AL Cheetah 7, 4-inch aluminum pans
Mossetti	300 Titan 303 Titan w/aluminum pan (any color)
Parma	Flexi Kar Flexi 2 Flexi 3 579 Flexi 4 605 Flexi 5
RadTrax Products	RT-55 Gambler
4-1/2 STOCK CAR CHASSIS	
Champion	TurboFlex Astro SE
JK Products	One Piece Scorpion II JK 25231S JK2532 Cheetah 7, 4-1/2 inch 0.030 JK2533 Cheetah 7, 4-1/2 inch 0.030 center section JK25047 Cheetah 7, 4-1/2 inch 0.030 pans JK25057 Cheetah 7, 4-1/2 inch 0.025 pans JL25047AL Cheetah 7, 4-1/2 inch aluminum pans JK2916S C-12E Chassis
Parma	Flexi 2 Flexi 3
C-12E CHASSIS	
FX Racing Products	FX90
JK Products	JK10761E New C-12 Euro chassis JK1076E New C-12 Euro chassis
Kelly	1532 1530

Mossetti Racing	MR212A New C-12 Euro chassis
Slick 7	496
	496A GTC-II C-12E & GT-12 chassis
	497
	497A GTC-II C-12E & GT-12 chassis
	477 - Motor brace to convert 498 & 499 to C-12 Euro chassis

GT-12 CHASSIS

B Slotcar Performance	BSP01
	GT12-04
	GT12-06
FX Racing Products	FX77
	FX79
	FX80
	FX89
	FX92
	FX93
	FX89 lighter GT-12 with center rails
	FX89 lighter GT-12 without center rails and center and side bar stiffeners. Note: the FX 89 may be built either way.
JK Products	10731
	1073E
	1073E kit
Kamen	700
Kelly	1520 kit
	1521 G3 kit
	1523 new G3 GT-12
	1527
	1529
	1530 kit
	1922 assembled
Mossetti Racing	200
	200A new GT-12
Slick 7	447
	447A
	447B assembled ASP III
	446A
	446B kit ASP III
	496A GTC-II C12E & GT-12 kit
	497A GTC-II CC12E & GT-12 assembled
	498 K-1 kit
	498A K-2 GT-12 kit
	499 K-1 assembled
	499A K-2 GT-12 assembled

Slick 7, con't

548 Xtreme GT-12 w/ front bumper body mnts
572 GTX GT-12
447C ASP 4
446C ASP 4 kit. Note: there are 3 options for this kit:
1. Bite bar tubing with upstop,
2. No bite bar tubing with pan upstop and pan and downstop,
3. No bite bar tubing, no pan upstop or downstop.

GROUP 10 BODIES

JK Products

7321 Monte Carlo
7322 Dodge
7323 Taurus
7324 Pontiac

Kelly

1716 '06 Camry HS
1717 '06 Camry HD
1723
1724
1725

Parma

1747 '05 Taurus
1748 '05 Pontiac
1015 '05 Taurus
1034 Ford Fusion

Outisight

1081 Monte Carlo
1127 Dodge Charger
200 Monte Carlo
201 Monte Carlo
350 2K7 Monte Carlo
351 2K7 Dodge Charger

4-1/2 STOCK CAR BODIES

JK Products

73121 Dodge
73131 Taurus

Kelly

1718 '06 Camry HS 4-1/2
1719 '06 Camry HD 4-1/2
1731
1733
1737
1735

Parma

1746 '05 Taurus
1749 Monte Carlo
1762 '06 MC 41/2

Outisight

1016 Taurus
1082 Monte Carlo
250 Monte Carlo

G-Force
JK Products
JK Products

LMP BODIES

001 333 Prototype
7197 Bentley
7197 Bentley
7112 Saleen
7194 Chrysler LMP
7195 Courage
7196 Panoz LMP
7193 Reynard
7187 Lola Judd
7191 Sintura
7186 Panoz open cockpit
7176 Toyota
7192 Audi R8
7184 BMW V12 LRM
7185 Cadillac Le Mans
7177 BMW Le Mans
7178 Porsche GT1
7183 Mercedes CLR
7182 Audi RSC
7207 Bentley 03 LMP
7198 MG Lola
7199 Dome
7200 Ascari
7203 Porsche
7204 Lola B05
7205 Mazda
7301 Multimac
72341 Doran
1741 Mercedes
1740 Porsche
1742 CLK
1744 Foxfire
1745 DT

Kelly

Outisight

061 Mercedes CRL

063 Ferrari 333

088 2K2 Mercedes

282 HD 333

Parma

1044 Mercedes

1045 Porsche

1048 Dome

1083 MG LeMans

Red Fox

001 Bentley

002 Cad-GT

003 Cadi 05

004 Porsche

GTP BODIES

(Also used with LMP and C-12E)

Best O The West	305 Wildfire GTP
G-Force	010 Caddy GTP
	011 Stinger GTP
FX Products	78 BMW GTP
JK Products	70701 Ultimate Peugeot
	70714B
	7014U
	7073
	7070U
	K035 BMW
Kelly	1754 Countach
	1756 Diablo
	1750 Elise
	1737 Bimmer
	1760 Caddy HD
	1753 F1
	1759 F1 HD
	1755 Enzo
	1757 Enzo HD
	1761A MK GTP
	1761B MK GTP
Outisight	065 BMW Short Wing
	066 Mercedes Ultimate
	066E Mercedes ISRA/Short Wing
	067 Cadillac Ultimate
	067I Cadillac IMCA
	067E Cadillac ISRA/Short Wing
	068 Bentley IMCA
	069 Bentley Ultimate
	084
	085
	300 BMW ISRA
	301 BMW Ultimate
Parma	70514 Lola
	70513 R8R
	70519 Ultimate Intrepid
	70506 Intrepid SS
	1103 Intrepid
	70512 Euro R8R
	70519 Lola
	70524 Lola HD
	70525 Caddy
	70526 Caddy HD

Parma, con't
ToyTech

70516 Storm
TR-166-7 ALMS coupe
TR-165-7 ALMS
TR124
095
095-7
096
096-7
097
097-7
102
102-7
103
103-7
124-7

1/32 EUROSPORT BODIES

BPA

037 Reynard
057 Courage

JK Products

7012B
7152B
K057 Courage C60
K037 Porsche 917

Kelly

1782
1780

Outisight

220
221
222 Porsche K8
223 BMW
224 Porsche 917
225

Red Fox

Reynard
1782
1780

2007 Fast BS

F1/32 BODY LIST

BPA

BAR 2004 006
Ferrari 2001/02 F2001
Jaguar 2003 R4
Jordan 2000 EJ10
McLaren 2002 MP4/17
Williams 2001 FW23

JK Products

6124 Ferrari 2003 F2003GA
6125 Jaguar 2003 R4

JK Products, *con't*

6126 Toyota 2003 TF 103
6127 McLaren 2003 MP4/17D
6128 Renault 2003 R23
6129 Williams 2003 FW25

Outisight

OS-330 F1 Indy

Red Fox

McLaren 1998 MP4/13
McLaren 2005 MP4/20

NOTES, CORRECTIONS, & ADDITIONS

2006 NATIONAL CHAMPIONS

SCALE DIVISION

- 1/24 Eurosport** – Paul Gawronski
1/32 Eurosport – Paul Gawronski
C-12E – Sebastion Alioto
GT-12 – *Expert:* Herman James
Amateur: Zac Grinstead
GT-1 – *Expert:* Paul Gawronski
Amateur: Ron Southern
GTP – *Expert:* Duran Trujillo
Amateur: Chris Rodriguez, Jr.
Group 10 – *Expert:* Duran Trujillo
Amateur: Zac Grinstead
Junior: Zac Grinstead
4-1½ Stock Car – *Expert:* Duran Trujillo
Amateur: Bill Vanderziel

2006 NATIONAL CHAMPIONS

WING-CAR DIVISION

- Group 7** – *Pro:* Paul ‘Beuf’ Pedersen
Semi-Pro: Terry Kunz
Group 27 – *Expert:* Luis ‘Gugu’ Bernadino
Amateur: Earl Simpson
Senior Group 7 – Valdo Okali
GP-12 – *Expert:* Brad Friesner
Amateur: James Grinstead
International 15 – *Expert:* Joe Salzman
Amateur: David Key
Cobalt 12 – *Expert:* Paul ‘Beuf’ Pedersen
Amateur: Ed Gibson
Spec-15 – James Grinstead

PAST 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

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