

USRA

UNITED SLOT RACERS ASSOCIATION

1971 - 2011

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

2011

RULE BOOK

2011 NATIONAL CHAMPIONSHIPS

SCALE DIVISION

Mid-America Raceway, 2035 63rd St. Downers Grove, IL 60516
(630) 484-8574

Thursday, April 7	Amateur LMP - King Track Expert LMP - Flat Track
Friday, April 8	4.5" Amateur Nascar - King Track 1/32 F-1 Eurosport - Flat Track General Meeting 4.5" Expert Nascar - King Track
Saturday, April 9	4" Amateur Nascar - King Track Kids Race - Figure 8 1/32 Eurosport GT - Flat Track 4" Expert Nascar - King Track
Sunday, April 10	Amateur GT 12 - King Track Expert GT 12 - Flat Track GTP - King Track
Monday, April 11	1/24 Scale Eurosport - Flat Track

WING-CAR DIVISION

Chick's Hobbiz 10401 Dow-Gil Rd. Ashland, VA 23005
(804) 798-2298

Friday, August 5	Spec-15
Saturday, August 6	Amateur & Pro Group 12
Sunday, August 7	Amateur & Pro International 15
Monday, August 8	Amateur & Pro Cobalt 12
Tuesday, August 9	27 Lite & Group 7 Warm-up
Wednesday, August 10	Amateur Group 27 USRA Meeting Pro Group 27
Thursday, August 11	OMO Geezer Group 7
Friday, August 12	Semi-Pro Group 7
Saturday, August 13	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 to 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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BYLAWS

ARTICLE I

A. DEFINITION OF BYLAWS

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

B. PURPOSES & POWERS

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

C. BOOKS & RECORDS

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

D. NON-PROFIT OPERATIONS

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

ARTICLE II – MEMBERSHIP

A. DEFINITION OF MEMBERSHIP

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

B. CLASSES OF MEMBERSHIP

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

C. MEMBERSHIP DUES

The membership dues payable to the Association by members will be in such amounts as may be determined from time to time by vote of the members. Dues are payable annually. Dues are \$12.00 for General Membership at the national level \$25.00 for Raceway membership, and \$25.00 for Commercial Membership, which are payable to the National Treasurer during the year, or at the National race event. Only products of USRA commercial members will

be approved for use at USRA regional and national competitions. Elected USRA officials will receive a paid Membership. All monies are U.S. Funds.

D. VOTING MEMBERS

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.

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 – (Optional)

- 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) One Assistant Tech Director for each Division of racing
- 7. Webmaster – (Optional)

B. SELECTION OF OFFICERS

The officers except for the National Director will be elected annually by vote of the general membership of the Association at the respective national meeting. Each officer will remain in office until a successor to such office has been elected and qualified. The changeover date will be on October 1 for the Wing-Car Division. The Scale Division 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 “Restricted Products” used in USRA racing. The National Director may appoint an assistant to function as a Communications Director. The Communications Director will assist in the USRA custodial requirements of record keeping as required by law or the USRA Bylaws and communicating public announcements as necessary. He/She will be responsible to publish all of the following in accordance with the USRA Rules and in a timely manner: current rulebook, BOD decisions, proposals, and vote results.

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 “Restricted Products” used in USRA racing.

E. 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.

F. TECHNICAL DIRECTORS (Wing-Car & Scale Divisions)

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

G. WEBMASTER (Optional)

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

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

Nationals Committee;

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

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

ARTICLE VI – AMENDMENT & MODIFICATION OF BYLAWS AND TECHNICAL RULES

All proposals will be reviewed by the USRA Board of Directors as applicable. The Board will decide if the proposal should be placed on the respective ballot. All Technical Proposals are required to be submitted in writing by the close of the respective Divisional National Championship. All proposals affecting the USRA Bylaws are required to be submitted in writing by the close of the Wing-Car National Championship.

A. Online Voting

1. Annual Post Scale Nats Online Vote

- a) The Online Ballot will be posted on June 7. The voting will commence immediately and will close on June 21.
- b) Only Scale Division Members will vote in this election.

2. Annual Post Wing Nats Online Vote

- a) The Online Ballot will be posted on September 15. The voting will commence immediately and will close on September 29.
- b) Only Wing-Car Division Members will vote in this election.

3. Annual Bylaws Online Vote

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

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 be posted on the USRA website homepage at the completion of the vote.
- 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.

- 6. 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.

B. Format of Proposed Rule Changes

1. Rule proposals must include an explanation of how they will impact the current rules. A USRA Board Member will review the proposal with person submitting the proposal for clarity/definition and for the intent/meaning prior to it being submitted to the Board for consideration of being placed on the ballot once the proposal goes to the Board it cannot be changed
2. The USRA Director or his designee shall be present at the Respective Divisional General Meetings and all pre-meetings for the purpose of announcing the proposals and counting votes. The voting results, including exact counts, shall be made public within 30 days of the General Meeting.
3. The next year's rule book for both divisions must be publicly available via the USRA Website no later than December 1.

ARTICLE VII - GENERAL MEETING

A. ANNUAL MEETING

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

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

B. CLASS MEETING (IF NECESSARY)

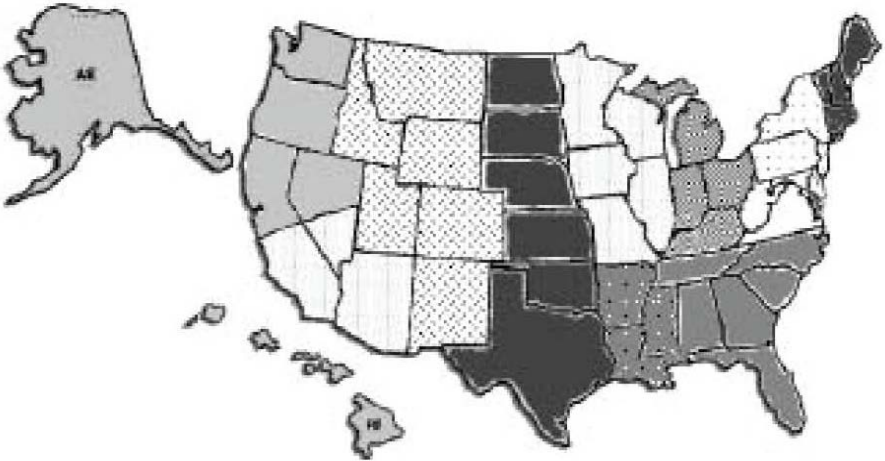
There shall be a meeting for each class following qualifying or at another appropriate time, and rules relating specifically to that class shall be discussed at that time.

C. ORGANIZATION

For various administrative purposes the 48 contiguous states, Hawaii, Alaska, and Canada are divided into 14 Regions as follows:

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

11. Rhode Island, Massachusetts, New Hampshire, Vermont, Maine
12. Hawaii
13. Alaska
14. Canada



ARTICLE IX – SANCTIONED RACING EVENTS

A. NATIONAL CHAMPIONSHIP

1. A National Championship shall be conducted annually for each division of USRA (i.e., major racing category).
2. All entry forms and/or tech sheets are and will remain the property of the USRA. All forms must and will be turned over to USRA officials only.
3. Once the hosting track has been established, the actual Nats race schedule will be determined in collaboration with the hosting track and the USRA Divisional Director. Once a mutual agreement is decided upon by both parties, the final schedule will be sent to the national director for final approval.
4. The annual Scale National Championship Race shall be held between April 1 and May 7.
5. The annual Wing-Car National Championship Race shall be held between July 16 and August 15.

B. SPONSORSHIP

USRA sanctioned events shall not take on the name of any company nor individual engaged in commercial sale of, or production of, products sold for the purpose of slot racing nor any entity deriving commercial benefit from the sport of Slot Car Racing. This would not preclude a retail establishment from normal promotional billing, but would specifically exclude manufacturers or

distributors from usurping the USRA image for their benefit. There are no such restrictions placed on major corporations not operating in or affiliated with persons or firms operating commercially in the sport of slot car racing, and such outside sponsorship is encouraged.

C. NATS SITE SELECTION VOTING PROCEDURE

1. WING AND SCALE 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 year's National Championships in that division. A written ballot will be used for all voting. Votes will be collected during the days preceding the day of the last race. The morning of and prior to that race the vote will be tabulated and the results announced. Should there be a tie in the vote, a track 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.
2. 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 (cashier's 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 treasurer's 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 Champions shall be moved around the country every year. The National Championship may not be held in consecutive years by the same or adjoining areas unless there are no other bids. The map on page 11 shall be used to define areas.

F. SCALE NATIONALS TRACK

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

G. WING NATS SCHEDULE

Classes contested are as follows: Spec 15, GP-12, Intl-15, C-12, 27 Lite, G27Am, G27 Pro, OMO, Geezer G7 Semi-Pro, and Pro 7. Start the races on Saturday and end on the following Saturday or Sunday. An Open Warm-UP race is optional. The USRA Div. I General Business Meeting should be held on Tuesday or Wednesday.

H. HAND-OUT MOTORS

If hand-out motors are used, bids from USRA member manufacturers for supplying hand-out 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.

ARTICLE IX – 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 Tech Director by August 1 for evaluation and inspection.
- C.** Each Divisional Tech Director will report their findings and decisions directly to the USRA National director. The manufacturer will be notified accordingly. Approval will be pending subject to the Manufacturer having product in production to begin filling orders by October 1.
- D.** 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.
- E.** 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.
- F.** When submitting new products to the USRA, manufacturers must provide a written request including a definitive description of the product and if it supersedes a previous product or if it is completely new. If a product is

similar to a previous product the Manufacturer will also provide information that will assist a Tech Director in identifying the product.

X. COMMERCIAL AVAILABILITY

1. Major components for Group and restricted racing (motor, motor parts, chassis, chassis parts, bodies) must be readily available to all participants sufficiently in advance of the race event for all participants to be able to compete on an equitable level.
2. "Commercially-available" means that the product must be "readily available" through at least six (6) retailers across the country and one (1) Commercial Distributors by October 1 of the year prior to the USRA National Event (or other USRA competition event in which they will be used). A Commercial Distributor is defined as business that engages in "Business to Business" sale of slot car products and does not sell direct to retail customers (end users). Recognized Commercial Distributors for 2011 are Crawley Distributing, Eagle Distributing, ERI, and REH.
"Readily available" means that a retailer/distributor must be able to procure product from the manufacturer to reasonably supply demand for the products in a timely manner. This rule does not compel a retailer/distributor to stock slow-moving products, but does require the retailer to act as an order/supply point for the manufacturer's products. Manufacturers must provide a list of distributors and retailers where their products can be found to the USRA official handling the product submissions for the relevant division before October 1.
3. The number of pieces required to be available for a product to be considered commercially-available is 250 pieces for GP-12/15 motors, tagged armatures, restricted chassis, any other restricted component, and bodies.
4. 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.

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 and 27 Lite chassis.

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. Any racer that wins Semi-Pro at the USRA Wing Championship must move to Pro the following year.

C. Pro

1. Any racer who receives merchandise directly from any manufacturer at less than retail price is considered a sponsored racer and must race as 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.

3. Payout will be in cash to Pro Group 7, Senior Open, and Sponsored Pro Group 27 racers. Amateurs or Experts competing in Pro Group 27 will receive merchandise prizes.

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/Pro	Pro
Spec 15*	X		
Amateur Group 12	X		
Expert Group 12		X	X
Amateur Intl 15	X		
Expert Intl 15		X	X
Amateur Cobalt 12	X		
Expert Cobalt 12		X	X
One Motor Open (one combined race)	X	X	X
Group 27 Light 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*

II. RACE PROCEDURE

A. REGISTRATION

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

B. 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 14.3 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 and the bank may be cleaned in both spray glue and limited glue conditions.

D. ACCIDENTAL SPILLAGE

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

PLEASE NOTE:

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

IX. QUALIFYING

A. ORDER

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

B. FORMAT

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

- a) One minute with no byes.
- b) One minute with bye with no loss of time.

X. EUROPEAN (STAGGERED) LANE ROTATION

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

XI. AUSTRALIAN RACE FORMAT

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

1-8: Main only.

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

11-16: 2 Semis and a Main.

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

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

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

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

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

37-38: top 22 qualifiers into Quarters. Remaining run two 4 lane 2x3 races using the red set black set rotation. Top 5 from each move into Quarters. Then 2 Semis and a Main.

39-48: Top 16 qualifiers into Quarters. Remaining racers into four 4 lane 2x3 races using red set, black set rotation. Top 4 from each race moving into Quarters. Then 2 Semis and a Main.

49-54: Top 22 qualifiers into Quarters. Remaining racers into four 4 lane 2x3 races using red set, black set rotation. Top two from each moving into Quarters plus two top lap totals not finishing 1 or 2. Then 2 Semis and a Main.

55-64: Top 16 into Quarters. 17-32 into consis. Remaining into four subconsis using 4 lane 2x3 red set, black set rotation. Four move up each race. Then two Semis and Main.

65-80: Top 16 qualifiers into Quarters. Qualifiers 17-32 into consis. Qualifiers 32-48 into sub consis. Qualifiers 49-80 into sub-sub consis. All consis using red set black set rotation with 4 lanes 2x3 races. Top 4 from each moving up.

81-unlimited: using same as sub-sub-sub-sub.

5. Lane choice will be determined first by qualifying position then by lap total and position from previous heat.
6. In moving racers up from Consis, Quarterfinals, or Semis, the same logic applies. Lane choice selection order is determined by the total laps turned by the winners of the qualifying race.
7. For Main event move-ups first pick goes to the racer with the most laps out of the two Semis, second pick goes to the racer with the most laps out of the other Semi.
8. Choices are then alternated between Semis. Third pick goes to the second-place finisher in the Semi that had first pick, and fourth goes to the second-place finisher in the Semi with second pick, etc.
9. Racers are seeded into the appropriate Semis, Quarterfinals, or Consis according to the following pattern (example given for Semis and Quarterfinals; Consis same pattern as Quarterfinals).

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/ Other winner of Quarter A or	Quarter C or D winner w/ most 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 Qualifier #1	Quarterfinal-B	Quarterfinal-C	Quarterfinal-D
8	2	3	4
9	7	6	5
16	10	11	12
17	15	14	13
24	18	19	20
25	23	22	21
32	26	27	28
	31	30	29

10. Heats, Consis, and Quarterfinals are run: D, C, B, A.

11. Semis are run: B, A.

XII. DURATION OF RACES

<i>Race</i>	<i>Heats</i>	<i>Heat Length</i>	<i>Lane Change</i>
Mains			
1. Pro/Semi-Pro Group 7	8	5 minute	5 minute
2. Group 27/Pro 27	8	4 minute	4 minute
3. Group 27 Lite & OMO	8	4 minute	3 minute
4. All other Wing-car Divs	8	3 minute	4 minute
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
Quarterfinals			
1. Pro/Semi-Pro Group 7	8	2 minute	3 minute
2. Group 27/Pro 27	8	2 minute	3 minute
3. Group 27 Light	8	2 minute	3 minute
4.			
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 unmarshallable car
 - f) Car in wrong lane (rider)
 1. **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 un-marshallable car, racers may continue to work on cars in the pits, if the cars are already in the pits at the time of the track call. A car may not be taken from the track into the pits during a track call. Work may not be carried out during 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.
 - c)** At this time, the armature must then be non-destructively and indelibly marked (suggested method is unique Dremel marks on the shaft). Extreme care must be exercised to avoid damage to armature balance and delicate components such as ball bearings, motor brushes, etc.
 - d)** An impartial race steward must then be charged with the responsibility of observing and verifying the authenticity of the armature for post race inspection. The race will then be restarted.
- 2.** Thorough disassembly and inspection must be conducted immediately upon completion of racing, in a manner assuring accurate technical verification. Armature stack length will be measured, and if within specs, the inspection will proceed to the wire. This can be accomplished by destroying any epoxy or similar binder with extreme heat (suggested method is to use a small torch). Then dissecting the armature with a Dremel and carefully measuring the wire and counting the turns.
- 3.** The fees will be held by the race director until resolution of the matter, then promptly surrendered to the appropriate party. Likewise, any winnings and/or points will be held pending the outcome of the inspection.
- 4.** "Buy a look" proceeds go to the protested party, if not applied to a formal protest.
- 5.** There is a maximum fee of US\$100.00 for protesting Group 27 armatures.

GENERAL TECHNICAL RULES

All cars/racers are expected to comply with these guidelines. All drivers are responsible for the legality of their equipment. There is one car per driver per class, and one driver per car per class. The foundation for rules interpretation is "that if it is not stated as being permitted then it will not be allowed". **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 .750 inches (19.05 mm), unless otherwise specified. Rear wheels maximum width is .810 inches (20.57 mm), unless otherwise specified.
- B. Front tire minimum diameter is .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) No part may exceed 2.5 inches (63.5 mm), measured from the tech block surface. No air control devices can be opaque.

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

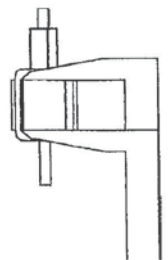
VIII. PARTS REPLACEMENT

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

IX. GENERAL TECHNICAL SPECIFICATIONS

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 lamination material shall be used to determine this figure. This is meant to specifically exclude, for example, such practices as the insertion of spacer-type materials between the laminations, abnormally thick applications of coatings, or any other method of artificial compliance with the rule.

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

B. CONTROLLER SPECIFICATIONS

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

X. TIRE RUBBER

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

XI. SPEC TIRES

A spec tire is defined as a tire provided by the track to the racers for a specific race. A minimum of two brands of tires shall be available for the specific class using spec tires.

Class - Amateur Group 12, tire price - \$12.00.

Amateur Group 12 will be the only class utilizing Spec Tires at the 2008 USRA Nationals.

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.
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.

C. Armature

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

D. Can Modifications

See C-Can Motor Specifications.

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 racers will then fill out the attached registration card and send it in to the USRA to register his chassis. Each chassis competing at the Nats will be checked for this serial number to insure its appropriate use and legality. Chassis may not be modified from original assembled form. All weight must be attached to top of chassis pans only. No weight under the chassis is allowed. All body mounts to be left in original position. (No floating of rear body mounts.) See USRA Price List Table 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 hand-out 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.
3. Axles must be a minimum of 3/32 inch in diameter.

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.

B. Armature

See Armature Technical Specifications table for armature specs. X12 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 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:

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

G. Gears

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

H. Axles

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

I. Wheels

Front and rear wheels may be drilled.

J. Bearings

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

K. Weight

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

INTERNATIONAL 15

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: .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 .0112-.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 .440 inches (11.18 mm). See Armature Stack Length section for clarification.
5. Armatures retailing for the USRA I-15 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.

D. Axles

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

COBALT 12/15

All General Rules also apply.

A. Setup

1. No restrictions.
2. Ball bearings are allowed
3. Amateur and Pro C-12 racers may use single, quad (4), or six (6) magnet motors only.

B. Armature

1. See Armature Technical Specifications table for armature specs, and Approved Components for GP-12 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.

D. Axles

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

GROUP 27 Light

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

A. Motors

1. Cobalt magnet singles only [.400 Tall X .440 Long (+/- 5%)].
2. Ball Bearings allowed in can and endbell.
3. No restrictions on can and endbell.

B. Armature

1. See Armature Technical Specifications table for armature specs.
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

1. USRA Approval Required; may be submitted to USRA as a kit; must be Commercially Available; will have a Maximum Retail Price as listed in the table on page 44.
2. Chassis must be made of steel; must be one continuous piece from the guide mount to the rear axle centerline, to which the rear pillow blocks and rear pillow-blocks are attached.
3. Pillow blocks and motor brace must be made of steel; must remain as submitted by the MFG in the approved kit; no interchanging of components between manufacturers.
4. The length of the chassis must be within +/- .010" of the specified length furnished to the USRA by the MFG.

5. Pin tubes may be brass or steel; maximum 5/8" length; additionally a 1/2" length of pin tubing or maximum .035" piano wire brace to the pin tube may be used.

D. Wheels, Tires, & Gears

Must comply with General Rules; otherwise no restrictions.

E. Bodies

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

F. Race Conditions

Spray glue **only**. (See Track Conditions.)

G. Race Format - All Main

1. Two motors allowed for race including qualifying. May change motors during the race and switch back (A-B-A).
2. 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. Mains will be 3 minutes on and 3 minutes off.
5. Marshalling will go as follows:
 - a) A Main racers will marshall 1st race.
 - b) All other racers will race their Main, then marshall the following Main

H. Axles

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

GROUP 27

All General Rules also apply.

A. Set-up

No restrictions.

B. Armature

1. See Armature Technical Specifications table for armature specs.
2. Timing may be adjusted to allow for factory variations
3. Must be 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 - All Main

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 at a maximum of 13.8 Volts unloaded.
6. Marshalling will go as follows:
 - a) A Main racers will marshall 1st race.
 - b) All other racers will race their Main, then marshall the following Main.

GROUP 7/OPEN (UNLIMITED)

All General Rules also apply.

A. Motor

No restrictions on setup or armature.

B. Chassis

No restrictions.

C. Bodies

Must comply with General Rules; otherwise no restrictions.

D. Wheels, Tires, & Gears

Must comply with General Rules; otherwise no restrictions.

APPROVED COMPONENTS FOR GP-12

C-Can Motors

Cahoza	230 231 232
Camem	K102 K202
GT1	277 T-5 Magnets (Flat Tipped)
Kamen	K100 Set-up K101 K102 Old can new endbell K050 Motor
Kelly & Red Fox	1001 Ultra Lite Plated Can 1150 1152 1153 Ultra Lite plated can (new hardware) 1154 G-2

	1155 G-2 Thin can
	1160 Ultrafast plated
	1170 Silver Bullet thin
	New endbell for all Kelly motors
	KE253 C1X magnets
	Red Fox Box Stock Magnets
Koford	M408J (horizontal)
	M408K (Spec-15)
	M504A Super-Feather GP-12 motor
	M504B Super-Feather Spec-15 motor
	M527A Ultra Feather GP-12 motor
	M 604 .500T X 150L magnets
	M 605 .450T X 150L magnets
	M 606 .450T X 150L magnets
	M 607 .450L X 155T magnets
	M630 Grp. 12 Magnet
Mura	1212
	1213P
	1215P
Parma	455
Pro Slot	723
	723-VIP
	728 (Spec-15)
	728-SRS
	New cans with Mega 3 magnets
Viper Engineering - All approvals expire 2011	505
	506
	507 thin can
	590 (Spec-15)
	GP-12 Motor

ARMATURES -All Classes

Camem	GP-12
	Intl-15
	C-12
	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
Pro Slot	206 (Intl-15)
	207 (C-12)
	211 (27)
	701 Series (GP-12)
	702 (Spec-15)
Viper Engineering _ All approvals expire 2011	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
FX	79 Fast Eddy Chassis
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
	Boxstock 12
Mack	
Parma	
Red Fox	
Proformance	07-W, 07-P GP-12 chassis

Pro Slot	317
	317-04 Perimeter
	317-07
	318
	317-06
	317-08 Tripod
	318-08 Perimeter
	318-04 Tripod
	318-07
	319
	320
Red Fox	RFL
Slick 7	243E
	473D
	543A
	548A
	614
	7243C .055
	7243C .062
	7243D
	7473B
	7541
	7543
	7273C

27 LITE CHASSIS

B-52	27 Lite
Camem	2050
	2051
	Wedge Reverse Taper Center
GTO	Madman V
Koford	M610A
	M610B Kit
	M610C
	M610C Kit
N-R Slot Racing	G-27L
Slick 7	650
Wrightway/Red Fox	270 Narrow
	270 Wide

BODIES FOR WING CLASSES

Alpha	420 Jaguar
	460 Toyota
	470 Shadow
	472 Griffin
	474 Valkyrie
	476 Nissan
	478 RL-1
Camen	GTO II w/rib
	GTO II w/o rib
	GTO III
	Supro
	Supro w/rib
	Supro dimple
	Supro dimple w/rib
	Carrera
	Venom
	Lotus
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
	HSP - 009 * Hypercane
	HSP - 009R * Hypercane with rib
JK Products	KO20 Audi
	KO30 Porsche
	KO41 Stratos
Kamen	Charger
	804 Taz
Kelly	1700A Stalker
	1701 Fox Tail
	1805 Bat
	1806 T-bird
	1802 Fox
	1803 Firestorm
	1807 Bat, with rib
	1808A Bullet
	1809 BK
Koford	M214G Porsche
	M214H Mercedes
	M214I Peugeot
	M214J Ferrari

Outisight

M214J Tesla
M214J Tesla with rib
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
109
110
111R Fugya
112R Fuga

Parma

70503 Phantom
70507 Demon, with rib
70511 Demon

Proformance

7100 Z-28
7100-2 Z-28 without rib
7100-3
7100-4
7101 Secco
7102 Elroy
7103 Outrider
7104 Endor
7105 SkyWalker

7106 Ormond
7107 Excalibur
7108 Quest
7109 Falcon
7109-2 Falcon, with rib
7110 Vanquish, with rib
7110-2 Vanquish, without rib
7111 Hype

Pro Products

7112 Red Five
Pro 101 Carrera
Pro 102 Pontiac GTO
Pro 103 Lotus
Pro 104 Supra with & without rib
Pro 105 Daytona
Pro 106 Venom
Pro 107 Supra (no rib)
Pro 109 Skype

Red Fox

001 Shadow
001A Shadow, with rib
002 Tyfon
003 G-2 Scorp
004 Renault
005 Storm
006 Fulda
007 RFL
Devil
Stock1
Barricuda no part # given
Fat Fox
R - 10
Fox Tock B 101

Maximum Retail Prices for USRA Approved Products

Spec 15 Motor	\$55.53
Group 12 (GP 12 & GT12) Motor	\$55.53
LMP Motor Challenger/Contender/Competitor/Sportsman/Group 11	\$55.53
16D Setup	\$22.36
16D Setup with Aluminum Spring Cups	\$22.36
Spec 15 Armature	\$41.54
I15 Armature	\$39.06
C12 Armature	\$38.89
Group 12 (GP 12 & GT12) Armature	\$36.54
GTP Armatures: Wasp / Hornet / Super 16C / Super 16D	\$29.42
LMP Armatures: Challenger/Contender/Competitor/Sportsman/Group 11	\$28.80
27 Light Chassis Kit	\$78.00
Group 12 Chassis	\$49.17
Spec 15 Chassis	\$49.17
GT 12 Chassis	\$63.81

C-CAN MOTOR SPECIFICATIONS

A. General

1. Motors must be commercially available, as defined in General Rules, Section IX, and must be specifically approved for the GP-12 class on an “as-submitted” basis. Approved motors are listed in the Approved Components for GP-12 listing.
2. Can and endbell must be mass-produced, 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:
 - a) Length - .925 inches (23.50 mm)
 - b) Width - .835 inches (21.21 mm)
 - c) Height - .560 inches (14.22 mm)
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).

	Scale	Expert Wing	Amateur Wing	Spec-15
Magnet Adhesive	No Restriction	No Restriction	No Restriction	No Restriction
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

- 4. Any motor retailing for the USRA Group 12 motor maximum price or less (see USRA Price Limit Table) may be used.
- 5. Anodized spring cups are allowed.

B. Magnets

- 1. Magnet dimensions plus or minus 10% are as follows:
 - a) Length: .500 inches (12.70 mm)
 - b) Width: .150 inches (3.81 mm)
 - c) Height: .550 inches (13.97 mm)
- 2. Magnets must be commercially-available through major distributors.
- 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 C-Can Motor Specs 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.
- 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 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.

Armature Technical Specifications

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

D-CAN MOTOR SPECIFICATIONS

A. Motors (Stock 16D)

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.

1. Stock 16D style set-ups only. Must be commercially-available. Setup must retail for the USRA 16D Setup maximum price or less (see USRA Price Limit

Table). Setups sold with aluminum spring cups must retail for the USRA 16D Setup with Aluminum Spring Cups maximum price or less (see USRA Price Limit Table) 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) Magnets may be shimmed.
 - g) May glue magnets in place. Any adhesive may be used.
 - h) May change brushes and may use any three-coil springs.
 - i) No polishing or honing of magnets is allowed.
 - j) Balancing is allowed.
 - k) Armature may be reconditioned; coating may be removed.
 - l) There is no minimum air gap in 16D motors, beginning in 2008.
 - m) May interchange parts between manufacturer's set-ups.
 - n) Ball bearing allowed in can end only; 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 (16D)

- 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:
 1. Height: .600 inches (15.24 mm)
 2. Width: .875 inches (22.23 mm)
 3. Length: .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 (16D)

- a) Must be stock one piece single (no quads) ceramic magnets as found in the production motor, and meet the following minimum dimensions:
 1. Height: .570 inches (14.48 mm)
 2. Length: .650 inches (16.51 mm)

3. Thickness: .145 inches (3.68 mm)

5. Armatures

See Armature Technical Specifications for armature specs.

6. Set-ups (16D)

16D 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. Ball Bearing allowed in can end; may be soldered in place. End bell fully assembled and drilled for can screws. 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) At the National Championships, Amateur Division racers will use handout motors for all classes.
- c) 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

1. Drivers and Interiors

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

2. Bodies

- a) Must be commercially available and approved for use in the class.

- b)** Bodies must be fully painted, including sides of the body.
- c)** May reinforce body with tape and/or Lexan.
- d)** No air control devices allowed.
- e)** No alterations or additions to the manufacturer's dimensions are permitted.
- f)** Any cut-outs or openings must be the same as on the actual car.
- g)** Body must cover entire chassis when viewed from above.
- h)** All windows must be clear.
- i)** Front wheel wells may be cut out or left clear.
- j)** No cutting into the top of fenders is allowed.
- k)** Must have three decal or painted numbers on the car in appropriate positions.
- l)** Chassis or track may not be visible through windows.

3. Wheels, Tires, & Axles

a) Rear Wheels & Tires

1. Scale classes may only run black rear tires. No dyed tires are allowed.
2. Maximum rear tire width is .815 inches (20.7 mm) unless class rules specify another width.
3. Where .062 clearance is used, there is no minimum tire diameter.
4. Where .032 clearance is used, there is no minimum tire diameter.

a) Rear Axles

1. 3/32 inch axles may be used.
2. No hollow or other lightweight axles may be used.

4. Clearance

- a)** 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.
- b)** 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.
- c)** For banked tracks clearance will be .062 inches for all stamped-steel chassis classes.
- d)** 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.
- e)** For flat tracks clearance will be .032 inches for all stamped steel chassis classes.
- f)** See class rules for additional clearance rules.

III. National Championship Procedures

A. Race Format

1. All scale races will utilize Multiple Mains Formats except 1/32, 1/24, and F-1 Eurosport classes.
2. Mains will be seeded by qualifying.
3. Qualifying order will be determined by fastest lap achieved during the specified qualifying period.
4. All Main events will be 8 x 3 minutes with 2 minute lane changes. For Eurosport race duration refer to Eurosport Race Procedure.
 - a) 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 classes with armature wire specifications.

V. Lane Changes

1. Limit work between heats to adjust braid, push in body pins, straighten body and change lane sticker.
2. NO TOOLS can touch the car during a lane change. Oil and Braid Juice allowed.
3. Allow tires changes ONLY under green flag racing conditions.

VI. 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 manufacturer; such as Flexi and Flexi-2 parts, JK long or short center sections, and heavy or light pans on JK chassis.
- e) Chassis may have a maximum of three chassis parts consisting of one solid center section and maximum of two separate pans. No additional pans or two piece center sections allowed.
- f) No modifications except for the following:
- g) May solder or glue motor, axle oilites, and front wheel retainers.

- h)** May add lead weight and tape to chassis.
- i)** May file holes in motor bracket to allow better gear mesh, but must retain a portion of motor bracket.
- j)** No oilite modifications allowed. May use offset oilites.
- k)** May add spacers between pan and center section.
- l)** May add a 1-inch (25.4 mm) long motor brace and a maximum of two upright braces (one for each upright).
- m)** The original manufacturer's plating may be removed only in areas to be soldered.
- n)** May add pin tubes. Pin tubes may be either solid or floating. May add lead wire retainer.
- o)** May solder on steel guide tongue reinforcement such as Slick 7 but the original tongue may not be removed, modified, or moved.
- p)** No other-modifications, soldering, cutting grinding or bracing allowed.
- q)** May use any guide, nut, spacers, lead wire and clips.
- r)** May perform reasonable filing of rear oilite chassis holes to allow for axle alignment.

GROUP 10 STOCK CAR

All General Rules also apply.

A. Chassis

See Stamped Steel Chassis Regulations.

B. Motors

1. Amateur

- a)** Will be handout motors: Parma 501 or SpeedFX on alternate years.

2. Expert

- a)** See D-Can Motor Specifications, A. Motors (Stock 16D).

C. Bodies

See Stock Car Body Specifications.

D. Gears

Any gear ratio allowed.

E. Axles, Tires, & Wheels

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

F. Clearance

See General Scale Rules – Clearance Section

PRODUCTION 4-1/2 STOCK CAR

All General Rules also apply.

A. Chassis

See Stamped Steel Chassis Regulations.

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

B. Motor

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

C. Bodies

See Stock Car Body Specifications.

D. Gears

Any gear ratio allowed.

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 .675 inch (17.15 mm). Minimum front tire width 0\400 inch (10.16 mm). Minimum rear tire diameter is .790 inch (20.07 mm). Maximum rear tire width is .815 inch (20.7 mm).
5. Independent rotating front wheels are allowed.
6. Solid, one-piece front axles only; no stubbies. Axle must pass through both front uprights. Front axles may be soldered to uprights, but front wheels must rotate. Axle hole in front uprights may be enlarged to allow .675 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.

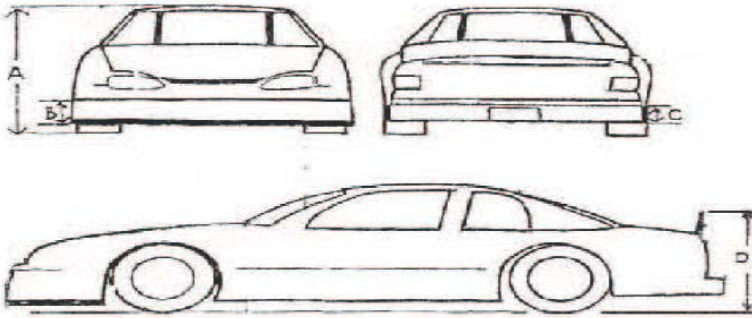
B. Dimensions/rules applying to Group 10 (4") Stock Car Only

1. 4-inch Stock Car bodies will be used. Should represent the full size car. Only Stock Car body styles will be permitted. Bodies must have front and rear bumpers.
2. See Stock Car dimension diagram below for measurement points (A-D):
 - 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 1-1/2 inches (38.43 mm) measuring from test block.
3. For manufacturer specifications, please refer to the USRA website at www.portjeffraceway.com/usra
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 with a maximum height of 1-3/8 inch (34.93 mm).

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 for measurement points (A-D):
 - 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.portjefftraceway.com/usra.
4. Cars must have front and rear bumpers. Front bumper must be at least 1/4 inch (6.35 mm) tall, measuring from top of bumper down. Rear bumper must be at least 1/8 inch (3.18 mm) tall, measuring from top of bumper down.
5. Car must retain a minimum of 1-3/16 inches (30.16 mm) rear body valance. This will be measured from trunk lid down. Rear bumper may be included in the measurement, but must also be a minimum 1/8 inch (3.18 mm). May not cut out or punch holes in rear of the body.
6. Rear spoilers with a maximum height of 1-5/8 inches (41.28 mm) measuring from tech block to top of spoiler.
7. No additions or alterations to the manufacturer's dimensions are allowed.



8. No cutting into top of body or fenders allowed. No part of the chassis or tires may be visible when viewed from above. Maximum of 1/8 inch (3.175 mm) of tire may be visible as viewed from above.
9. Front wheel wells must be cut out.

GTP

All General Rules also apply. This class is open to any competitor, regardless of driver ranking/classification. No Amateur/Expert split.

A. Chassis

See Stamped Steel Chassis Regulations.

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. Super 16D armature must be used.
2. **C-Can:** Refer to C-Can specifications. Armature must be Super 16C, 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 16D, and Super 16C. See Armature Technical Specifications 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 .500 inches (12.7 mm).
3. Sticker front wheels allowed.

G. Clearance

See General Scale Rules – Clearance Section.

LMP

All General Rules also apply.

A. Chassis

See Stamped Steel Chassis Regulations.

B. Motor

A. Amateur

1. Will be handout motors: Falcon 7, Pro Slot Chinese mini motors, Slick7 Chinese mini motors on alternating years.

B. Expert

1. Refer to C-Can Specifications.
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, CTR), or Sportsman (SP).
2. Refer to Armature Technical Specification table for specs.

D. Bodies

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

E. Gears

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

F. Axles, Tires, & Wheels

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

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) 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.
7. Allow axle ball bearings.

B. Motors & Armatures

C-Cans and X12 armatures are used. Refer to C-Can specifications. Refer to X12 armature specification in table.

C. Bodies

1. Amateur Bodies
 - a) Amateurs will use GTP bodies.
2. Expert Bodies
 - a) Experts will use LMP bodies.
 - b) Bodies do not need to be cut on the cut line. The front of the body must maintain some vertical surface. “Blade” bodies will not be allowed.
 - c) Maximum rear body height is 1-5/8 inches (41.288 mm).
 - d) Cut line does not need to be maintained along the sides of the body.
 - e) The front skid plate of the chassis may protrude up to 1/16 inch (outside of the body on each side. The rest of the chassis must be covered by the body when viewed from above 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 .815 inches (20.7 mm).
2. Front wheel minimum diameter is .500 inches (12.7 mm).
3. Sticker front wheels allowed.
4. No hollow or other lightweight axles. May use 3/32 inch rear axles.

F. Clearance

Same as 1/24 Eurosport.

1/24 SCALE EUROSPORT

All General Rules also apply.

A recessed tech block (guide and rear wheels) is used when measuring the car dimensions except ground clearance.

A. Dimensions

1. Car

- a) Max height at rear wing is 35.0mm.
- b) Max width excluding body pins and tape is 83.0mm.
- c) Min vertical edge at front is 1.0mm.
- d) Min ground clearance under rear axle and between rear tires is 0.8mm.

2. Wheels and Axles

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

3. Chassis

- a) Max length; center of rear axle and guide pivot hole is 125.0mm.

B. Chassis

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

C. Body

1. Eurosport 1/24 is a single body class.
2. Legal body is RedFox (Brazil) ISRA Audi R10.

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

D. Motor

1. No restrictions.

E. Front Wheels

1. The front wheels must turn on their center at 90 degrees angle to the track surface and have a black rubber/plastic perimeter.

F. Rear Tires

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

1/32 SCALE EUROSPORT

All General Rules also apply.

A recessed tech block (guide and rear wheels) is used when measuring the car dimensions except ground clearance.

A. Dimensions

1. Car

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

2. Wheels and axles

- a) Max rear tire width is 16.0mm.
- b) Min rear tire diameter is 15.0mm.
- c) Min front wheel diameter is 12.7mm.
- d) Min front wheel width is 0.8mm.

e) Min front wheel track is 56.0mm.

3. Chassis

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

B. Chassis

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

C. Body

1. Eurosport 1/32 is a single body class.
2. Legal body is Red Fox (Brasil) ISRA Audi R10. The body must not deviate from its shape as produced by the manufacturer.
3. The body must cover the entire chassis, including the rear axle and guide flag, in at least one unforced position. It can be fixed to the chassis with pins or cellophane.
4. Body decoration is unrestricted, but must be made in at least two different colors. The body must be completely opaque. Windows must be left clear and all four wheels must be completely visible when viewed from the side. Pin striping and/or bodyline detailing is mandatory.
5. Numbers must be displayed in at least 3 different positions.
6. All cars must contain a painted and 1/32 scale three-dimensional interior with the driver's helmet, shoulders, arms and the steering wheel mounted in the original cockpit position. No portion of the chassis must be seen through the cockpit area when viewed from above. Body cutting must maintain every detail of the real car (i.e. lights, wheel position, etc.).
7. Two bodies per car are permitted, provided that they are painted, trimmed and mounted identically. The extra body is kept in the enclosed park and made available on the return of the other. During a service break both bodies are available to the driver.

D. Motor

1. No restrictions.

E. Front Wheels

1. The front wheels must turn on their center at 90 degrees angle to the track surface and have a black rubber/plastic perimeter.

F. Rear Tires

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

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. 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 side pod 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.

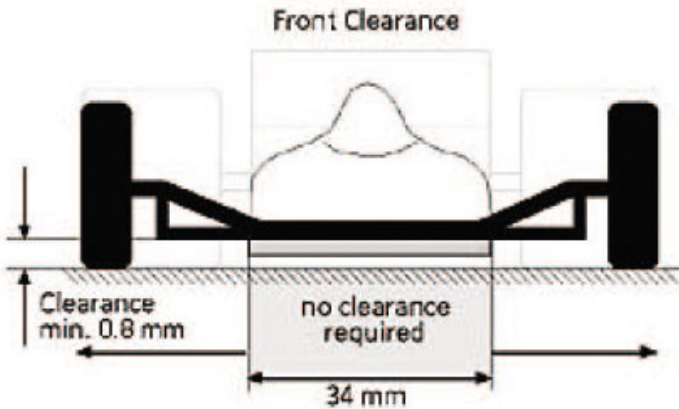
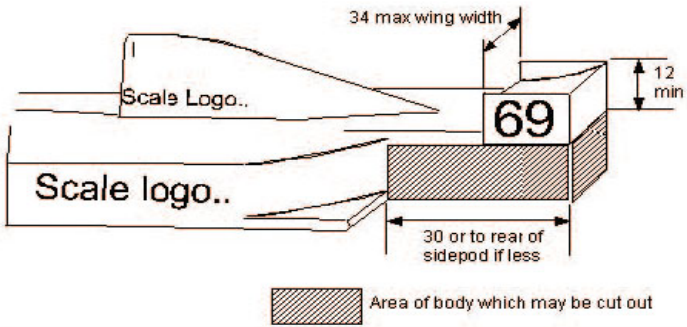
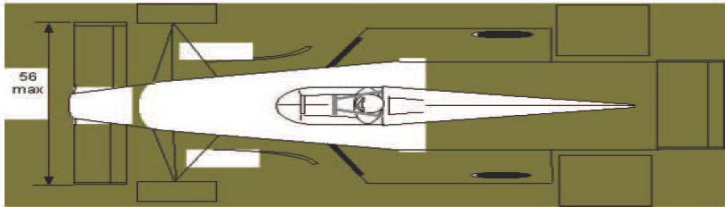
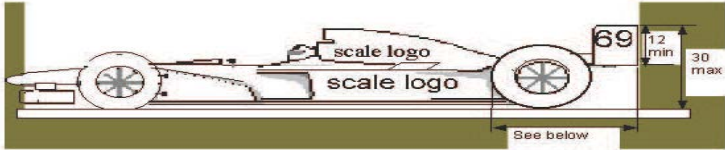
C. Motor

No restrictions.

D. Front wheels

1. The front wheels must have a minimum diameter of .550 inches (14 mm) and a minimum width of .157 inches (4 mm) to a maximum width of .400 inches (10 mm).
2. 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 (.8 mm) at the start of qualifying and each main, the clearance being measured between the rear tires and under the rear axle.
3. The clearance under the front axle and its support(s) must be a minimum of .032 inches (.8 mm). This is the area between the front wheels and the sides of the front of the chassis.
4. There is no minimum clearance required at the front of the chassis (the portion of the chassis ahead of the pans).

1/24 SCALE IRL/INDY CAR

May be substituted for 4-1/2 Stock Car at the discretion of the Nats raceway.
All General Rules also apply.

A. Chassis

1. May use the following chassis: Mossetti, FX, Clark, Mack F1, HNR, Parma Flexi 1 853 (may substitute Flexi 2 center 595B, JK JRL Indy car/ F1 chassis 2690 and 2692, JK Cheetah 2511, JK Cheetah 7 F1 chassis, Champion Turbo Flex, Champion Astro Flex with narrow pans.
2. JRL top suspension piece may be bent to ease body mounting.
3. Stamped steel chassis may add any type of piano wire bracing.
4. Pin tubes may be added.
5. Must utilize bushings only. Ball bearings are not allowed.
6. Pan movements may be increased or restricted.
7. Front wheels must be at least .600 inches in diameter and at least .300 inches wide.
8. No other modifications will be allowed.

B. Body

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

C. Motor

1. Any commercially-available C-can.
2. No strap or cut-down cans are allowed.
3. May notch cans for axle clearance.
4. May drill one small hole per side in can to ease magnet installation.
5. May only use single-piece full-height C-can magnets.
6. May epoxy or superglue magnets in place.

7. May interchange manufacturers' parts.
8. Aftermarket aluminum endbells are specifically legal.
9. Ball bearings in motor are allowed.
10. Brush shunt wires and spring insulation are allowed.
11. The following arms are allowed in Motor Option 1: Super Wasp, Stinger, Hornet, Sportsman, Contender, Challenger, and Competitor. Arms must be tagged and .540 inches in diameter maximum.
12. Motor Option 2: Super 16D motors, defined as any 16D setup.
 - a) Must use Super 16D magnets.
 - b) DM2 magnets are legal.
 - c) Minimum stack length .490 inch.

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 Semis. Top eight into A Semi, next eight into B Semi, 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 Semis. If this is not possible the extra car will be added to the higher Semi. Example: Seventeen cars into two Semis. Nine in A Semi and eight into B Semi.

B. Racing

Eurosport racing Semis will be comprised of 8 x 4 minute heats. The European lane rotation system will be used. Lane changes will be one (1) minutes between heats with no work allowed on the cars during this period. However, drivers or pit personnel are not permitted to work on the track at any time. The top 8 lap totals from Semis will race in a final Main. The Main will be comprised of 8 x 5 minute heats.

SCALE DIVISION APPROVED COMPONENTS

For approved Gp12 / C-Can motors, arms, and components refer to list beginning on pg. 37.

**** Approval for All Viper Engineering Componesnts Expire 10/1/2011**

GROUP 10 MOTORS - 16D

Fast Ones

260SU Twistr

Kelly

580 G2 16D Setup with new or old hardware
 581 G2 Thin
 731 G2
 732 G2
 2000 16D motor

	2004 16D and S16D motor set-up
	270 D1X magnets
Pro Slot	2000 16D
	2004 16D & S16D Motor Set-up
Parma	Rotor
	498IX
	499IX
	Deathstar
Viper Engineering **	541

GROUP 10 ARMATURES - 16D

Mura	2216
Parma	72013
	72015
Pro Slot	706
	16D M2 blank
	706B 16D .520-.560. dia.
Viper Engineering **	5-1 16D
	922B .518 dia. arm
	946B 16D .518 dia. arm

GT1 ARMATURES

(May also be used for GTP racing)

Champion	Sportsman
Koford	Competitor
Mura	Challenger
Pro Slot	Contender
	705 Contender M2 blank
	705B Contender .520-.540 dia.
Viper Engineering **	2-1 Contender
	998B Contender arm .518 dia.

GTP ARMATURES

- SUPER 16C

Mura	Super 16C
Pro Slot	Super 16C
	700C Super 16C arm M2 blank
	700C-B Super 16C .520-.660 dia.
Viper Engineering **	3-1 Super 16C
	926B
	947B

SUPER 16D

Kelly 2001 S16D motor
Parma S16D
Pro Slot S16D
700 Super 16D arm M2 blank with coating
2001 S16D motor
700B S16D .520-.560.dia.
Viper Engineering ** 4-1 Super 16D
919B

Hornet/Wasp/12

Koford M468-SW Super Wasp Arm
Mura Super Wasp
Pro Slot Super Wasp
704 Super Wasp arm M2 blank
704B Super Wasp arm .520-.540 dia.
Viper Engineering ** 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 .025
25017 Cheetah 7 .030
25017R Cheetah 7, 4-inch
25027R Cheetah 7, 4-inch
25047 Cheetah 7, 4-inch .030 pans
25047 Cheetah 7, 4-inch .025 pans
25047AL Cheetah 7, 4-inch aluminum pans
250112C Cheetah 11, .025 C-can chassis

25011C Cheetah 11, .030 C-can chassis
25012 .030 C & D pans
25013C .030 C-can center section
250122 .025 C & D pans
250132C .025 C-can center section
25021 Cheetah X21
X24 Cheetah 11 2 piece
X25 Cheetah 25
X24PA 4-inch aluminum pans

Parma

Flexi Kar
Flexi 2
Flexi 3
605 Flexi 5

Pro Slot

5000 SpeedFX C-can chassis
5000C C-Can center section
5001 SpeedFX D-can chassis
5001C D-can center section
5002 standard pans
5003 medium pans
5004 light pans

4-1/2 STOCK CAR CHASSIS

Champion

Turbo Flex
Astro SE

JK Products

Scorpion II
25231S
2532 Cheetah 7, 4-1/2 inch .030
2533 Cheetah 7, 4-1/2 inch .030 center
25047 Cheetah 7, 4-1/2 inch .030 pans
25057 Cheetah 7, 4-1/2 inch .025 pans
25047AL Cheetah 7, 4-1/2 inch alum. pans
2916S

Parma

Flexi 2
Flexi 3

GT-12 CHASSIS

AB Slotsport

GT12 chassis (Approval exp. 2011)

B Slotcar Performance

GT12-06
BSP GT-12-10

FX Racing Products

FX77

79

89

JK Products

1073E (Approval exp. 2011)

Mack	1073E kit Bull Dog GT-12 Stinger GT-12 Bulldog-2 Stinger-2 Tazer
Red Fox	RFGT12A, RFGT12U Unassembled Kit GT12 brass & wire
Slick 7	446C ASP 4 Kit (3 Options listed below) 1 - Bite bar tubing w/upstop 2 - No bite bar tubing w/pan upstop & pan downstop 3 - No bite bar tubing, no pan upstop or downstop 447 ASP 4 496A GTC-II C12E & GT-12 kit 497A GTC-II C12E & GT-12 assembled 498A K-2 GT-12 kit 499 K-1 assembled 499A K-2 GT-12 assembled 576 GTX GT-12 643 hybrid gt kit 644 hybrid gt assembled 648 hybrid gt blueprinted 645 GTXL kit 646 GTXL assembled 648 GTXL blueprinted

4 Inch Stock Car Bodies (Group 10)

JK Products	70529 09 COT stock car body
Kelly	1747 Taurus 1748 Pontiac 1717 Camry
Parma	1033, 1/24 '06 Ford Fusion HD 1127 1/24 '06 Charger 1035 1/24 '08 COT Stock Car
Outisight	354 2k8 stock car
Red Fox	Camary RFSC38C

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

JK Products	73179 09 COT stock car body
Kelly	1762 06 Monte Carlo 1737 04 Taurus

Parma 1749 05 Monte Carlo
1083 Monte Carlo
1055 09 COT stock car body
Red Fox Fusion RFSC39C
Outisight 250 Monte Carlo

LMP BODIES

G-Force 333 GF-001
Audi GF-007
Prophet 1 GF-002
JK Products 7184 BMW V12 LRM
7183 Mercedes CLR
7213 Peugeot 908 HDi
Kelly 1741 Mercedes
1744 Foxfire
1745 DT
Outisight 285 Audi R8C LMP
291 Audi R10
293 Acura
Parma 1045 Porsche
1048 Dome
1083 MG LeMans
Red Fox Acura RFSC40C
Audi R10 RFSC33C
Peugot 908 HD RFSC44C

GTP BODIES

G-Force 333 GF-013 GTP
Stinger 011a GTP
Caddy 010a GTP
JK Products 70141 - Peugeot
70701 Ultimate Peugeot open cockpit
Kelly 1755 Enzo
1753 FI
Outisight 066 Mercedes Ultimate
343 Acura GTP
069 Bentley Ultimate
Parma 70525 Caddy
70526 Caddy HD
70516 Storm
Red Fox Fighter HD RFSC41LC
Fighter HD Short RFSC41SC

1/24 EUROSPORT BODIES

Red Fox ISRA Audi R10 -24 Scale

1/32 EUROSPOORT BODIES

Red Fox ISRA Audi R10 -32 Scale

F1/32 BODY LIST

Betta BAR Honda V10 2004
Betta Williams BMW 2004
Betta Renault 2006

Bolid BMW Williams
BPA Ferrari (#040)
Jordan 199 (#031)
Williams WF23/BMW (#039)
McLaren MP 4-17 (#045)
Jaguar R 4 (#048)
BAR Honda (#056)
Toyota TF105 (#064)

Outisight OS-330 F1 Indy
OS-331 McLaren

Red Fox F1/GP McLaren 2003
F1 McLaren 2005
F1 McLaren 2006
F1/GP Ferrari 2008

1/24 F1/Indy

G-Force Narrow Indy GF-022
JK Products 6101 - JRL
6118 - IRL
61116 champ car

Outisight 336 F1
337 Indy

Red Fox 1/24 Indy RFSC35C
1/24 F1 RFSC29C

2010 NATIONAL CHAMPIONS

SCALE DIVISION

1/24 Eurosport	George Russell
1/32 Eurosport	George Russell
Formula 1/32	George Russell
4-1/2 Nascar	<i>Expert:</i>
	<i>Amateur:</i> Richie Austin
GT-12	<i>Expert:</i> George Russell
	<i>Amateur:</i> Dustin Senft
LMP	<i>Expert:</i> George Russell
	<i>Amateur:</i> Chris Sanchez
GTP	<i>Expert:</i>
	<i>Amateur:</i> Trace Bowden
Nascar	<i>Expert:</i> Mike Lowery
	<i>Amateur:</i> Richie Austin
JRL/Indy/F1	<i>Expert:</i> Chris Radisich
	<i>Amateur:</i>
Jr. Nascar	Josh Bloom

WING-CAR DIVISION

Group 7	<i>Pro:</i> Paul 'Beuf' Pedersen
	<i>Semi-Pro:</i> Zac Grimstead
OMO	Joe "Chubby" Salzman
Group 27	<i>Expert:</i> Richard Curnette
	<i>Amateur:</i> Luca Bernardino
Senior Group 7	Richard Curnutte
Group 12	<i>Expert:</i> Rob Garland
	<i>Amateur:</i> Lil Brian Stuart
International 15	<i>Expert:</i> Richard Curnutte
	<i>Amateur:</i> Rob Garland
Cobalt 12	<i>Expert:</i> Terry Kunz
	<i>Amateur:</i> Bill Frost
Spec 15	George Mikez

USRA GROUP-7 NATIONAL CHAMPIONS

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