

USRA

UNITED SLOT RACERS ASSOCIATION

1971-2006

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

2006

RULE BOOK

NATIONAL CHAMPIONSHIPS – SCALE DIVISION

Slot Car Raceway, 305 Southwest Blvd., Rohnert Park, CA 94928
(707) 795-4156, www.scrhobbies.com

Tuesday, April 18	1/32nd Eurosport (road course), Amateur GT-12 (King), Expert GT-12 (road course)
Wednesday, April 19	C-12E (road course), 1/24th Eurosport (road course), USRA Meeting
Thursday, April 20	Amateur & Expert GTP (King)
Friday, April 21	Expert GT-1 (road course), Amateur GT-1 (King),
Saturday, April 22	Junior Group 10 (King), Amateur Group 10 (King), Expert 4-1/2 Stock Car (King)
Sunday, April 23	Expert Group 10 (King), Amateur 4-1/2 Stock Car (King)

Amateur Group 10, 4-1/2, GT-1, GTP, GT-12, and Junior Group 10
classes will use hand-out motors.

NATIONAL CHAMPIONSHIPS – WING-CAR DIVISION

Chicagoland Raceway, 300 S. Washington St., LaGrange, IL 60525
(630) 484-8574

Friday, July 28	Spec-15
Saturday, July 29	Amateur GP-12
Sunday, July 30	Expert GP-12
Monday, July 31	Amateur & Expert Intl 15
Tuesday, August 1	Amateur & Expert Cobalt 12
Wednesday, August 2	GP-7 Warmup, General Meeting, Senior GP-7
Thursday, August 3	Amateur Group 27
Friday, August 4	Expert Group 27
Saturday, August 5	Semi-Pro Group 7
Sunday, August 6	Pro Group 7

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By accepting membership into the USRA as a racer or commercial member, you are agreeing to comply with all rules and bylaws in this rule book and not to bring any legal action against the USRA or any of its officers.

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

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UNITED SLOT RACERS ASSOCIATION

BYLAWS

ARTICLE I

A. DEFINITION OF BYLAWS

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

B. PURPOSES & POWERS

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

ARTICLE II – MEMBERSHIP

A. DEFINITION OF MEMBERSHIP

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

B. CLASSES OF MEMBERSHIP

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

C. MEMBERSHIP DUES

The membership dues payable to the Association by members will be in such amounts as may be determined from time to time by vote of the members. Dues are payable annually. Dues are US\$10.00 for General Membership at the national level, US\$25.00 for Raceway membership, and US\$50.00 for Commercial Membership, which are payable to the National Treasurer during the year, or at the National race event. Only products of USRA commercial members will be approved for use at USRA regional and national competitions.

D. VOTING MEMBERS

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

E. TRANSFERABILITY OF MEMBERSHIP

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

F. TERMINATION OR SUSPENSION OF MEMBERSHIP

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

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

ARTICLE III – EMERGENCY CLAUSE

A. EMERGENCY RULE CHANGES

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

ARTICLE IV – OFFICERS

A. ROSTER OF OFFICERS

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

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

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

B. SELECTION OF OFFICERS

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

C. NATIONAL DIRECTOR

The National Director will chair the general membership meeting, and will have full and final authority to make decisions on technical matters which have not been approved by vote of the members of the Association. He/she has the authority to cancel or relocate the site of the USRA Nationals, in accordance with the national rule book procedures. He/she has the responsibility of ensuring that the rule book is updated in accordance with the annual vote of the membership. The National Director may not be a manufacturer, owner, or employee of any company manufacturing or distributing products used in USRA racing.

D. ASSISTANT DIRECTORS (Wing-Car & Scale Divisions)

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

E. COMMUNICATIONS DIRECTOR

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

F. TREASURER

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

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

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

H. WEBMASTER

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

ARTICLE V – COMMITTEES

A. OFFICIAL COMMITTEES

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

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

Rules/Technical Committees - There will be a Rules/Technical committee for each division, which will consist of the Division Director, the Division Tech Director, and the Division Assistant Tech Directors.

Nationals Committee;

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

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

Publicity Committee.

B. COMMITTEE MEMBERSHIP

Members of these committees will be appointed by the Board of Directors and approved by a majority of all Directors. The Product Approval Committee will consist of three (3) members who are not manufacturers, owners, or employees of any company manufacturing or distributing products used in USRA racing.

C. BOOKS & RECORDS

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

D. NON-PROFIT OPERATIONS

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

ARTICLE VI – AMENDMENT & MODIFICATION OF BYLAWS AND TECHNICAL RULES

A. Voting for National Director and Changes to Bylaws affecting both Scale and Wing-Car divisions.

1. There shall be an annual online/postal vote held to elect the National Director.
3. There shall be an annual online/postal vote held to vote on any changes to the Bylaws of the USRA, or any other matters affecting more than one division of racing.
4. A USRA official will be appointed by the National Director each year to officiate in the voting. This officials name will be published on the USRA website along with contact details.
 - a) Proposals and nominations for this vote will close on the 31st of July
 - b) Each fully paid member is entitled to one vote, providing the vote reaches the appropriate USRA official in charge of the voting on or before the 30th of September, in the correct form.
 - c) Voting papers showing all proposals will be mailed to every USRA member before September 1st. Members must either mail their vote to the USRA using the official USRA voting form, or may vote online at the USRA website <http://www.usra.us> using the official voting form.
 - d) Votes without a current membership number and matching name will not be counted.
 - e) Any ties will be broken by a vote of the Board of Directors

B. Amendments to technical specifications will require a simple majority vote of the membership present at the General Meeting.

C. Format of Proposed Rule Changes

1. Rule proposals must include an explanation of how they will impact the current rule book. Proposals that do not fully and clearly state how the proposal, if passed, will change the rule book will not be considered for voting by the membership.
2. Proposals may not be changed once brought to the vote of the general

membership. A printed ballot will be handed out and no changes will be allowed to the ballot once the meeting begins.

3. The USRA Director or his designee shall be present at the General Meeting and all pre-meetings for the purpose of announcing the proposals and counting votes. The voting results, including exact counts, shall be made public within 30 days of the General Meeting.
4. The next year's rule book for both divisions must be publicly available via the USRA Website no later than December 1st following the Nats

ARTICLE VII – ORGANIZATION

A. For various administrative purposes, the 48 contiguous states, Hawaii, Alaska, and Canada shall be geographically divided into 5 areas:

1. West
2. Intermountain
3. Midwest
4. South
5. East

Refer to Article XII section E for the definition of areas.

B. Each area will be headed by a Director appointed by the National Director. It will be his/her responsibility, by working with the respective regional and neighboring area directors where appropriate, to coordinate series events within the various regions to avoid, to the greatest degree possible, conflicts of race dates. Further responsibilities include publication of this race schedule, and responding to requests by members for same. He/she will also serve as arbitrator of disputes at the regional level, consulting the other Area Directors, and National Director as required.

C. Any number of regional associations may be organized within the geographic areas. In addition to the executive duties at the regional level, the Directors of these regions shall make up the competition committee at the national level, with responsibilities to include National Event site selection, and setting of the agenda for the national general meeting.

D. Regional Associations are encouraged to organize and promote annual series championships for each division in accordance with the National Rules.

1. Wing-Car Division: traditional Group & Open racing classes, various Wing Cars.

2. Scale Division: non-glue classes, various Scale Cars.

E. To apply for consideration as a USRA regional entity, the following procedures and limitations must be observed:

1. The prospective region must have a minimum of 20 (twenty) regional dues-paying members.

2. The prospective region must file a list of officers and a projected race schedule with the appropriate Division Director by October 31st of each year and co-ordinate schedules with the Division Director by November 30th each year.

This list is to be published by the USRA by December 31st each year for both divisions.

3. A region that wants to be part of more than one division must register their region with each appropriate USRA Division Director. Before a region will be accepted by a Division Director it must satisfy the Division Director that it does regularly run races for that division.

This can be established by looking at memberships lists for more than the last year as well as race results and championship standings. The final decision rests with the Division Director.

4. The prospective region must have organized and run a race series utilizing rules conforming to the National USRA rules (with minimal modifications permitted) for at least one season.
5. The regional racing series must include events scheduled for at least three separate raceways. The Division Director may waive this requirement in special circumstances (usually geographical) on the condition that the series will meet the requirement should those conditions change.

ARTICLE VIII - PURPOSE OF COMMITTEES

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

ARTICLE IX – GENERAL MEETING

A. ANNUAL MEETING

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

1. Presentation of the Division's financial report.
2. Presentation of rule changes recommended by members for consideration. Proposed changes must be submitted in good form to the appropriate National Director at least sixty (60) days prior to the National Championship events.
3. Election of divisional officers.
4. Before submitted proposals are placed on the agenda for the General Meeting they must be reviewed and voted on by the Board of Directors. Proposers of failed proposals must be given the reasons for their failure, and one chance to re-submit a changed proposal for the Board of Directors to consider. A list of all approved proposals shall be published no later than two weeks before the Annual meeting and Regional Directors Meeting.

B. DIRECTORS MEETING

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

C. CLASS MEETING

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

ARTICLE X – EQUIPMENT APPROVALS

- A. Manufacturers of products who wish to have their components accepted for use in restricted classes in USRA sanctioned events at the national or regional level must be Commercial Members of the Association and must conduct themselves in a manner conducive to the best interests of the sport.
- B. Manufacturers must submit one piece of each component for which they seek approval to the respective Divisional Director by August 1 for evaluation and inspection.
- C. Each Divisional Director will report their findings and decisions directly to the USRA National director.
- D. Each manufacturer must notify in writing all distributors and raceways of any and all new products by Sept. 1 each year.
- E. Before being approved for USRA competition the product must be commercially available at distributors and/or retailers by October 1.

- F. The director will notify the manufacturers of approval or non-approval for the following year's Wing-Car or Scale National Championships.
- G. The National Tech Directors may remove any restricted products that they can prove are no longer commercially available. Refer to *General Competition Regulations, Commercial Availability*.
- H. The products submitted to the USRA for product approval are the property of the USRA, and not the individuals in the respective positions of the USRA. All products are to be available for inspection at the Nats. Products must be turned over to the incoming Tech Director by the outgoing Tech Director.

ARTICLE XI – RACER SPONSORSHIP

- A. Any racer who receives merchandise directly from any manufacturer at less than retail price is considered a sponsored racer.
- B. Level 1 (Major) Manufacturers (defined as complete line manufacturers) may sponsor two drivers maximum per region plus four wild cards total.
- C. Level 2 (Minor) Manufacturers (defined as specialized manufacturers) may sponsor one driver only per region plus two wild cards total.
- D. Employees of manufacturers are exempt from this rule and evidence of employment must be proven to the USRA by two of the following means: Canceled check, W-2 Form and/or 1099 Form.
- E. The Board of Directors will decide the level of the manufacturers.
- F. Each manufacturer with sponsored racers will submit a list of them to the National Director along with the manufacturer's annual membership dues.

ARTICLE XII – SANCTIONED RACING EVENTS

A. NATIONAL CHAMPIONSHIP

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

B. SPONSORSHIP

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

facturers 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. The following voting procedure will be used at the annual meeting of both the Wing and Scale divisions. All fully-paid up members of the USRA present at the annual meeting are entitled to vote for the site of the next years National Championships in that division. A written ballot will be used for all voting. There will be one vote to reduce the number of sites to two from the nominated list. Should there be a tie in this first vote, a complete re-vote will be held. Results will be announced and recorded immediately at the conclusion of the voting, including actual numbers of votes for each site. The voting papers will then be destroyed. Once the two sites are identified, another written ballot will be held to select the site for the next year's National Championship. Results will be announced and recorded immediately at the conclusion of the voting, including actual numbers of votes for each site. The voting papers will then be destroyed.
2. If the raceway which is selected to host the USRA Nats is sold or closes, the race automatically goes to the alternate location. (This does not mean that if a slot car track is sold and replaced in the same location, under the same owner, the race will be moved; only if the slot racing business itself changes hands). If the alternate site also has been sold or closed, the USRA president must either:
 - a) Select a new site to host the National Championship.
 - b) Cancel the race for that year.

D. BIDDING ON NATIONAL EVENT

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

1. The raceway or promoter should be well established with a reputation for organizing and directing quality races. Raceways which have hosted well-attended events will receive preference in the selection process.
2. If it is desired to submit a bid for a USRA National event, a raceway must notify the USRA Director of its intentions to do so. This must be accomplished in writing no later than ninety (90) days prior the current year's National Event.
3. Each bid for the USRA Nationals will be accompanied by a refundable deposit of US\$500.00 (cashiers check or money order). Deposits will be returned promptly to the unsuccessful bidders after the Nats site determination is made. The deposit for the successful bid will be returned after the National Event (two weeks) provided there are no financial problems such as bad checks, failure to deliver advertised pay-outs, etc. If financial problems occur, the deposit will be forfeited and the USRA treasurer shall

use the full amount of the deposit funds to correct bad checks or other losses in an equitable way. The disbursement of Nats site deposit funds, if any, is to be included in the treasurers report.

4. The bids for the next National Events are presented at the General Meeting during the current year's Nationals. Presentations should include:
 - a) Pictures of the raceway or host site, and of previous races (if possible).
 - b) A summary of selected past races, including race schedule, number of entries, etc.
 - c) Details about the facility's track(s) and lap counter system(s), including information concerning track power, batteries, color, braid recess, power polarity, etc.
 - d) Information concerning lodging, airlines, restaurants, and places of interest.
 - e) Pictures of available pit space.
 - f) Letters of approval from local City Directors, and radio and/or television stations.
 - g) A mock race schedule of dates, times, and activities for each day of the National Event. This is a requirement that must be included in any bid.
 - h) 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.
 - i) 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.
 - j) Each bid for the National Event must include financial details of the race to include: guaranteed purse, entry fees, warm up race entry fees, pay-outs, cost of track time, etc.

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 the following page shall be used to define areas.



GENERAL COMPETITION REGULATIONS

I. DRIVER CLASSIFICATION (Wing-Car Division)

A. AMATEUR

1. Race prize payout will be in merchandise certificates and/or trophies, with at least 50% payback to top 8 finishers in a particular class.
2. Car classes will have Amateur and Expert Divisions as defined below:
 - a) Spec-15: Amateur only
 - b) GP-12: Amateur and Expert
 - c) International 15 (15A): Amateur and Expert
 - d) Cobalt 12/15: Amateur and Expert
 - e) Group 27: Amateur and Expert
 - f) Group 7: Semi-Pro and Pro
3. Any racer who has won a USRA National Championship in any Amateur Division, or who has finished in the top three places prior to 2003 in a USRA National Championship event can only compete in the Expert Division in the same (and any lower) class.
4. Amateur racers may enter any Amateur Division with these exceptions:
 - a) Spec-15 racers may only race Spec-15 and Amateur GP-12.
 - b) A racer may not run both Amateur GP-12 and Semi-Pro Group 7 at the same event.
 - c) No Amateur or Semi-Pro entrant may also race Pro Group 7.
 - d) No Pro Racer may enter any Amateur Division in any class.
 - e) No racer who has raced Pro Group 7 at the Nats in the past five years may enter any Amateur Division.

- f) No racer may race both the Amateur and Expert Divisions of any class at the same Nats.

B. PROFESSIONAL

1. Race prize payout will be in cash to Pro Group 7, Senior Open, and Sponsored Pro Group 27 racers. Amateurs competing in Pro Group 27 will receive merchandise prizes.
2. Pro Group 7:
 - a) All drivers with exceptional driving ability.
 - b) Any driver sponsored by a major manufacturer.
3. Pro Group 27:
 - a) All drivers with exceptional driving ability.
 - b) Any driver entering Group 27 who is sponsored by a major manufacturer must race in this class, i.e. cannot race in Amateur Group 27.
 - c) Any driver entering Group 27 who has won the National Championship in Group 27, Semi-Pro Group 7, or Pro Group 7 must race in this class, i.e. cannot race in Amateur Group 27.
 - d) Any driver entering Group 27 who has entered the Pro Group 7 class at the National Championship in the past five years must race this class, i.e. cannot race in Amateur Group 27.

C. SENIOR OPEN

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

II. COMMERCIAL AVAILABILITY

- A. Major components for Group and restricted racing (motor, motor parts, chassis, chassis parts, bodies) must be readily available to all participants sufficiently in advance of the race event for all participants to be able to compete on an equitable level.
- B. “Commercially-available” means that the product must be readily available through retailers and/or three (3) national USRA member 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).
- C. The number of pieces required to be available for a product to be considered commercially-available is 250 pieces for GP-12/15 motors, tagged armatures, restricted chassis, any other restricted component, and bodies.
- D. A product will be considered to be no longer commercially-available after production has ceased. Products in this status which have been approved for competition will continue to be legal for USRA competition for a period of no longer than 2 years after production ceases.
- E. All products which are considered to be commercially-available as well as restricted products must meet retail specifications and must be sold at standard industry discounts through approved dealers. Any product that is restricted in retail price by the USRA may be adjusted in retail price accord-

ing to the annual cost of living, maximum 5% annually. These items include: Group 12, 15, and 27 armatures, and GP-12 chassis.

III. RACE PROCEDURE

A. REGISTRATION

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

B. ACKNOWLEDGMENT

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

IV. NO SMOKING

Smoking is prohibited within the raceway at all USRA events.

V. NO ALCOHOLIC BEVERAGES

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

VI. DRIVERS MEETING

It is suggested that a drivers meeting be held prior to qualifying to discuss race and qualifying procedures, marshaling responsibilities, racer conduct, glue rules, track calls, disqualifications, track tech, etc. Drivers with specific questions should ask them at this time.

VII. TRACK PRE-REQUISITES

In all USRA events, qualifying voltage for all classes will be limited to a maximum of 16.0 volts, and race voltage will be limited to a maximum of 14.0 volts. This voltage is to be measured, unloaded, without the cars on the track, using accurate digital voltmeters to measure the values.

VIII. TRACK CONDITIONS

A. LIMITED GLUE

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

before the power comes on. No glue or other chemicals may be put down or removed from the track surface while the track power is on.

B. SPRAY GLUE

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

C. TRACK CLEANING

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

D. ACCIDENTAL SPILLAGE

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

PLEASE NOTE:

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

IX. QUALIFYING

A. ORDER

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

B. FORMAT

1. Time - A two minute run is allowed to establish the fastest single timed lap. Back up times will be recorded to break ties. Spec-15 class will not qualify. Lanes will be chosen at random. Amateur GP-12 will run a one minute no-bye round of qualifying.
2. The first qualifier will receive one extra minute qualifying time.
3. Byes - A racer may take one bye for any reason (may abort initial qualifying attempt and re-attempt during the bye round).
 - a) Thirty seconds will be deducted from the racers remaining time as a penalty for using a bye.
 - b) Cars will be technically inspected prior to their bye round.
 - c) Times made during the initial attempt and the bye round will count.
 - d) Byes will be run (racers remaining time less a thirty second deduction) at the end of qualifying for each respective class; order will be the same as the original round.

4. If a lap timer is not available, qualifying may be conducted in the form of a one minute run for total laps and sections. Adequate marshaling must be available.
5. Each racer will be given a specified amount of time (not to exceed fifteen seconds) to get hooked up to begin his/her qualifying round. This should be set into the computer to automatically start the time and make it uniform for all racers. Any registered racer not present to qualify when called will be given an automatic bye. Any racer unavailable for the bye will stand by his/her previous best, or if no times are recorded, will be placed in the first (lowest) level of consolation races.
6. Local Option Format (excluding National Competition):
 - a) One minute with no byes.
 - b) One minute with bye with no loss of time.

X. EUROPEAN (STAGGERED) LANE ROTATION

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

XI. AUSTRALIAN RACE FORMAT

- A. All entrants will contest a series of Consis, Heats, Quarterfinals, Semifinals and Finals depending on the number of entries.
- B. All races designated as Consis will be contested over 4 lanes only, running on either the red set (red, green, blue, purple) or the black set (black, yellow, orange, white).
- C. All other races will be contested over 8 lanes.
- D. All races will be on a “move-up” basis. The following schedule has been adopted to ensure that a minimum of four drivers will move up from each race.
 - 1-8 entries:** Final only
 - 9-11 entries:** Round Robin
 - 12-23 entries:** two Round-Robin Semis and Final. Top 4 in each Semi move up.
 - 24-44 entries:** Four Quarterfinals, two Semis, and Final. All entrants start in Quarterfinals, top 4 in each move up to Semis, top four in each Semi move up to Final.

45-46 entries: Two Round-Robin Consis, four Quarterfinals, two Semis, and Final. Fastest 24 qualifiers into Quarterfinals, top 4 in each Consi move up.

47-60 entries: Four Round-Robin Consis, four Quarterfinals, two Semis, and Final. Fastest 16 qualifiers into Quarterfinals, top 4 in each Consi move up.

61-76 entries: Four Sub-Consis, four Consis, four Quarterfinals, two Semis, and Final. Fastest 16 qualifiers into Quarterfinals, qualifiers 17-32 into Consis, top four in each race move up.

more than 76 entries: For races with over 76 entries create Sub-Sub-Consis (and Sub-Sub-Sub-Consis if needed) using the same procedures as for Sub-Consis. Top four in each race always move up.

E. Lane choice will be determined first by qualifying position then by lap total and position from previous heat.

F. In moving racers up from Consis, Quarterfinals, or Semis, the same logic applies. Lane choice selection order is determined by the total laps turned by the winners of the qualifying race.

1. For main event move-ups first pick goes to the racer with the most laps out of the two Semis, second pick goes to the racer with the most laps out of the other Semi.

2. Choices are then alternated between Semis. Third pick goes to the second-place finisher in the Semi that had first pick, and fourth goes to the second-place finisher in the Semi with second pick, etc.

G. Racers are seeded into the appropriate Semis, Quarterfinals, or Consis according to the following pattern (example given for Semis and Quarterfinals; Consis same pattern as Quarterfinals).

24 or fewer entries

Semi-A

Semi-B

Qualifier #

1

2

3

4

5

6

7

8

9 or winner Heat-A

10 or winner Heat-B

11 or second Heat-A

12 or second Heat-B

13 or third Heat-A

14 or third Heat-B

15 or fourth Heat-A

16 or fourth Heat-B

25 or more entries

Semi-A

Semi-B

Quarter A or B winner w/most laps Quarter C or D winner w/most laps

Other winner of Quarter A or B

Other winner of Quarter C or D

Second place from Quarter with first pick

Second place from Quarter with second pick

Continue alternating for remaining picks

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

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

I. Semis are run: B, A.

XII. DURATION OF RACES

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

XIII. MISCELLANEOUS PROCEDURES

A. BLACK FLAG

The race director is obliged to black flag any car which is dragging, interfering with other cars, or continuously de-slotting due to mechanical problems. Upon being black-flagged, the driver must bring the car in for repairs immediately. If the problem is not corrected, the black flag may be enforced again as required.

B. TRACK CALLS

1. The power will only be turned off for extremely unfair or dangerous situations. The following are the only acceptable reasons:
 - a) Braid up
 - b) Power failure (one lane or all)
 - c) Debris in slot
 - d) Lap counter or track equipment failure
 - e) An unmarshalleable car
 - f) Car in wrong lane (rider)

In both the Wing-Car and Scale Divisions, riders will be track calls.
2. During a track call, there will be absolutely no work performed on the cars or lane preparation. Doing so will result in a 20-lap penalty. A second infraction will result in disqualification. This restriction applies to both drivers and their pit helpers.
3. During track calls due to e) above, an unmarshalleable car, racers may 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 marshal-

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

F. UNSPORTSMANLIKE CONDUCT

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

G. PROTEST

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

1. A racer must be aware of the rules when entering a USRA event and withdrawal is not an option in the case of a protest.
2. Any racer in a USRA-sanctioned race whose motor is protested and then refuses to have his/her motor torn down shall be banned from competition in any USRA race for a period of one year from the date of said infraction.
3. **Non-Armature Protest Procedure:**
 - a) A written protest must be filed with the race director within 20 minutes of the end of a main event. Where racers are moving up into another race, protests must be made within 10 minutes of the end of the race in which the protested racer competed.

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

XIV. ARMATURE PROTEST

(Restricted Classes Only)

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

USRA CHAPTERS

Florida (Scale)	http://www.floridadivision2.com/
Great Plains	www.geocities.com/gpusra/
Mid-Atlantic	Jeff Muller, 856-464-1382 jeff_08051@yahoo.com
North Central	www.raceclub.us/NorthCentral
Northern California	www.slick7.com/USRAindex.htm
Mid-South (Wing-Car)	Dennis Strickland, 704-878-0792 dastrickland@bellsouth.net
Mid-South (Scale)	Carroll Bailey, 846-895-3191 batazboy47@aol.com
Penn/Jersey	Jay Kisling, 610-779-5629 jkdir2pres@cs.com
Southern California	www.socalusra.com
Tri-State (Wing-Car)	Ron Van Wagnen, 440-288-1798, 4409498125 rvw288@centurytel.net
Tri-State Oval Series	Ken Green, 317-535-0680 Ron Hershman, fast1ron@yahoo.com
Yankee	www.modelvillehobby.com/images/yankee_usra.htm

GENERAL TECHNICAL RULES

All cars/racers are expected to comply with these guidelines. All drivers are responsible for the legality of their equipment. There is one car per driver per class, and one driver per car per class. **Any rule that is in question or is being interpreted improperly will be clarified by the National Director and/or the Rules Committee.**

I. SCALE

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

II. WIDTH

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

III. WHEELS

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

- A. Rear tire minimum diameter is 0.750 inches (19.05 mm), unless otherwise specified. Rear wheels maximum width is 0.810 inches (20.57 mm), unless otherwise specified.
- B. Front tire minimum diameter is 0.500 inches (12.7 mm), unless otherwise specified.
- C. Front wheels, or one-piece wheel/tire units, must rotate on their axles.
- D. Front wheels must be mounted so as to contact the racing surface, as the car is rocked to the side, before grounding on the chassis or body. This rule applies only to the Wing-Car division.

IV. CLEARANCE

For all classes, the minimum track clearance of chassis, gear, and motor is .062 inches (1.58 mm) unless specified otherwise. No parts may drag. Guide flag/braid, and front and rear tires are exempt from this rule.

V. GUIDE FLAG

One guide or pickup device per car.

VI. BODY

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

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

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

- B. Numbers:** All cars must display three numbers of reasonable size and position, 1/4 inch (6.35 mm) minimum.
- C. Interior:** All cars must contain a suitably painted, 1/24th scale driver, with helmet, shoulders, arms, and steering wheel, mounted in the original cockpit position at all times during race. May be made of any material, paper included.
- D. Windshield:** Windshield must be clear and allow for viewing of driver. May not exceed 1-1/4 inches x 1-1/4 inches (31.75 x 31.75 mm) unless following original manufacturer's mold lines.
- E. Wheel Wells:** Wheel wells must be transparent, or cut to the horizontal center line of the front wheel. When viewed from either side of the car, 75% of both of the front wheels must be visible through the wheel wells.
- F. Body Openings:** The chassis must be completely covered by the body and air control when viewed from above, except for the cockpit opening or USRA legal body openings (such as accurate representations of vents, scoops, etc.).

VII. AIR CONTROL DEVICES (Wing-Car Division Only)

- A.** No part may exceed 2.5 inches (63.5 mm), measured from the tech block surface. No air control devices can be opaque.
- B.** Side Dams may be a maximum of 2.5 inches (63.5 mm) high behind the rear wheel center line and continue on a taper making them a maximum of 2.0 inches (50.8 mm) high at a point 3.75 inches (95.25 mm) forward of the rear wheel center line. The same taper may continue ahead of the front wheels.
- C.** All air control devices must have their front edges taped and their outside corners rounded to a degree which will minimize the chance of injury to race participants and spectators
- D.** May affix any decals or markings on any air control surface (including spoiler) but air control surfaces cannot be opaque.
- E.** Diaplane maximum length is 0.500 inches (12.7 mm). Corners must be rounded to help prevent injury to race participants and spectators..

VIII. PARTS REPLACEMENT

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

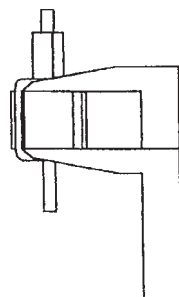
IX. GENERAL TECHNICAL SPECIFICATIONS

A. ARMATURE STACK LENGTH

- 1.** Any armature that has been purposely altered or tampered with to make the stack appear longer in an attempt to circumvent the stack length rules as listed shall be declared illegal at the tech inspector's discretion. Stack length minimums shall be required on all three poles of the armature (using

calipers with the faces across each end of the pole) and only the actual 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.

CAR SPECIFICATIONS - WING-CAR DIVISION

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 who have *never* made the main event in any class at a previous Nats. Drivers may *only* compete in Spec-15 class and Amateur GP-12. Winners of this class may defend their championship title one time *only* (the following year).

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, Sec-*

tion IX, and must be specifically approved for the Spec-15 class on an “as-submitted” basis.

2. Can and endbell will be the same as in the Amateur GP-12 motor rules. See page 31.
3. Any motor retailing for US\$46.13 or less may be used as long as it meets all Spec-15 specifications and rules.
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 GP-12 specifications on page 31.

C. Armature

1. Armatures must be commercially available as defined in General Rules Section IX, and must be specifically approved for the class.
2. Must be machine wound with a minimum of 50 series-wound turns of AWG #29 wire per pole. AWG #29 wire is 0.0112–0.0114 inches in diameter, excluding insulation.
3. Only Spec-15 armatures are permitted, and must have a minimum stack length of 0.440 inches (11.18 mm). See *Armature Stack Length* section for clarification.
4. *All* armatures will be 0.513 inches in diameter (13.03 mm) *only*.
5. Must be tagged with Spec-15 indicating they were produced by a USRA-approved manufacturer in compliance with these rules.
6. Armatures may be reconditioned. Reconditioning includes: cleaning, dyeing, commutator re-truing, and re-balancing.
7. Armatures retailing for US\$30.35 or less may be used as long as they meet all Spec-15 armature specifications and rules.

D. Can Modifications

See C-Can specifications on page 40.

E. Chassis

All chassis manufacturers are encouraged to produce Spec-15 chassis. The USRA will provide each manufacturer with a disk that will have the USRA-designed chassis drawing and specs (measurements) on it. Any manufacturer wishing to make a Spec-15 chassis will be required to make the chassis to these specifications and design *only*. An assembled chassis showing where all of the components are to be placed will also be sent to any manufacturer that wishes to make a Spec-15 chassis. *All* Spec-15 chassis will be engraved by the manufacturer with a serial number. The racer will then fill out the attached registration card and send it in to the USRA to register his chassis. Each chassis competing at the Nats will be checked for this serial number to

insure its appropriate use and legality. Chassis may *not be* modified from original assembled form. All weight must be attached to top of chassis pans *only*. No under chassis weight allowed. All body mounts to be left in original position. (No floating of rear body mounts.) Maximum chassis cost is US\$40.85.

F. Bodies

Any USRA-approved body may be used.

G. Tires

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

H. Gears & Axle

1. Any gear ratio or pitch may be used. Drilled gears are permitted.
2. Only solid axles retailing for US\$5.18 or less may be used. May have flats.

I. Bearings

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

J. Weight

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

GP-12

All *General Rules* also apply.

A. Motors

Refer to page 40 for C-Can specifications.

B. Armature

Refer to page 42 for armature specifications. X-12 or GP-15 armatures may be used.

C. Chassis

1. Chassis for the GP-12 class must be commercially-available and be specifically approved on an “as-submitted” basis, in accordance with the following parameters:
 - a) Any chassis, which has been submitted and approved, that retails for US\$40.85 or less in completed form and which meets all current USRA GP-12 specs, may be used.
 - b) Chassis must be commercially-available separately, and may also be available in an assembled ready-to-run car.
 - c) See the *Approved Components for GP-12* on page 35 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 which is integral.
 - b) Must be made of a continuous piece of steel extending from the guide mount to the rear axle line, to which the pillow blocks are attached.
 - c) The bottom of the guide mount must be level with the bottom of the chassis with no offset.
 - d) Steel 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. On steel chassis, brass and lead may be used for weight.
 - a) Weights must be solid, rigidly-attached, and not used as a brace. All weight may only be attached to the front and/or to any existing weights. Weight may not be soldered to the center rail or to the side rails.
 - b) Weights may extend no more than one (1) inch (25.3 mm) back from the center of the guide hole.
 - c) No modifying or bracing of chassis will be considered to be legal weight.
 - d) Weights may be soldered to the bottom of the chassis so long as the chassis and attached weight clear the track by 1/16 inch (13.05 mm) at all times.
4. A lead wire retainer may be added.
5. A motor support tube or wire may be added, not to exceed 1-1/2 inches (38.1 mm) in total length behind the motor. Motor must be soldered to this brace or it will be considered an illegal chassis brace. Chassis may have steel pillow blocks and motor brace.
6. May solder or glue oilites in place.

E. Prohibited Modifications:

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

F. Lightweight Components

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

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

G. Gears

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

H. Axles

1. Axles retailing for US\$5.18 or less may be used.
2. Axles with flats are allowed.

I. Wheels

Front and rear wheels may be drilled.

J. Bearings

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

K. Weight

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

INTERNATIONAL 15

All *General Rules* also apply.

A. Motor

1. Can must be mass produced, and commercially-available, as defined in the *General Rules, section IX*. Cut outs and machine work are allowed.
2. Can inside dimension minimums are defined as not less than:
 - a) Length: No restrictions.
 - b) Width: 0.835 inches (21.21 mm).
 - c) Height: No restrictions.
3. Magnets must be ceramic. Magnets containing rare earth materials (defined as elements with atomic weights 58 through 71) are not allowed. No neodymium magnets or materials allowed.
4. Ball Bearings are allowed.

B. Armature

1. Must be tagged with at least the number 15, and mass produced by a USRA-approved manufacturer.
2. Must be machine wound with a minimum of 50 series-wound turns of AWG #29 wire per pole. AWG #29 wire, excluding insulation, is 0.0112–0.0114 inches in diameter.
3. Must be commercially available, as defined in *General Rules, Section IX*.

4. Armature stack lamination length shall be a minimum of 0.440 inches (11.18 mm). See *Armature Stack Length* section for clarification.
5. Armatures retailing for US\$32.00 or less may be used as long as they meet all specifications and rules for Intl-15 arms.

C. Chassis

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

COBALT 12/15

All *General Rules* also apply.

A. Setup

1. No restrictions.
2. Ball bearings are allowed
3. Amateur C-12 racers may use single or quad magnets only.

B. Armature

1. Must be tagged with at least the number 12 or 15, and be mass produced by a USRA-approved manufacturer.
2. Must be machine wound with a minimum of 50 series-wound turns of AWG #29 wire per pole. AWG #29 wire, excluding insulation, is 0.012-0.0114 inches diameter.
3. Must be commercially-available, as defined in *General Rules, Section IX*.
4. Armature stack length shall be a minimum of 0.350 inches (8.89 mm). See *Armature Stack Length* section for further clarification. No minimum diameter is specified.
5. Timing may be adjusted to allow for factory variations.
6. Armatures retailing for US\$33.60 or less may be used as long as they meet all specifications and rules for C-12 arms.

C. Chassis

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

GROUP 27

All *General Rules* also apply.

A. Set-up

No restrictions.

B. Armature

1. Must be a tagged Group 27 armature, and mass produced by a USRA-approved manufacturer.
2. Must be commercially-available, as defined in *General Rules*.

3. Must be wound with a minimum of 38 series-wound turns of AWG #27 wire per pole. AWG #27 wire, excluding insulation, is 0.0141–0.0143 inches in diameter.
4. Armature stack lamination length shall be a minimum of 0.440 inches (11.18 mm). See *Armature Stack Length* section for further clarification.

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.

GROUP 7/OPEN (UNLIMITED)

All *General Rules* also apply.

A. Motor

No restrictions to setup or armature.

B. Chassis

No restrictions.

C. Bodies

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

D. Wheels, Tires, & Gears

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

APPROVED COMPONENTS FOR GP-12

(New Parts for 2006 are in **Bold Type**)

C-CAN MOTORS

B52	B52-131
Best O' the West	229B
Cahoza	230
	231
	232
Fast Ones	FO2000
Kamen	K100 Set-up
	K101
	K102 Old can new endbell
	K050 Motor
Kelly	1001 Ultra Lite plated can
	1150
	1152

Kelly, con't	1153 Ultra Lite plated can (new hardware) 1154 G-2 1155 G-2 thin can 1160 Ultrafast plated 1170 Silver Bullet thin New endbell for all Kelly motors
Koford	M408 (vertical) M408J (horizontal) M408K (Spec-15) M504A Super Feather GP-12 motor M50444B Super Feather Spec-15 motor
Mura	1212 1213P 1215P
Parma	455
Proslot	723 723-VIP 728 (Spec-15) 728-SRS New cans with Mega 3 magnets
Viper Engineering*	505 506 507 thin can 590 (Spec-15) GP-12 Motor

ARMATURES

Best O' the West	200C (C-12) 207 (27) 200 (GP-12)
Camen	GP-12 Intl-15 C-12 27
Fast Ones	FO390 (X-12) .513 FO391 (X-12) .518 FO470 (Intl-15) FO480 (C-12) FO490 (27)
Koford	M468-15 (Spec-15) M468-15A (Intl-15) M467-12-B&C (C-12) M468 Box (GP-12) M467-27A
Mura	2012 2013

Mura, con't	2015
Proslot	206 (Intl-15)
	207 (C-12)
	211 (27)
	701 Series (GP-12)
	702 (Spec-15)
Viper Engineering*	901 (GP-12) .513, 38 deg
	901B (GP-12) .518
	901X (GP-12) .513
	903B (C-12)
	906B (GP-12) .518 new blank
	912B (Intl-15)
	990 (Spec-15)
	Va 9-1 (GP-12)
	Va 10-1 (GP-12)

GP-12 CHASSIS

FX	79 Fast Eddy Chassis
	97
	98
GTO	Grp12A&B
JK	27041
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
Parma	70013
Proformance	201
	201A
	201B
	202
Proformance	202A
	202B
	203
	203A

Proformance, con't	203B	
	204	
	204A	
	204B	
	205 GP-12 chassis, all steel	
	205A	
	206	
	207	
	Proslot	317
		317-04 Perimeter
318		
318-04 Tripod		
319		
Red Fox Slick 7	320	
	RFL	
	243E	
	473D	
	543A	
	548A	
	7243C .055	
	7243C .062	
	7243D	
	7473B	
	7541	
	7543	
	7273C	
Zap	100	
	101	

BODIES

Alpha	410 Jaguar XJR
	420 Jaguar
	450 Spice, with rib
	460 Toyota
	470 Shadow
	472 Griffin
	474 Valkyrie
	476 Nissan
Best O' the West	478 RL-1
	301 Mirage
	302 Panoz
	303 Venom
JK Products	304 Hawk
	KO20 Audi
	KO30 Porsche

JK Products, *con't*
Kelly

KO41 Stratos
804 Taz
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

028 Tiga
029 Royale
029R Royale, with rib
029AW Royale SE
030R Vette, with rib
041 Infinity
041R Infinity, with rib
052 Viper
052R Viper, with rib
053 Cobra
053R C-2, with rib
054 Avenger
054R Avenger, with rib
055 Probe, with rib
056 Banshee
057 Viper, short
057 Viper, short, with rib
058 Reaper
100 Asp
101 Serpent
101N Serpent without rib
102 Royale 2K2
103 Vette 2K2
106 V-3
107 V-5 Viper
108 Charger
108R Charger, with rib

Parma

70515 Stinger
70503 Phantom
70507 Demon, with rib

Parma, con't	704651 966, with rib 70500 955 70511 Demon 70499 Cobra
Proformance	7100 Z-28 7100-2 Z-28 without rib 7101 Secco 7102 Elroy 7103 Outrider 7104 Endor 7105 SkyWalker 7106 Ormond 7107 Excalibur 7108 Quest 7109 Falcon 7109-2 Falcon, with rib
Red Fox	001 Shadow 001A Shadow, with rib 002 Tyfon 003 G-2 Scorp 004 Renault 005 Storm 006 Fulda 007 RFL
ZAP	Z-1 Lola Z-2 Ferrari Z-3 Lotus Z-4 Ferrari

* - new name for company that formerly was RJR

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 *GP-12 Approved Components* 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:
 - Length - 0.925 inches (23.50 mm)
 - Width - 0.835 inches (21.21 mm)
 - Height - 0.560 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).
4. Any motor retailing for US\$46.13 or less may be used as long as it meets all GP-12 specs and rules. Price only applies to Amateur Wing-Car motors.

B. Magnets

1. Magnet dimensions plus or minus 10% are as follows:
 - a) Length: 0.500 inches (12.70 mm)
 - b) Width: 0.150 inches (3.81 mm)
 - c) Height: 0.550 inches (13.97 mm)
2. Magnets must be commercially available through major distributors.
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. A minimum air gap of 0.528 inches (13.41 mm) will be enforced.
8. Motor brushes and springs may be replaced and spring tension may be adjusted. See table for spring rules.
9. A 1/8 inch (3.18 mm) notch may be cut in the can to allow for axle clearance.
10. Prohibited Modifications:
 - a) Cut outs or machine work on can or endbell.
 - b) See table 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 manufac-

turers. Spec-15 motors must use the original can, endbell, and hardware.
See table for mixing of other parts.

11. 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.

General C-Can armature specifications

1. Refer to section about C-can motor specification for restrictions on new armature submissions.
2. Only round copper wire can be used. Litz wire may not be used.

GP-12 Armature Specifications

1. Armatures must be commercially-available as defined in *General Rules, Section IX*, and must be specifically approved for the class. Approved armatures are listed in *GP-12 Approved Components*.
2. Must be machine wound with a minimum of 50 series-wound turns of AWG #29 wire per pole. AWG #29 wire, excluding insulation, is 0.0112-0.0114 inches in diameter.

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

Note: Future proposals to allow bearings in endbell end of C-Can motors in the Wing-Car Division will NOT be accepted, per proposal made and passed at the 2005 Wing-Car General Meeting.

3. GP-12 or -15 armatures are permitted in GP-12. Must have a minimum stack length of 0.350 inches (8.89 mm). See *Armature Stack Length* section for clarification. Spec-15 armatures must be a minimum of 0.440 inches (11.18 mm) long.
4. GP-12 armatures must be no less than 0.513 inches (13.03 mm), and no more than 0.518 inches (13.16 mm) in diameter. Spec-15 armatures must be 0.513 inches (13.03 mm) in diameter only.
5. Armatures must be tagged with at least the number 12 or 15 to indicate they were produced by a USRA-approved manufacturer in compliance with these rules. Spec-15 arms must be tagged Spec-15.
6. Armatures may be reconditioned. Reconditioning includes: cleaning, dyeing, commutator re-truing, and re-balancing.
7. Armatures retailing for US\$30.35 or less may be used as long as they meet all GP-12 armature specifications & rules.
8. Only GP-12 (X-12) armatures can be used in GT-12.

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

1. *Amateur Division*

- a) Racers with average driving or technical ability and newer racers.
- b) C-12E class will be for Amateur racers only. Any racer who has previously raced a main in either 1/24th or 1/32nd Eurosport may not compete in C-12E.
- c) At the National Championships, Amateur Division racers will use hand out motors for all classes except C-12E.
- d) Junior class is for those 14 years of age and younger.

2. *Expert Division*

- a) All drivers with exceptional driving or technical ability.
- b) Any driver sponsored by a major manufacturer must race in this Division.
- c) Any racer who has won in any Amateur class at the Scale Nationals must race Expert Division in all classes at any future Nats.

II. Additional General Scale Rules

- A. All scale classes must use three-dimensional vacuum-formed interiors. No paper, flat, or thingie type interiors allowed.

B. National Championship Procedures

1. Amateur classes, not including C-12E, shall use handout motors.
2. Amateurs and experts shall race on each day of the Nats.
3. All scale races apart from 1/32nd, Eurosport, 1/24th Eurosport and C-12E will follow the race format as set out in section XI. Australian Race Format, except that there will be no qualifying for any races. Initial heats will be seeded in a random manner. For all Eurosport classes refer to the Eurosport Race Procedure Section
4. All main events will be 8 x 3 minutes with 2 minute lane changes. Semi finals and Quarterfinals will be 8 x 2 minutes with 2 minute lane changes. All consis and lower will be 4 x 2 minutes with 2 minute lane changes. For Eurosport race duration refer to Eurosport Race Procedure Section.
5. All scale races will be run under USRA Spray Glue conditions as described in section VIII.B.

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

CAR SPECIFICATIONS - SCALE DIVISION

Group 10 Stock Car

All General Rules also apply.

A. Chassis

1. Must be a commercially-available approved chassis.
2. Must be stamped and formed metal. The portions to which the motor is attached must be steel. Floating pans may be steel, aluminum, or brass.
3. May update chassis to RTR specs. May use lightweight replacement pans, and center sections.
4. May interchange parts from a single manufacturers; such as Flexi and Flexi-2 parts, JK long or short center sections, and heavy or light pans on JK Chassis.
5. 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.
6. No modifications except for the following:
 - a) May solder or glue motor, axle oilites, and front wheel retainers.
 - b) May add lead weight and tape to chassis.
 - c) May file holes in motor bracket to allow better gear mesh, but must retain a portion of motor bracket.
 - d) No oilite modifications allowed. May use offset oilites.
 - e) May add spacers between pan and center section.
 - f) May add a one-inch (25.4 mm)long motor brace and an upright brace.
 - g) The original manufacturer's plating may be removed only in areas to be soldered.

- h) May add pin tubes. Pin tubes may be either solid or floating. May add lead wire retainer.
- i) May solder on steel guide tongue reinforcement such as Slick 7 but the original tongue may not be removed, modified, or moved.
- j) No other-modifications, soldering, cutting grinding or bracing allowed.
- k) May use any guide, nut, spacers, lead wire and clips.
- l) May perform reasonable filing of rear oilite chassis holes to allow for axle alignment.

B. Motors (Stock 16-D)

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

1. Stock 16-D style set-ups only. Must be commercially-available. Setup must retail for US\$11.55 or less. Setups sold with aluminum spring cups retailing for US\$12.68 or less may compete.
2. No modifications allowed except as follows:
 - a) Racer may add can screws.
 - b) May add spacers to limit end play.
 - c) May dye armature.
 - d) May re-true commutator.
 - e) May zap magnets.
 - f) May glue magnets in place. Any adhesive may be used.
 - g) May change brushes and may use any three-coil springs.
 - h) No polishing of magnets allowed.
 - i) No shimming or honing of magnets.
 - j) Balancing is allowed.
 - k) Armature may reconditioned; coating may be removed.
 - l) Minimum air gap is 0.575 inches (14.61 mm).
 - m) May interchange parts between manufacturer's set-ups.
 - n) Oilite may be soldered in place.
 - o) May use any USRA-approved C- or D-can endbell hardware as replacement hardware. Aluminum or brass spring cups may be used as replacements.
 - p) May solder and/or glue endbell hardware together and to endbell.

3. Cans (16-D)

- a) Must be made from metal, and have no cutouts or metal removed from sides of can. The only allowable cutouts are the axle notches. Only one hole is allowed on the top and bottom of can. No strap-type cans allowed. Cans must have a full top and bottom. No cheater tabs on cans allowed.
- b) Must meet the following minimum inside dimensions:
 - Height: 0.600 inches (15.24 mm)
 - Width: 0.875 inches (22.23 mm)
 - Length: 0.950 inches (24.13 mm)

- c) Definition of can shall not include surface treatment. If a manufacturer introduces a plated can they need not go through the submission process again. Plated can must sell for the same price as the unplated version.

4. Magnets (16-D)

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

Height: 0.570 inches (14.48 mm)

Length: 0.650 inches (16.51 mm)

Thickness: 0.145 inches (3.68 mm)

5. Armatures (16-D)

Must be commercially available, meet all USRA manufacturing specs, and be approved for use in this class by the USRA.

- a) Must meet the following minimum dimensions:

Diameter: 0.513 inches (13.03 mm) excluding coating

Stack Length: 0.600 inches (15.24 mm)

No split-stack/lamination arms allowed.

- b) Must be wound with 70 series-wound turns of AWG #30 gauge wire (0.0099–0.0101 inches excluding insulation) per pole.

- c) May be balanced.

- d) May have factory-applied commutator tie wrap.

- e) May be dyed and commutator may be re-trued.

- f) Must be tagged 16-D.

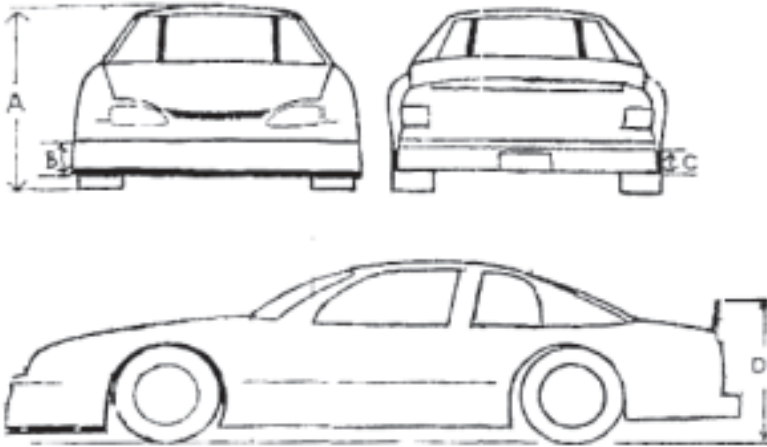
5. Set-ups (16-D)

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

- 6. 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.

C. Bodies

1. Must be commercially-available and approved for use by the USRA.
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. 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.



- A = Roof Height:** 1-1/2 inches (38.10 mm) measured from the track to the center of roof; roof ribs not included.
- B = Front Bumper:** Minimum 1/8 inch (3.18 mm) measured from the top of bumper down.
- C = Rear Bumper:** Minimum 1/8 inch (3.18 mm) measured from top of bumper down.
- D = Rear Spoiler Height:** Maximum height 1-3/8 inches (34.93 mm) measuring from test block.
- For manufacturer specifications, please refer to the USRA website at www.usra.us.

- a) Minimum roof height is 1-1/2 inches (38.10 mm) measured from tech block to the center of the roof. Measurement does not include roof ribs. Car is to have legal clearance while measuring body height.
- b) Minimum 1/8 inch (3.18 mm) bumpers front and rear. Must retain a minimum of 5/8 inch (15.86 mm) rear valance measured from the trunk lid down. Rear bumper may be included in the measurement, but must also be minimum 1/8 inch (3.18 mm). May not cut out or put holes in rear portion of bodies.
- c) All windows must be clear.
- d) Bodies must have full painted 1/24th scale stock car interior. Chassis or track must not be visible.
- e) Rear spoiler to be blade type only with a maximum height of 1-3/8 inch (34.93 mm) measured from tech block to the top of the spoiler. Spoilers are to have no side dams/plates, no radius or fillets between the trunk lid and blade/spoiler.
- f) No other air control devices allowed.
- g) Front wheel wells may be cut out or left clear. No cutting into the top of the fenders.
- h) 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.
- i) No wedging of bodies.
- j) Tech Director reserves the right to allow or disallow any cars or bodies and his decision is final.

D. Gears

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

E. Axles, Tires, & Wheels

1. The car must have a single one-piece front axle that passes through both uprights.
2. Front axle minimum diameter is 0.047 inch (1.19 mm). Front wheel minimum-diameter is 0.500 inch (12.7 mm).
3. May solder front retainers to front axle. May solder front axle where it passes through chassis. Front axles may be bent.
4. Front tires must be made of rubber mounted on separate metal rims. Tires must be mounted on front axles.
5. Rear Tires must be black rubber with a minimum diameter of 0.750 inches (19.05 mm).
6. May use 3/32 inch rear axle.
7. May use drill blank axles front and rear. Axles must be steel. No hollow or other lightweight axles allowed.

F. Clearance

Must have 0.062 inches (1.57 mm) clearance, measured at rear axle including gear.

PRODUCTION 4-1/2 STOCK CAR

All *General Rules* also apply.

A. Chassis

1. Must be a commercially-available, stamped and formed chassis with a 4-1/2 inch wheelbase and be approved for competition. The portion to which the motor is attached must be steel. Floating pans must be steel, aluminum, or brass.
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.
3. May update chassis to RTR specs. May use lightweight replacement pans and center sections.
4. May interchange parts from a single manufacturers; such as Flexi and Flexi-2 parts, JK long or short center sections, and-heavy or light pans on JK chassis.
5. No modifications except for the following:
 - a) May solder or glue motor, axle oilites, and front wheel retainers.
 - b) May add lead weight and tape to chassis.
 - c) May file holes in motor bracket to allow better gear mesh, but must retain a portion of motor bracket.
 - d) No oilite modifications allowed. May use offset oilites.

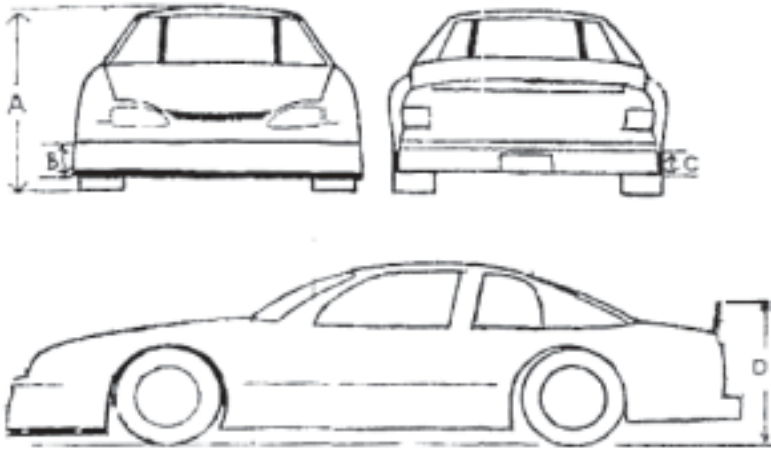
- e) May add spacers between pan and center section.
 - f) May add a one-inch (25.4 mm) long motor brace and an upright brace.
 - g) The original manufacturers plating may be removed in the area to be soldered only.
 - h) May add pin tubes. Pin tubes may be either solid or floating. May add lead wire retainer.
 - i) May solder on steel guide tongue reinforcement such as Slick 7 but the original tongue may not be removed, modified, or moved.
 - j) No other modifications, soldering, cutting, grinding, or bracing are allowed.
 - k) May use any guide, nut, spacers, lead wire and clips.
6. No ball bearings allowed.
7. 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.

B. Motor

Same as GP-10 motor rules.

C. Bodies

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. Bodies must be fully-painted and all window areas must be left clear.
3. 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.
4. Cars must have a minimum roof height of 1-7/8 inch (47.63 mm) measured from tech block. Roof height is to be measured at the center of roof, and does not include roof ribs. Height will be measured with car on tech block or track with legal clearance.
5. Cars must have front and rear bumpers. Front bumper must be at least 1/4 inch (6.35 mm) tall, measuring from top of bumper down. Rear bumper must be at least 1/8 inch (3.18 mm) tall, measuring from top of bumper down.
6. Car must retain a minimum of 1-3/16 inches (30.16 mm) rear body valance. This will be measured from trunk lid down. Rear bumper may be included in the measurement, but must also be a minimum 1/8 inch (3.18 mm). May not cut out or punch holes in rear of the body.
7. Rear spoilers are to be blade-type only with a maximum height of 1-5/8 inches (41.28 mm) measuring from tech block to top of spoiler. Rear spoilers are to have no side dams/plates, no radius, or fillets between the trunk lid and blade spoiler.



- A = Roof Height:** 1-7/8 inches (47.63 mm) measured from the track to the center of roof; roof ribs not included.
- B = Front Bumper:** Minimum 1/4 inch (6.35 mm) measured from the top of bumper down.
- C = Rear Bumper:** Minimum 1/8 inch (3.18 mm) measured from top of bumper down.
- D = Spoiler height:** Maximum 1-5/8 inches (41.28 mm) height measured from tech block to top of spoiler.

For manufacturer specifications, please refer to the USRA website at www.usra.us.

8. No air control devices allowed. No additions or alterations to the manufacturer's dimensions are allowed except for the following:
 - a) Rear spoiler maximum height is 3/8 inch (9.53 mm) measuring the actual blade/chord length. May add Lexan to meet this measurement.
 - b) Rear spoiler maximum width is 3-1/4 inches (82.55 mm). Lexan may be added to meet this measurement.
 - c) No "Gurney Lip" or additional bends in the spoiler allowed.
9. Bodies must have three scale-sized decal or painted numbers placed on roof and both doors. Bodies should be painted to resemble real stock cars.
10. 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.
11. Front wheel wells must be cut out.
12. May reinforce body with tape and Lexan.
13. No wedging of bodies.
14. Tech Director reserves the right to disallow any cars or bodies and his decision is final.

D. Gears

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

E. Axles & Tires

1. Minimum front and rear axle diameter is 3/32 inch. Steel axles only. No hollow or other lightweight axles. Drill blank axles are allowed.

2. Tires front and rear must be composed of black foam rubber only. No dyed tires allowed. May add nail polish to front tires.
3. Front tire minimum diameter is 0.675 inch (17.15 mm). Minimum front tire width 0.400 inch (10.16 mm). Minimum rear tire diameter is 0.790 inch (20.07 mm). Maximum rear tire width is 0.810 inch (20.57 mm).
4. Independent rotating front wheels are allowed.
5. Solid, one-piece front axles only; no stubbies. Axle must pass through both front uprights. Front axles may be soldered to uprights, but front wheels must rotate. Axle hole in front uprights may be enlarged to allow 0.675 front tires to touch the track but 4-1/2 inch wheelbase must be maintained.

F. Clearance

Car must have 0.062 inch (1.57 mm) clearance, as measured at the rear axle including gear.

GTP

All *General Rules* also apply.

A. Chassis

Same as Group 10 Stock Car.

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** Motor follows the same rules as described under GP-10 Stock Car except a Super 16-D armature must be used.
- 2) **C-Can:** Refer to C can specifications on page 40. Armature must be Super 16-C, Super Wasp, or Group 11.

C. Armature

1. Armatures must be commercially available as defined in General Rules, Section IX, and must be specifically approved for the class. Approved armatures types are Super Wasp, Hornet, GP-11 (Challenger, Contender, Competitor, and Sportsman), Super 16-D, and Super 16-C.
2. Armatures must meet one of the following technical requirements:
 - (a) **Wasp/Hornet**
 - (1) Armatures must be no less than 0.513 inches (13.03 mm) in diameter.
 - (2) Armatures must have a minimum stack length of 0.350 inches (8.89 mm). No split-stack/lamination arms allowed.
 - (3) Armatures must be wound with a minimum of 60 turns of AWG #30 gauge wire (0.0099–0.0101 inches, minus insulation) per pole.
 - (4) Armatures must be tagged Super Wasp or Hornet.
 - (b) **Challenger/Contender/Competitor/Sportsman (Group-11)**
 - (1) Armatures must be no less than 0.513 inches (13.03 mm) in diameter.

- (2) Armatures must have a minimum stack length of 0.440 inches (11.176 mm). No split-stack/lamination arms allowed.
- (3) Armatures must be machine wound with a minimum of 55 turns of AWG #30 gauge wire (0.0099–0.0101 inches, minus insulation) per pole.
- (4) Armatures must be tagged Group 11, Challenger (CH), Competitor (COM, COMP), Contender (CONT, CTR), or Sportsman (SP).

(c) Super 16-C

- (1) Armatures must be no less than 0.513 inches (13.03 mm) in diameter.
- (2) Armatures must have a minimum stack length of 0.490 inches (12.45 mm). No split stack/lamination arms allowed.
- (3) Armatures must be machine wound with a minimum of 55 turns of AWG #28 gauge wire (0.0125–0.0127 inches, minus insulation) per pole.
- (4) Armatures must be tagged Super 16-C.

(d) Super 16-D

- (1) Armatures must be no less than 0.520 inches (13.03 mm) in diameter. Coating may be removed.
 - (2) Minimum Stack length of 0.490 inches (12.45 mm). No split-stack/ lamination arms allowed.
 - (3) Must be machine wound with a minimum of 60 turns of AWG #28 gauge wire (0.0125–0.0127 inches, minus insulation) per pole.
 - (4) Armatures must be tagged Super 16-D.
- 3. Armatures may be balanced.
 - 4. Armature may have factory commutator tie wrap.
 - 5. Armatures may be reconditioned.
 - 6. Arms meeting these specs and retailing for US\$24.45 or less are allowed.

D. Bodies

- 1. Only bodies on USRA-approved GTP body list may be used.
- 2. Body must cover entire chassis when viewed from above. Cutting into the top of the body for motor, gear, tire, or guide clearance is not allowed. Any cut outs or openings must be the same as on actual car. May cut out rear portion of bodies as long as body is cut to manufacturers cut lines.
- 3. Bodies must be fully painted. All windows must be clear. Must have 3 numbers.
- 4. No air control devices may be added. Alterations or additions to the manufacturer's dimensions are not permitted.
- 5. Must use a 1/24 scale size painted driver/interior, mounted in normal position, and covering entire interior. No flat or thingie interiors allowed. Driver/interior must include helmet, arms, and steering wheel.
- 6. May reinforce body with Lexan and tape.
- 7. Maximum height of body is 1.625 inches (41.28 mm).
- 8. Front wheel wells may be cut out or left clear.

E. Gears

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

F. Axles, Tires, & Wheels

1. Front axle minimum diameter is 0.047 inches (1.19 mm). Front axle may be bent. May use piano wire or drill blank and axle may be soldered to chassis.
2. May use 3/32 inch rear axle. No hollow or other lightweight axles.
3. Front tires must be made of rubber mounted on separate metal rims, and mounted on front axles. Front wheels and tires must rotate. Minimum diameter is 0.600 inches (15.24 mm).
4. Black rear tires only; minimum tire diameter is 0.750 inches (19.05 mm), maximum tire width is 0.810 inches (20.57 mm).

G. Clearance

Chassis must have 0.062 inches (1.57 mm) rear clearance as measured at the rear axle, including gear. May use Eurosport clearance rules on flat tracks. If Eurosport clearance rules are used, rear tire diameter is unrestricted.

GT-1

All *General Rules* also apply.

A. Chassis

Same as Group 10 Stock Car.

B. Motor

1. Refer to C-Can specifications on page 40.
2. Motors with a retail price of US\$46.13 or less are allowed but meet all specifications for this class.

C. Armature

1. Armatures must be commercially available as defined in *General Rules*, and must be specifically approved for the class.
2. All armatures must meet the following technical requirements:
 - a) armatures must be no less than 0.513 inches (13.03 mm) in diameter.
 - b) Armatures must have a minimum stack length of 0.440 inches (11.18 mm).
 - c) Armatures must be wound with 55 turns of AWG #30 gauge wire (0.0099–0.0101 inches, minus insulation) per pole.
 - d) Armatures may be balanced.
3. Armatures may be reconditioned but not re-sized. Reconditioning to include cleaning, balancing, dyeing, and re-truing of commutator.
4. Must be tagged Group 11, Challenger (CH), Competitor (COM, (COMP), Contender (CON or CTR), or Sportsman (SP).
5. Armatures retailing for US\$23.93 or less are allowed.

D. Bodies

1. Bodies for GT-1 class must be commercially available and approved for competition.

2. Body must cover entire chassis when viewed from above. Cutting into the top of bodies for motor, gear, tire or guide clearance is not allowed. May cut out rear portion of bodies. Bodies must be mounted to manufacturer's existing cut lines.
3. Bodies must be fully painted. All windows must be clear. Must have three (3) scale-sized numbers, decals or painted.
4. No air control devices may be added. Alterations or additions to the manufacturer's dimensions are not permitted.
5. Bodies must have full painted 1/24 scale interior. Chassis or track may not be visible.
6. Front wheel wells may be cut out or left clear.
7. May reinforce with tape and Lexan.
8. Maximum rear height is 1- 5/8 inches (41.28 mm). Body must be cut on manufacturer's cut line.

E. Gears

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

F. Axles, Tires, & Wheels

1. Front axle minimum diameter is 0.047 inches (1.19 mm). Front axle may be bent. May use piano wire or drill blank and front axle may be soldered to the chassis.
2. May use 3/32 inch rear axle. No hollow or other lightweight axles.
3. Front tires must be made of rubber mounted on separate metal rims, and mounted on front axles. Front wheels and tires must rotate. Minimum diameter is 0.600 inches (15.24 mm).
4. Black rear tires only; minimum tire diameter is 0.750 inches (19.05 mm), maximum tire width is 0.810 inches (20.57 mm).

G. Clearance

Chassis must have 0.062 inches (1.57 mm) rear clearance as measured at the rear axle, including gear. May use Eurosport clearance rules on flat tracks. If Eurosport clearance rules are used, rear tire diameter is unrestricted.

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 US\$53.01 or less are allowed.
6. Manufacturer must provide an assembly instruction sheet. The instructions must explain how to assemble the chassis like the assembled submitted chassis. Subject to the approval of the Scale Division Tech Director, the instructions may include minor modifications to the chassis.

B. Motors & Armatures

C-Cans and X-12 armatures are used. Refer to *C-Can specifications* on page 40. Refer to X-12 armature specification on page 42.

C. Bodies

Same as GTP, except Experts will use GT-1 bodies.

D. Gears

No Restrictions.

E. Wheels, Tires, & Axles

1. Black rear tires only. Minimum rear tire diameter is 0.750 inches, (19.05 mm), maximum tire width is 0.810 inches (20.57 mm). If Eurosport clearance rules are used, rear tire diameter is unrestricted.
2. Front wheels and tires must rotate. Minimum diameter is 0.600 inches (15.24 mm). Axles must be mounted to chassis.
3. Front tires must be mounted approximately perpendicular to the track; axles may be adjusted to allow this.
4. No hollow or other lightweight axles. May use 3/32 inch rear axles.

F. Clearance

Same as 1/24 Eurosport.

C-12E

A. Chassis

1. Any chassis approved for racing in the scale division retailing for US\$84.58 or less may be used. See approved list for C-12E chassis.
2. Ball bearings allowed.
3. Manufacturer must provide an assembly instruction sheet. The instructions must explain how to assemble the chassis like the assembled submitted chassis. Subject to the approval of the Scale Division Tech Director, the instructions may include minor modifications to the chassis.

B. Setup

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

C. Armature

1. Armatures must be tagged with the number 12 or 15 and be mass-produced by a USRA-approved manufacturer.
2. Armatures must be machine wound with a minimum of 50 series-wound turns of AWG #29 wire per pole, which is 0.0112–0.0114 inches in diameter, excluding insulation.
3. Must be commercially available, as defined in *General Rules, Section IX*.
4. Armature stack length shall be a minimum of 0.350 inches (11.18 mm) See *Armature Stack Length* section of *General Rules* for further clarification.
5. Timing may be adjusted to allow for factory variations.
6. No armature minimum diameter.
7. Armatures retailing for US\$32.44 or less may be used but must meet all specifications and rules for C-12 armatures.

D. Bodies

Same as GTP.

E. Race Procedure

Same as 1/24 Eurosport.

1/24 SCALE EUROSPORT

All *General Rules* also apply.

A. Chassis

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

B. Motor

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

C. Bodies

Same as GT-1 bodies.

D. Gears & Axles

No restrictions.

E. Tires & Wheels

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

F. Clearance

1. Clearance will be checked at the beginning of the race with no check at the end of the race. However if the car is dragging the track during racing, the race director, at his discretion, may check clearance. Any car found to be dragging the track will be repaired during green flag racing conditions.

2. Clearance shall be 0.032 inches (.81 mm) in rear. This is not recommended for tracks with banking. When racing on banked tracks, a higher clearance (.062 inches, 1.57 mm) should be specified.
3. Gear may not extend below chassis.

1/32 SCALE EUROSPORT

All *General Rules* also apply.

A. Chassis

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

B. Motor

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

C. Bodies

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

D. Gears & Axles

No restrictions.

E. Tires & Wheels

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

F. Clearance

Same as 1/24 Eurosport.

EUROSPORT RACE PROCEDURE

A. Qualifying

Qualifying order will be determined by a random draw. Each driver will receive one minute of qualifying time to establish his/her single fastest recorded lap time. Qualifying times are used to seed multiple mains. Top eight into A main, next eight into B main, and so on. In the event of an odd number of cars needing Round Robins, the extra car(s) will be added evenly throughout the mains. If this is not possible the extra car will be added to the higher main. Example: Seventeen cars into two mains. Nine in A main and eight into B main.

B. Racing

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

SCALE DIVISION APPROVED COMPONENTS

For approved C-Can motors and X-12 arms refer to page 35.

(New Parts for 2006 are in **Bold Type**)

GROUP 10 MOTORS - 16-D

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

GROUP 10 ARMATURES - 16-D

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

GT1 ARMATURES

(May also be used for GTP racing.)

Best O The West Champion Fast Ones	216 Contender Sportsman Contender 360 Contender arm .514 dia. 361 Contender arm .518 dia.
Koford Mura Proslot	Competitor Challenger Contender 705 Contender M2 blank
Viper Engineering*	2-1 Contender 998B Contender arm .518 dia.

GTP ARMATURES

– SUPER 16-C

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

– SUPER 16-D

(Coating no longer required.)

Fast Ones	355
Kelly	2001 S16-D motor
Parma	S16-D
Proslot	S16-D 700 Super 16-D arm M2 blank with coating 2001 S16-D motor
Viper Engineering*	4-1 Super 16-D 919B

– HORNET/WASP

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

GROUP 10 CHASSIS

(Also used with GT-1 and GTP.)

Champion

Turbo Flex

Astro XE

JK Products

Scorpion II

Cheetah

Scorpion III

Scorpion III w/heat-treated pan

2909 pan

2909H

2901S

2501S

25027 Cheetah 7 0.025

25017 Cheetah 7 0.030

25017R Cheetah 7, 4-inch (front wheels must be outboard of pans)

25027R Cheetah 7, 4-inch (front wheels must be outboard of pans)

25047 Cheetah 7, 4-inch 0.030 pans

25047 Cheetah 7, 4-inch 0.025 pans

25047AL Cheetah 7, 4-inch aluminum pans

Mossetti

300 Titan

303 Titan w/aluminum pan (any color)

Parma

Flexi Kar

Flexi 2

Flexi 3

579 Flexi 4

605 Flexi 5

RadTrax Products

RT-55 Gambler

4-1/2 STOCK CAR CHASSIS

Champion

TurboFlex

Astro SE

JK Products

One Piece

Scorpion II

JK 25231S

JK2532 Cheetah 7, 4-1/2 inch 0.030

JK2533 Cheetah 7, 4-1/2 inch 0.030 center section

JK25047 Cheetah 7, 4-1/2 inch 0.030 pans

JK25057 Cheetah 7, 4-1/2 inch 0.025 pans

JL25047AL Cheetah 7, 4-1/2 inch aluminum pans

JK2916S

C-12E Chassis

Parma Flexi 2
Flexi 3

C-12E CHASSIS

FX Racing Products FX90
JK Products JK10761E New C-12 Euro chassis
JK1076E New C-12 Euro chassis
Kelly 1532
1530
Mossetti Racing MR212A New C-12 Euro chassis
Slick 7 496
496A GTC-II C-12E & GT-12 chassis
497
497A GTC-II C-12E & GT-12 chassis
477 - Motor brace to convert 498 & 499
to C-12 Euro chassis

GT-12 CHASSIS

B Slotcar Performance BSP01
FX Racing Products FX89
FX92
FX93
FX89 lighter GT-12 with center rails
FX89 lighter GT-12 without center rails
and center and side bar stiffeners. Note: the FX 89
may be built either way.
JK Products **10731**
1073E
1073E kit
Kamen **700**
Kelly 1520 kit
1521 G3 kit
1523 new G3 GT-12
1527
1529
1530 kit
1922 assembled
Mossetti Racing 200
200A new GT-12
Slick 7 447
447A
447B assembled ASP III
446A

Slick 7, con't

- 446B kit ASP III
- 496A GTC-II C12E & GT-12 kit
- 497A GTC-II CC12E & GT-12 assembled
- 498 K-1 kit
- 498A K-2 GT-12 kit
- 499 K-1 assembled
- 499A K-2 GT-12 assembled
- 548 Xtreme GT-12 w/ front bumper body mnts
- 572 GTX GT-12
- 447C ASP 4
- 446C ASP 4 kit. Note: there are 3 options for this kit:
 1. Bite bar tubing with upstop,
 2. No bite bar tubing with pan upstop and pan and downstop,
 3. No bite bar tubing, no pan upstop or downstop.

GROUP 10 BODIES

JK Products

- 7321 Monte Carlo
- 7322 Dodge
- 7323 Taurus
- 7324 Pontiac

Kelly

- 1723
- 1724
- 1725
- 1747 '05 Taurus**
- 1748 '05 Pontiac**

Parma

Outisght

- 1081 Monte Carlo
- 200 Monte Carlo
- 201 Monte Carlo**

4-1/2 STOCK CAR BODIES

JK Products

- 73121 Dodge
- 73131 Taurus

Kelly

- 1731
- 1733
- 1737
- 1735
- 1746 '05 Taurus**
- 1749 Monte Carlo**

Parma

Outisght

- 1016 Taurus
- 1082 Monte Carlo
- 250 Monte Carlo

JK Products

GT-1 BODIES

7197 Bentley
7112 Saleen
7194 Chrysler LMP
7195 Courage
7196 Panoz LMP
7193 Reynard
7187 Lola Judd
7191 Sintura
7186 Panoz open cockpit
7176 Toyota
7192 Audi R8
7184 BMW V12 LRM
7185 Cadillac Le Mans
7177 BMW Le Mans
7178 Porsche GT1
7183 Mercedes CLR
7182 Audi RSC
7207 Bentley 03 LMP
7198 MG Lola
7199 Dome
7200 Ascari

7203 Porsche
7204 Lola B05
7205 Mazda
7301 Multimac
72341 Doran

Kelly

1741 Mercedes
1740 Porsche
1742 CLK
1744 Foxfire

1745 DT

Parma

1044 Mercedes
1045 Porsche
1048 Dome
1083 MG LeMans
088 2K2 Mercedes

Outisght

Red Fox

001 Bentley
002 Cad-GT
003 Cadi 05
004 Porsche

GTP BODIES

(Also used with GT-12 and C-12E)

Parma

70514 Lola
70513 R8R
70519 Ultimate Intrepid
70506 Intrepid SS
1103 Intrepid
70512 Euro R8R
70519 Lola
70524 Lola HD
70525 Caddy
70526 Caddy HD
70516 Storm

Outisight

065 BMW Short Wing
066 Mercedes Ultimate
066E Mercedes ISRA/Short Wing
067 Cadillac Ultimate
0671 Cadillac IMCA
067E Cadillac ISRA/Short Wing
068 Bentley IMCA
069 Bentley Ultimate
084
085

Kelly

300 BMW ISRA
301 BMW Ultimate
1754 Countach
1756 Diablo
1750 Elise
1737 Bimmer
1760 Caddy HD
1753 F1
1759 F1 HD
1755 Enzo
1757 Enzo HD
1761A MK GTP
1761B MK GTP

JK Products

70701 Ultimate Peugeot
70714B
7014U
7073
7070U

Red Fox ToyTech

K035 BMW
005 Lola C
TR-166-7 ALMS coupe

ToyTech, con't	TR-165-7 ALMS
	TR124
	095
	095-7
	096
	096-7
	097
	097-7
	102
	102-7
	103
	103-7
	124-7
FX Products	79 BMW GTP
Best O The West	305 Wildfire GTP

1/32 EUROSPOORT BODIES

BPA	037 Reynard
	057 Courage
Outisight	220
	221
	222 Porsche K8
	223 BMW
	224 Porsche 917
	225
	Reynard
JK Products	7012B
	7152B
	K057 Courage C60
	K037 Porsche 917
Kelly	1782
	1780

* - new name for company that formerly was RJR

NOTES, CORRECTIONS, & ADDITIONS

2005 NATIONAL CHAMPIONS

SCALE DIVISION

- 1/24 Eurosport** – Paul Ciccarello
1/32 Eurosport – Herman James
C-12E – Joe Salzman
GT-12 – *Expert:* Herman James
Amateur: James Grinstead
GT-1 – *Expert:* Duran Trujillo
Amateur: Trevor Rosenberg
GTP – *Expert:* Alan Ohren
Amateur: Trevor Rosenberg
Group 10 – *Expert:* Alan Ohren
Amateur: Trevor Rosenberg
Junior: Matt Ramirez
4-1/2 Stock Car – *Expert:* John Martin
Amateur: Terry Tawney

2004 NATIONAL CHAMPIONS

WING-CAR DIVISION

- Group 7** – *Pro:* Paul ‘Beuf’ Pedersen
Semi-Pro: Marcio Paschoalino
Group 27 – *Expert:* Paul ‘Beuf’ Pedersen
Amateur: Roger Schmitt
Senior Group 7 – Richard Curnutte
GP-12 – *Expert:* Mike “Erkle” Tyliniski
Amateur: Bob Lucky
International 15 – *Expert:* Jason Bauer
Amateur: Bob Maxwell
Cobalt 12 – *Expert:* Paul ‘Beuf’ Pedersen
Amateur: Brad Freisner
Spec-15 – James Grinstead

PAST USRA GROUP-7 NATIONAL CHAMPIONS

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

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