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**Texas Slot Racers Association**  
**The Texas Chapter of the United Slot Racers Association**

**2006 SERIES RULES**

[Administration & Procedures](#)  
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Previous editions of TSRA rules are hereby superseded by the following 2006 TSRA rules.

*All previous editions are obsolete*

**ADMINISTRATION & PROCEDURES**

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*The TSRA policy meeting will be held 15 minutes after the TSRA Box Stock main event at final race of the year. The order of business will be:*

- 1. Trophy presentations for at least the top 3 Series points winners in Wing Flexi, Texas NASCAR, GTP, USRA Box Stock and TSRA Box Stock. (Trophy presentations for Cobalt 12 and Group 7 will occur after the Group 7 main.)*
- 2. Discussion and adoption of the 2007 year rule changes.*
- 3. Election of the 2007-year officer(s).*

*The yearly racing schedule should be finalized by the newly elected officer(s) and member track owners' 1 month prior to the first race of the new season.*

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The TSRA Raceways will host 8 races during the 2006 season. Four racing classes will be run on Saturday and three classes on Sunday. Please refer to the 2006 TSRA Race schedule in this rulebook.

## **CLASSES**

TSRA Raceways will host races in 2006 for the following slot car classes:

**Saturday:** 4" Wing Flexi, 4" Texas NASCAR, GTP, USRA Boxstock 12

**Sunday:** TSRA Boxstock 12 , Cobalt 12, Group 7

## **SMOKING**

FIRE MARSHALL CODE inside many TSRA member raceways prohibits smoking. Those wishing to smoke should take precautions when smoking outside the facility as to not allow or permit smoke from entering the raceway.

## **ALCOHOLIC BEVERAGES**

No alcoholic beverages may be consumed within the raceway or within close proximity. Consumption of these beverages on or near raceway premises may result in legal ramifications against the slot car business owner. The business owner retains the right to eject individuals from the raceway disrespecting this rule.

## **DRIVER CLASSIFICATION**

Drivers who are factory sponsored and/or receive their parts at a substantial discount will be classified as PRO and be restricted from earning any series points, qualifying points, prize earnings, trophies, or merchandise in any TSRA classes except Group 7. This does not apply to raceway owners or employees, as they will be evaluated on their building and driving ability on an individual basis and a decision made accordingly by the elected officials of the TSRA.

## **GENERAL AWARDS FUND**

A mandatory fee of \$2.50 is included for each entry fee in all of the classes. From the mandatory fee, \$1.50 is used for trophy purchases. At the end of the series, trophies will be awarded for at least the first THREE places in each class based on participation. The remainder of the mandatory fee is used for administrative supplies. If any money is left over, additional awards may be presented or simply carried over to the next year's general awards fund..

## **ENTRY FEES**

Entry fees shall be the same at all races in the TSRA series.

Wing Flexi	<b>\$10.00</b>
Texas NASCAR	<b>\$10.00</b>
GTP	<b>\$12.50</b>
USRA Box Stock	<b>\$12.50</b>
TSRA Box Stock	<b>\$12.50</b>
COBALT 12/15	<b>\$17.50</b>
GROUP 7	<b>\$32.50</b>

Track time at all TSRA races will be **\$5.00** per racer per day.

## REGISTRATION/TECHNICAL INSPECTION

All cars shall be inspected by the Race Director and impounded prior to qualifying. The chassis and body shall be marked with unique and identifiable markings to ensure they are not switched after "tech." Markings should be made with paint or nail polish on the chassis and body. There should be no need for engraving.

## TSRA TECH SHEETS

A standard TSRA Tech Sheet will be given to each racer at the time of signing up for the race event. Each racer must completely fill out at least one Tech Sheet for one class raced during each TSRA event. Tech sheets remain the property of TSRA, and the TSRA is specifically allowed to release the Tech Sheet information, regarding equipment used, to any publication or manufacturer deemed reasonable by TSRA officers.

## MEMBERSHIP

The TSRA is a self-funded association. All racing participants become members with entry into any of the classes.

## SERIES POINTS

Points will be awarded and accumulated for TSRA members as follows:

pts		pts	
12	First place finish in a main	6	Fifth place finish in a main
10	Second place finish in a main	5	Sixth place finish in a main
8	Third place finish in a main	4	Seventh place finish in a main
7	Fourth place finish in a main	3	Eighth place finish in a main
	<b>BONUS POINTS</b>		<b>BONUS POINTS</b>
1	<i>Top Qualifying</i>	5	<i>Attending all races</i>

## The series rankings will be determined from the best 6 races.

Qualifying points and race points not awarded in the main due to Pro racers entered in lower classes will flow down to be awarded to racers based on their semi placing. To accommodate this, race officials will record the track position for all racers at the end of the semis to determine the breaking of ties in the semi lap totals.

## Wing Flexi

At the end of the TSRA racing season, the 3 top points finishers in Wing Flexi will be moved into the Texas NASCAR during all subsequent TSRA racing seasons

## **TIE BREAKING SYSTEM**

If, after the final race of the 2005 series, a tie exists for any of the top 8 placements in a class the following tiebreaker system will be followed:

*1st* - If the racers in question are in attendance at the last race

*2nd* - Number of races won throughout the season

*3rd* - Number of TQ's through out the season

*4th* – Total laps acquired during the complete season.

## **TECHNICAL DISQUALIFICATION**

In the event a Driver is disqualified due to a technical disqualification of the car, the Driver will be relegated to last place in the entire field, and forfeit all entry fees and all points. All points are TQ point, participation points, entry points, and race points. In the event of a technical disqualification, affected remaining racers will be realigned and receive appropriate points.

## **NON-TECHNICAL DISQUALIFICATION**

In the event a driver is disqualified for non-technical reasons, all points and awards will be forfeited.

## **THE TSRA MEMBERSHIP OR ITS ELECTED OFFICIALS WILL NOT ACCEPT NEGLIGENCE OF THE RULES OR ANY OTHER ARGUMENT AS DEFENSE OF A FORMAL DISQUALIFICATION.**

## **RACE PRIZES**

Solicitation and distribution of race prizes from manufacturers and distributors is the responsibility of the individual Track Owners. The amount of merchandise received for race prizes will determine how many positions in the finishing order will receive merchandise as race prizes.

From the entry fees, 50% of the total fees collected for each class will be awarded in the form of a merchandise certificate redeemable only at the track issuing the certificate.

Certificates and race prizes will be awarded at the conclusion of the subsequent racing class.

Any Body Flexi	Prize award -----	<b>\$2.50</b> x	number of entries
Texas NASCAR	Prize award -----	<b>\$3.75</b> x	number of entries
GTP	Prize award -----	<b>\$3.75</b> x	number of entries
USRA Box Stock	Prize award -----	<b>\$5.00</b> x	number of entries
TSRA Box Stock	Prize award -----	<b>\$5.00</b> x	number of entries
COBALT 12/15	Prize award -----	<b>\$7.50</b> x	number of entries
GROUP 7	Cash pay---	between <b>80</b> and <b>100</b> %	of the total entry fees received.

This figure is up to the track owner's discretion.

## Awards Distribution Table

	4 or less	5 to 7	8 to 11	12 to 15	16 to 19	20 to 23	24 >
<b>First</b>	100%	70%	50%	50%	50%	50%	50%
<b>Second</b>		30%	30%	25%	22%	20%	15%
<b>Third</b>			20%	15%	12%	11%	10%
<b>Fourth</b>				10%	9%	8%	7%
<b>Fifth</b>					7%	6%	6%
<b>Sixth</b>						5%	5%
<b>Seventh</b>							4%
<b>Eighth</b>							3%

### PROGRAM FORMAT

Track time at all TSRA races will be \$5.00 per racer per day.

All series races shall be conducted in a two-day Saturday and Sunday format. The time frame should be as follows:

#### SATURDAY

8 am Track opens

9 am Tech opens for *Wing Flexi*

9:30 am Tech closes for Wing Flexi

9:35 am Concourse judging with cars on the track.

9:40 am Qualifying begins for Wing Flexi

*Texas NASCAR* tech opens 15 minutes after the Wing Flexi main and closes 30 minutes after it opens.

*Spray Glue* will be applied directly after Texas Nascar Race.

*GTP* tech opens 30 minutes after Texas NASCAR main and closes 30 minutes after it opens.

*USRA Boxstock* tech opens 15 minutes after GTP main and closes 30 minutes after it opens.

#### SUNDAY

8 am Track opens

9 am Tech opens for *TSRA Boxstock*

9:30am Tech closes for TSRA Boxstock

9:35 am Concourse judging with cars on the track.

9:40 am Qualifying begins for TSRA Boxstock

*Cobalt 12* tech opens 15 min. after TSRA Boxstock and closes 30 minutes after it opens.

*Group 7* opens 15 min. after Cobalt 12 (but not before 1 PM) and closes 30 minutes after it opens.

*Any racer missing the cut off time for officially entering a class may enter that class anytime until the final qualifier has finished. Late entries cannot qualify and will be seeded last choice in the field.*

***RACE INTERMISSIONS***

All consi or semi (depending on number of racers) race shall start immediately after lane choice, with 15 minutes between each consi and between each semi. Each consi race will have a 15-minute intermission between the successive semi race. There will be a 15-minute intermission between the semi race and the successive main event. In Texas NASCAR and GTP each Main will start immediately after lane choice for that Main.

**A lunch break may be taken at the shop owner’s discretion.**

**LENGTH OF HEATS**

In all racing classes with 12 or less entries the race will be run in "sit out" fashion.

<b>Wing Flexi , Texas NASCAR, GTP</b>
Main 8 three minute heats
Three minute lane change

<b>USRA &amp; TSRA Boxstocks, COBALT 12</b>
Consi 4 two minute heats
Semi 8 two minute heats
Three minute lane change
Main 8 three minute heats
Four minute lane change

<b>GROUP 7</b>
Consi 4 three minute heats
Semi 8 three minute heats
Three minute lane change
Main 8 five minute heats
Four minute lane change

**Wing Flexi, Texas NASCAR and GTP**

With 13 or greater racers in Wing Flexi, Texas NASCAR or GTP, separate Mains will be run. With 12 or less racers, sit outs will be run. The total laps from all Mains will determine final standing for each series event. At the end of each Main, the participant must (1) remove their lane sticker from the car, (2) write their name on that sticker, and (3) securely place the sticker on the side of the track where their car finished, (4) identify to the Race Director the location of where the car finished. Be sure the sticker is securely attached to the side of the track. This sticker will be used, as a track position reference in the event there is a total laps tie between participants.

It is the responsibility of the participant to properly designate their finishing position as described above. In the event of a tie and the participant failed to mark their finishing position, the tie will be given to the participant with the lane sticker marking their finishing position. In the event of a tie and two or more participants fail to mark their track position, the tie will be resolved by order of tech sheet numbers.

When separate Mains are run, the Race Director will note the finishing area of the track for all racers at the end of the race. At the end of each main the cars will be immediately impounded.

### **TECHNICAL INSPECTION**

A technical inspection can be conducted during the main race of any class. This is at the discretion of the race director or a TSRA official.

### **QUALIFYING**

High-powered Qualifying for lane choice is allowed at the raceways discretion.

1. All classes qualify for lane choice.
2. Qualifying order shall be random order such as computer generated or drawing numbers.
3. The first qualifier of each class shall have 1 extra minute to break in the lane at their option.
4. Wing Flexi, Texas NASCAR, GTP, classes will have one 45-60 second run to establish the fastest single lap. No optional bye runs.
5. All spray glue/ glue classes will have two 30-second runs to establish the fastest single lap. No optional bye runs.
6. USRA & TSRA Box Stocks, Cobalt 12 and Group 7 racers may abort the initial qualifying attempt for any reason and re-attempt during the second 30-seconds.
  - (a) Cars may be technically inspected prior or during either 30-second qualifying run by a TSRA official or designated inspector. No additional time allotted for inspection during Qualifying run.
  - (b) Times made during the initial qualifying 30-second attempt and the second 30-second attempt will count.
  - (c) A reasonable amount of time will be given (not more than 30-seconds) for controller hook up and run attempt. The race/qualifying director may begin the countdown after 30-seconds regardless (Track computers should be set allowing 30-second intervals between qualifying attempts).
  - (d) No shows - A racer who fails to show or waives the right for the initial 30-second Qualifying run will automatically be given the second 30-second Qualifying run without penalty. If the racer fails to show or forfeits the second 30-second Qualifying run, the racer is moved to the lowest level for qualifying time. If more than one racer is a "no show", they are moved to the lowest level of qualifying time based on their tech sheet order.

## **SITOUTS**

If any race is run in a sitout fashion, racers are to turn Marshal during their sitout heat or heats. Sitout racers are not allowed to work on their car during the sitout heats, except during the lane change segments.

Violations will not be tolerated and are subject to a warning on first offense, 5-lap penalty on second offense and disqualification on the third offense.

## **GLUE**

USRA & TSRA Boxstock, Cobalt 12 and 7 racing classes are "*GLUE*" classes, and racers will be permitted to apply glue directly to the track in the glue zones.

In all TSRA racing classes:

Tires may be glued by use of a glue board, tech block, or rubbed on tires with your fingers, the cars must put back on the track without rolling the tires thus creating a "glue zone", after a lane change, the cars must be put back on the track in the exact spot of the lane change card, cars that stop in or directly behind the lap counter may be moved

*Violations will not be tolerated and are subject to a warning on first offense, 5-lap penalty on second offense and disqualification on the third offense.*

## **RACE FLYER**

Race flyers should include description of anything unusual for typical slot car racing. Race flyer should be available prior to the previous race. Every effort should be made by the Shop Owner hosting the race to inform the racers of special racing conditions that may affect the car's set-up; i.e. track power, # of taps, surface conditions, braid type/recess, traction magnet race, flexi chassis motor bracket requirement, etc.

## **BLACK FLAG**

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

## **TRACK CALLS**

Race directors are allowed to turn off the track power if:

1. Prevent a "rider" from hitting the deadman wall or keep it from going through the lap counter on the wrong lane. Other track calls are at the discretion of the race director.
2. Track braid up.
3. Power failure (one lane or all). Failure determination is made first on car via nearby power supply then controller.
4. Possible debris in slot.
5. A car(s) that is off the track surface and the marshal is unable or not attempting to go for the car.
6. Possible lap counter or track equipment failure.
7. Poor, inconsistent, or absent turn marshaling.

You are ONLY allowed to *flatten your braid* if your car either caused the track call or was de-slotted due to the track call *and* no marshal is in that area of the track to retrieve the car. **NO OTHER WORK IS ALLOWED!!** The power will be turned on immediately after the driver returns to the control panel.

During a track call, you are not allowed to lay the controller on the track. Controllers may be laid on the drivers' panel or hooked in a manner not to impede the progress of the race.

### **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:
  - (a) Assign responsible stewards to count laps or verify the counter
  - (b) Add or subtract mutually agreed 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 major errors in counting, steps taken should preserve as much of the race as possible, while being fair to all.

### **MARSHALING**

Substitute marshals must be acceptable to the race director and drivers. Good racing is not possible without good marshals. Every racer is expected to do their part both before and after racing if necessary. If a car stops in front of a glue zone, in or behind a glue zone during a track call, the marshal may NOT relocate the car to any other point on the track and may not touch the car. Marshals should make every effort to be at their turns at the beginning of each heat. The race director is responsible for insuring that turn marshals are doing an adequate job, enforcing compliances and finding replacement marshals if necessary.

### **LANE CHANGE**

Following each lane change, all cars must be returned to the track where they stopped. It is the driver's responsibility to know where the car stopped. Corner marshals should take notice which cars stopped in their sections and pay close attention to cars near the lap counter section. At the conclusion of the race all cars will remain on the track. Any racer tied for a position that moves or removes their car from its final position will automatically lose the tie position. **The TSRA requires the use of a paper or flexible plastic LANE CHANGE CARD to be placed in the lane to be run in the next heat at the position that the car last stopped at in the previous heat.** Drivers or delegates are responsible for removing the lane change cards before the track power is turned on. If the car is off the track then the car goes in front of the driver's panel.

### **UNSPORTSMANLIKE CONDUCT**

Unsportsmanlike conduct on the part of a driver, pit crew, turn marshal etc. will be

subject 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 crew if their behavior is unacceptable. Further violations will result in a 5-lap penalty for the first infraction and disqualification for the second. Repeat offenders of any of the unsportsmanlike conduct guidelines, or any of the TSRA rules regarding process or technical requirements, may be prohibited from entering or attending future TSRA events.

### **INTRODUCTION OF NEW PRODUCTS**

In restricted classes, new products introduced during the prescribed race season will be allowed in the TSRA as submitted only if USRA approved and meeting all elements of the "commercially available " requirements.

### **ARMATURE PROTEST**

*(Restricted Classes Only)*

Any competitor may protest another person's armature. He/she must officially inform the race director or TSRA officer, at which time the race will stop. The protester may "BUY A LOOK" by posting a \$2.00 fee to the race director or TSRA officer. He/she is then entitled to look at the suspected armature in the car. If not satisfied, he/she may file a "**FORMAL PROTEST**" which requires posting a fee to *equal* the current manufacturer suggested retail price of their respective armature. The buy a look fee is transferable. At this time, the armature must then be non-destructively and indelibly marked (suggest unique engraving on the armature stack). Extreme care must be exercised to avoid damage to armature balance and delicate components such as ball bearings, motor brushes, etc. 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 and the protested armature *will be allowed to continue the race*. If the protested armature is removed from the car it is the stewards duty to impound the motor until race end. Thorough disassembly and inspection should be conducted immediately upon completion of racing, and must be conducted in a manner assuring accurate technical verification. This can be accomplished by first properly measuring the dimensions of the armature against those classes' technical rules for an approved armature. Secondly, the epoxy can be destroyed using extreme heat such as a common torch. Then the armature should be dissected using a Dremel and carefully measure the wire and counting the turns. The fees will be held by a TSRA official or designated steward until resolution of the matter, and then promptly surrendered to the appropriate party, armature owner or protester. Likewise, any winnings and/or points will be held pending the outcome of the inspection. "BUY A LOOK" proceeds go to the protested party if not applied to a "FORMAL PROTEST".

### **VOLUNTARY DISQUALIFICATION or WITHDRAWAL**

A racer may elect a voluntary disqualification prior to the destruction of a protested

armature. The protest fee and any posted money are returned to the party formally placing the protest. Any racer who elects disqualification forfeits the entry fee, TSRA fees, race points, and race prizes and/or awards for that event.

### **NON-ARMATURE PROTEST**

Protest may be filed for suspected illegal chassis, body, axles, etc. with a \$2.00 protest fee. Due to the ability of this type of illegality to be determined without destruction, the Tech Inspector/Tech Director will make an immediate determination of legality. If the car is found to be legal, the protest fee goes into the General Fund. If the car is found to be illegal, the fee is refunded to the racer making the protest, and the racer driving the car will be disqualified, forfeiting race points, entry fees, and race prizes and/or awards for that event. Tire measurement is exempt from any type of racer protest.

### **ARMATURE REGULATIONS ALL RESTRICTED CLASSES**

Any armature that has been purposely altered or tampered with, to make the stack appear longer so as to attempt to comply with the length rules as listed, shall be declared illegal at the tech inspector's discretion. Stack length minimums shall be required on all 3 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, as an example, such practices as the insertion of spacer type materials between the laminations, abnormally thick applications of coatings or any methods of artificial compliance with the rule.

## **TSRA GENERAL TECHNICAL RULES**

All cars/racers are expected to comply with these guidelines and agree as such by signing a TSRA entry form upon registration for each TSRA event. 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 BEING INTERPRETED IMPROPERLY WILL BE CLARIFIED BY THE TSRA OFFICERS AND ANY DECISION MADE WILL BE FINAL.**

**I. SCALE** - The size of scale to which the cars must be built is approximately 1/24th that of the actual race car.

**II. WIDTH** - All cars may not be more than 3.25 inches wide at any point at any time. Round head body mounting pins may extend beyond this width. Other type body pins such as glass head or T type is not allowed.

**III. WHEELS** - All cars must have front and rear wheels (2 each) with rubber tires.

(a) Rear tire minimum diameter is 0.750 inches

(b) Front tire minimum diameter is 0.500 inches

(c) Front wheels or tires 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 Rear wheels maximum width is .810 inches

**IV. GEAR SPECIFICATIONS** No metal spurs gears may be run in any TSRA class

**V. CLEARANCE** - The minimum clearance for chassis, body, gear, traction magnets, and motor is .062 inches. No parts may drag. Guide flag/braid, front and rear tires are

exempt from this rule.

**VI. GUIDE FLAGS** - One guide or pickup device per car.

**VII. BODY**

Designs should resemble full size racecars. Manufacturers are urged to maintain scale proportions. Variations are allowed to conform to state-of-the-art practices.

1. Paint - All bodies must be fully painted and opaque when sitting on the tech block. On air control type bodies only, the sides of the body may remain clear. Exhaust pipes, body lines injector stacks, mirrors and decals are optional.
2. Numbers - All cars must display three numbers of reasonable size and position, 1/4" height minimum, and please refrain from using markers.
3. Interior - All cars must contain a suitably painted three dimensional 1/24th scale driver, with helmet, shoulders, arms and steering wheel mounted in the original cockpit position at all times during the racing. No paper drivers are permitted.
4. Windshield - Each body must have a clear cockpit area.
5. Fender wells - A partial transparent view of both of the front wheels must be seen from the side.
6. Body openings - The chassis must be completely covered by the body and air control when viewed from above, except for the cockpit opening or USRA legal body openings.

**VIII. AIR CONTROL DEVICES**

1. No part may exceed 2.5 inches in height, measured from the tech block surface. Any air control devices cannot be opaque.
2. Side dams may be a maximum of 2.5 inches high aft of the rear wheel centerline and continue on a taper making them a maximum of 2.0 inches high at a point 3.75 inches forward of the rear wheel centerline.
3. Must have the front edges taped and outside corners rounded in a manner suitable to avoid injury to race participants and spectators.
4. May affix any decals or markings on any air control surface but cannot be opaque.
5. Diaplane maximum length is .0500 inches.
6. Rear spoiler cannot be opaque, although suitable decals may be affixed.

**IX. PARTS REPLACEMENT** - Any component may be replaced during competition except the original chassis and body. Any racer found to have switched chassis or body will be disqualified immediately.

**X. COMMERCIALY AVAILABLE** - Major components for group and restricted racing (motor, motor parts, chassis, chassis parts, bodies) must be readily available to all participants, sufficiently far in advance of the race event for all participants to be able to compete on an equitable level. Commercially available means that the product must be readily available through retailers and a minimum of 3 national USRA member commercial distributors at least 60 days prior to the USRA National Event (or any TSRA competition in which they will be used). The number of pieces required to be available for a product to be considered commercially available is 1,000 units for 12/15 motors, tagged armatures, restricted chassis, any restricted component, and bodies. 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 TSRA competition for a period of time not longer than 2 yrs after production ceases. All products, which are considered to be commercially available and 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 or TSRA may be adjusted in retail price according to the annual cost of living, maximum 5% annually. These items include Box Stock arms.

### **CONCOURS: ALL CLASSES:**

Concours to be judged prior to each class as follows:

1. Concours will be judged with all cars placed on the track,
2. The Race Director will appoint judges and hold a preliminary judging to eliminate all but 3 Concours entries from the field.
3. Then 2 or 3 judges will be selected to use the Standard Concours 1-5 Points Sheet for the 3 remaining cars. Things to look for will be overall appearance, cleanliness, detailing (including driver/cockpit), and workmanship. Ties will be broken by the flip of a coin.

### **Wing Flexi AND TEXAS NASCAR**

#### *Chassis Specifications:*

All commercially available stamped steel 4-inch FLEXI-type chassis, with a maximum suggested retail price of \$23.00 are approved.

#### *Accepted Modifications:*

1. May solder or glue oilites in place.
2. May solder motor in place.
3. May add static weight to chassis.
4. May file holes in motor bracket.
5. May add tape to chassis.
6. May use the same manufacturer's Lightweight Replacement Pan.
7. May add spacers between pan and center section.
8. The Parma #95C Motor bracket may be used on any of the approved chassis.
9. May remove plating on areas to be soldered.
10. May add nail polish, paint, or other to front chassis behind guide brushes for insulation.
11. The *host raceway* may accept or reject a flexi chassis with the bracket removed. If the host raceway requires the motor bracket be intact on a flexi chassis, then the race flyer must clearly state the same. See "*Race Flyer*" section.
12. May enlarge front axle holes to allow axle to float freely. Still must comply with TSRA General Technical Rules: Wheels.

#### *Prohibited Modifications:*

1. No ball, roller, needle, or polymer bearings.
2. Bat pans and/or center section may not be modified for use of Parma's motor bracket.

#### *Wing Flexi Motor Specifications:*

Motors are to be racer built **SPEED F/X 16D** with Balanced armatures.

1. Motor can grinding to remove plating for soldering purposes only is allowed.
2. An axle notch may be cut into the motor can and magnet.
3. Magnets may not be epoxied. Magnets may be glued
4. Motor can bushing may be soldered or glued in place
5. Balanced armature allowed

#### *Texas NASCAR Motor Specifications:*

Motors are allowed to be racer built 16D with American made armatures.

1. Motor can grinding to remove plating for soldering purposes only is allowed.
2. An axle notch may be cut into the motor can and magnet.
3. Magnets may not be epoxied. Magnets may be glued
4. Motor can bushing may be soldered or glued in place
5. Balanced armature allowed

***Wing Flexi Body Specifications:***

Any 4 inch commercially available 1/24th air controlled body allowed. Bodies must be fully painted including sides, and all window areas left clear. Body must have interior installed in the correct position.. Rear wheels wells must be cut out. No cutting into top of body or fenders allowed. May reinforce body. Bodies must have 3 scale-sized numbers. Check body and Air Control Devices guidelines in General Rules.

***Texas NASCAR Body Specifications:***

Any 4 inch commercially available 1/24th scale stock car body allowed. Bodies must be fully painted including sides, and all window areas left clear. Body must have full Stock Car interior (Parma #809 or similar) installed in the correct position. Cars must have a minimum roof height of 1 9/16 inch as measured from tech block. Roof height is to be measured at the center of roof. Measurement does not include roof ribs. May not cut out rear of body including punching holes or otherwise lightening body. Cars must retain front and rear bumpers with minimum of 1/8 inch retained between top and bottom of both bumpers. Rear wheels wells must be cut out. No cutting into top of body or fenders allowed. May reinforce body. Bodies must have 3 scale-sized numbers placed on roof and both doors.

***Wing Flexi Gear Specifications:***

1. Any plastic 48-pitch spur gear allowed with a 1/8" axle bore is allowed.

***Axle/Tires Specifications:***

1. Only 1/8" solid steel axle allowed.
2. Must have o-ring type 2 piece front tires. Rear tires have no color requirements.
3. Front axles may be soldered solid, but front wheels must rotate and maintain the original tech functionality of grounding the track prior to the chassis grounding the track.

***Texas NASCAR Gear Specifications:***

1. Any plastic 48/64 –pitch spur gear allowed with a 1/8" or 3/32" axle bore is allowed.

***Axle/Tires Specifications:***

1. 1/8" or 3/32" are solid steel axle allowed.
2. Must have o-ring type 2 piece front tires. Rear tires have no color requirements.
3. Front axles may be soldered solid, but front wheels must rotate and maintain the original tech functionality of grounding the track prior to the chassis grounding the track.

**GTP**

***GTP Chassis Specifications:***

All commercially available stamped steel 4-inch FLEXI-type chassis meeting the GTP specifications, with a maximum suggested retail price of \$23.00 are approved, or commercially available steel 4-inch chassis, with a maximum suggested retail price of \$40.00 for a kit or \$60.00 assembled. Examples of approved chassis are:

DRS 51

DRS 83  
RPM 111  
S7 - 447  
MWS (mini wheel sports) GTP-01

***GTP Accepted Chassis Modifications:***

1. May solder or glue oilites in place.
2. May solder motor in place.
3. May add static weight to chassis.
4. May add tape to chassis.
5. May use the same manufacturer's Lightweight Replacement Pan.
6. May add spacers between pan and center section.
7. May remove plating on areas to be soldered.
8. May add nail polish, paint, or other to front chassis behind guide brushes for insulation.
9. May remove motor bracket.
10. May only reposition front wheel mounts and body mounts location on any chassis.
11. Chassis must be commercially available, must be available separately and may also be available in a completed car.
12. Chassis may be re-soldered. The addition of "floating" body mounts, static body mounts, or a static pan on steel chassis is permissible.
13. Steel chassis may be built from kits as offered by manufactures, but must be built to factory specifications using the same components.

***GTP Prohibited Chassis Modifications:***

1. No ball, roller, needle, or polymer bearings.
2. No other chassis material may be removed except as defined in the GTP Accepted Chassis Modifications.

***GTP Motor Specifications:***

Motors for the GTP class will be approved or rejected on an as submitted basis. Motors must be commercially available, as defined in General Rules, and must be specifically approved.

**A. Set-up**

1. Can & End bell must be mass-produced, of full dimensioned "C" can type (full top and bottom, and vertical bound without cheater tabs or other artificial attempts to meet the dimensional specifications) without modification, and must meet the requirements of USRA Box Stock 12.
2. Inside can dimensions are defined as not less than: Length - .925 inches Width - .835 inches Height .560 inches
3. Motor parts may be interchanged between different mfg.
4. Motors may be blueprinted including gluing, shimming and honing.
5. Magnet Dimensions plus or minus 10% are as follows:
  - (a) Length; 0.500 Inches
  - (b) Height; 0.550 Inches
6. Magnets Must Be Commercially Available Through Major distributors.
7. Quad magnets may be used if they are in the same price range as legal single piece

Box Stock magnets.

8. Magnet clips not required
9. Can bushing may be soldered in place.
10. Diameter of bushing or bushing locator hole may be altered
11. Motor springs may be replaced and spring tension may be adjusted.
12. Magnets may not contain rare earth materials (defined as elements with atomic weights 58 through 71).
13. Gaussing of motors/magnets may be performed at Tech in or any time at race director's discretion, suspect motors may be marked to be torn down at the end of the race. Precautions should be taken by race officials to ensure that the motor is not altered prior to teardown.

### **B. Armatures:**

1. Armatures must be tagged to reflect the legal armatures allowed in the class. Legal armatures are:  
Champion Sportsman  
Pro Slot Contender  
Mura Challengers  
Koford Contenders  
R.J.R. Competitors
2. Armatures must be machine wound with a minimum of 55 series wound turns of AWG #30 wire per pole.
3. All armatures must retain .513 inches minimum diameter.
4. Minimum stack length for the listed armatures is .440".

### ***GTP Body Specifications:***

Any 4-inch commercially available 1/24th scale GTP or WSC car bodies allowed. Bodies must be fully painted including sides, and all window areas left clear. Body must have interior installed in the correct position. No cutting into top of body or fenders allowed. May reinforce body. All cars must display three numbers of reasonable size and position, 1/4" height minimum, please refrain from using markers.

*GTP bodies cannot have built-in molded straight line tapered wings on the body sides that extend to or higher than the top of the front wheel wells. Wings may not extend forward of the front wheel wells.*

### **GTP Gear Specifications:**

1. Any pitch plastic spur gears allowed.

### ***GTP Axle/Tires Specifications:***

1. Any axle size allowed.
2. All 4" type FLEXI type chassis must have o-ring type 2 piece front tires.
3. Advanced GTP may use any \_" front wheel except on 4" FLEXI type chassis.
4. Rear tires have no color requirements.
5. Front axles may be soldered solid, but front wheels must rotate.
6. Front wheels must maintain the original tech functionality of grounding on the tech block prior to the chassis or body.

## USRA BOXSTOCK

(these rules are from the USRA rulebook)

### A. Motors

Refer to C-Can specifications.

### B. Armature

Refer to page 40(*from the USRA rulebook*) 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\$39.44 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 *GP-12 Approved Components* 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.

**J. Bearings**

Ball, roller, or other frictionless bearings are allowed in the **CAN ONLY**. Not allowed on any other part of the car.

**K. Weight**

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

**Motor parts** may be interchanged between different mfg .

**TSRA BOX STOCK**

*Chassis Specifications:*

Chassis for the Box Stock class will be approved or rejected on an as submitted basis.

See: USRA OFFICIAL RULES on approved chassis.

***Boxstock Accepted Chassis Modifications:***

1. May only reposition front wheel mounts and body mounts location on any chassis.
2. Chassis must be commercially available, must be available separately and may also be available in a completed car.
3. Chassis may be re-soldered. The addition of "floating" body mounts, static body mounts, or a static pan on steel chassis is permissible.
4. Steel chassis may be built from kits as offered by manufactures, but must be built to factory specifications using the same components.

***Boxstock Prohibited Chassis Modifications:***

1. No ball, roller, needle, or polymer bearings.
2. No other chassis material may be removed except as defined in the Boxstock Accepted Chassis Modifications.

***Motor Specifications:***

Motors for the Box Stock class will be approved or rejected on an as submitted basis.

Motors must be commercially available, as defined in General Rules, and must be specifically approved.

Any motor retailing for \$42.00 or less may be used as long as all other Boxstock motor specs are met. Approved motors:

Mura M1212, M1213P, M1215P

Parma 455

Champion 510X, 511X, 510HTX, 511HTX

ProSlot PS728, PS723

Koford 408, M408J

Camen 130.10, 130.15  
Kelly Racing 1150, 1152

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

1. Can & endbell must be mass-produced, of full dimensioned "C" can type (full top and bottom, and vertical bound without cheater tabs or other artificial attempts to meet the dimensional specifications) without modification, and must meet the requirements of USRA Box Stock
2. Inside can dimensions are defined as not less than: Length - .925 inches Width - .835 inches Height .560 inches
3. Motor parts may be interchanged between different mfg.
4. No aluminum endbells allowed.
5. Motors may be blueprinted including gluing, shimming and honing.
6. Magnet Dimensions plus or minus 10% are as follows:
  7. Length; 0.500 Inches
  8. Height; 0.550 Inches
9. Magnets Must Be Commercially Available Through Major distributors.
10. Quad magnets may be used in Box Stock if they are in the same price range as legal single piece Box Stock magnets.
11. Magnet clips not required
12. Can bushing or bearing may be soldered in place.
13. Diameter of bushing or bushing locator hole may be altered
14. Motor springs may be replaced and spring tension may be adjusted.
15. Magnets may not contain rare earth materials
16. Gaussing of motors/magnets may be performed at Tech in or any time at race director's discretion, suspect motors may be marked to be torn down at the end of the race. Precautions should be taken by race officials to ensure that the motor is not altered prior to teardown.
17. Bearings are allowed in the can only as per the USRA rules.

### **B. Armature**

1. Armatures must tagged 12, X-12, or 15 and must be commercially available as defined in General Rules.  
approved armatures:  
Mura M2212, M2213, M2215  
Champion 510A, 511A, 510AHT, 511AHT  
ProSlot 701, 702  
RJR 901, 901X, 903, 903X, 931, 931X  
Koford M387, 468  
Camen 1243.10, 1243.15
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 0.0114 inches maximum diameter.
3. All armatures must retain .513 inches minimum diameter.
4. Minimum stack length for tagged "12" or "X-12" armatures are .350", minimum stack length for tagged "15" armatures is .440".

5. There is no maximum price limit provided the arm meets all other criteria. See Armature Regulation All Classification for further clarification.

***Body Specifications:***

No Restrictions except for Body and Air Control Devices guidelines in General Rules

***Axle/Tires Specifications:***

Axles must retail for \$5.00 or less.

No other restrictions except for Wheels guidelines in General Rules.

Front wheels must maintain the original tech functionality of grounding on the tech block prior to the chassis or body.

***Gear Specifications:***

Any pitch plastic spur gear

**COBALT 12/15**

***Chassis Specifications:***

No restrictions

***Motor Specifications:***

***A. Armature***

1. Must be tagged with at least the number "12" "X-12" or "15" and be mass-produced by a USRA approved manufacturer.

2. Must be commercially available, as defined in, General Rules. 3. Must be machine wound with a minimum of 50 series wound turns of AWG #29 wire per pole. AWG #29 wire, excluding insulation, is 0.0114 inches maximum diameter.

3. Minimum stack length for tagged "12" armatures is .350", minimum stack length for tagged "15" armatures is .440".

4. There is no maximum price limit provided it meets all other criteria.

See Armature Regulation All Classification for further clarification.

***Body Specifications:***

No Restrictions except for Body and Air Control Devices guidelines in General Rules

***Gear Specifications:***

Any pitch plastic spur gear

***Axle/Tires Specifications:***

No Restrictions except for Wheels guidelines in General Rules.

Front wheels must maintain the original tech functionality of grounding on the tech block prior to the chassis or body.

## **GROUP 7**

*Specifications:*

No Restrictions

***Chassis Specifications:***

No restrictions except for Clearance guidelines in General Rules.

***Motor Specifications:***

No Restrictions

***Body Specifications:***

No Restrictions except for Body and Air Control Devices guidelines in General Rules

***Gear Specifications:***

Any pitch plastic spur gear

***Axle/Tires/Wheels Specifications:***

No Restrictions except for Wheels guidelines in General Rules.

Front wheels must maintain the original tech functionality of grounding on the tech block prior to the chassis or body.