



***HOPRA***  
***H.O. PROFESSIONAL  
RACING ASSOCIATION***



**OFFICIAL NATIONAL RULES  
2012 Edition**

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***H.O. PROFESSIONAL  
RACING ASSOCIATION***



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**NOTE:** An asterisk (\*) signifies that this class/rule has been added or revised in compiling the 2012 H.O.P.R.A. Rulebook.

## 1. DEFINITIONS

1. Concoirs d'Elegance A competition to determine the best-looking cars.
2. Best Appearing Race Car A competition to determine the best-looking cars that are entries in a racing event.
3. Cut Sanding, melting, trimming, i.e. to reduce. (This does not include natural wear caused by track rails.)
4. Entry One who has paid the entry fee and whose car has passed the technical inspection.
5. Extra Magnets Any stock magnets that are not armature magnets.
6. Flux Collectors Shim (not including a car's armature and magnets) that strengthens a magnet for horsepower or handling purposes, and/or collects magnetic flux for handling purposes.
7. General Rules Rules which are applicable to all car classes.
8. Readily Available Mass produces for HO slot car racing and obtainable 120 days prior to the National Championship Race.
9. Scratchbuilt Stock chassis will not support car on its own.
10. Shall Mandatory.
11. Shim Material that exhibits magnetic attraction to a rare earth magnet.
12. Stock Any part or condition that normally comes with the car as manufactured.
13. Stock Replacement To equal the original part designed for replacement. The stock replacement part must fit without modification to the car or part.
14. Bottom Surface The portion of any part of the car that is closest to the track when the car is placed in an operational mode on the track after the car is built.
15. Polymer Magnets Small magnetic particles (the particles being less than .0625" in size) suspended in a plastic shell.
16. H.O.P.R.A. Approved The Executive Committee has the right to declare the legality of a product.

## 2. GENERAL RULES

1. All magnets must be "H.O.P.R.A. Approved" and made from ceramic or polymer magnet material only.
2. No freak or irregular magnets shall be allowed. Magnets must be within 5% of "standard" magnets submitted.
3. The number of armature magnets used per car cannot be more than two.
4. The number of extra magnets used per car cannot exceed the stock number and cannot be more than two magnets.
5. The number of flux collectors used per car cannot be more than stock.
6. Any car, which contains more than two magnets, shall not be allowed any flux collectors.
7. The chassis entered must be H.O.P.R.A. Approved, with magnets being part of the chassis and cannot be substituted. Bulkheads/Endbell are part of the chassis and may be replaced after qualifying. The body cannot be substituted except for same color conflicts and at the tech inspector's discretion and approval.
8. All cars/chassis must be readily available and H.O.P.R.A. approved. See individual class rules for legal chassis.
9. All new cars, chassis and magnet sets must be available for purchase by all racers no later than the end of the current HOPRA National Championships to be considered for approval for the following year's National Championships. Each manufacturer is asked to submit one (1) new car/chassis/magnet set to the National Director by June 1st (or first business day of June) for review and approval by the Executive Committee. If for any reason, a manufacturer does not submit a new car/chassis/magnet set, a HOPRA Executive Committee representative may purchase the item for submission to the Committee for review and approval. An original purchase receipt that shows the name of the vendor, their address, phone number, name of item purchased, its price and the total price paid, must accompany all items submitted in this manner.
10. Magnets submitted for "H.O.P.R.A. Approval" are to be considered the "standard" set in regards to all technical inspection questions. Meters throughout the organization will be calibrated using these standard magnets provided. These standard sets are to be identical to what is readily available.
11. Chassis/Cars submitted for "H.O.P.R.A. Approval" are to be considered the "Standard" in regards to all technical inspection questions. Changes to the original "Standard" design spec chassis shall be resubmitted for "H.O.P.R.A. Approval". All chassis must be molded and no after production machining is allowed except for where allowed per class rules (Body tubes, axle retainer etc.).
12. No broken chassis will be allowed to enter the race.
13. The minimum allowable wheelbase is  $1 \frac{1}{4}$  (1.250) inches.
14. The maximum allowable width of the car is  $1 \frac{5}{16}$  (1.3125) inches.
15. The maximum allowable length of the entire car is three (3.00) inches.

16. Only one guide pin per car shall be allowed.
17. The maximum allowable lateral movement of the front axle is 1/32 (.03125) inch.
18. During the race, any individual part of the car may be replaced. The chassis and body are not considered individual parts. The Race Director or Technical Inspector has the right to inspect any car after repairs have been made. If repairs are necessary, they shall be made before the car may re-enter the race. The repairs may be made during lane change periods or on the driver's race time. The race shall not be stopped for repairs unless the Race Director has declared a track call specifically to allow for repairs.
19. The body must be painted and rear wings/spoilers maybe added for esthetics only.
20. The body must cover the chassis, tires and wheels when viewing the car from above except through legal openings (i.e. windows, etc.). No body cutting except for wheel openings. Open wheel bodies are only allowed in Stock Class. This rule does not apply to the Vintage T-Jet car class as it is subject to its specific body regulations.
21. Any car without a body or with an interfering body will not be allowed to continue to run.
22. Cars must be equipped with four tires, which touch and roll when checked on a test track with no or low rails.
23. The driver has the final responsibility to prove the legality of his car.
24. Every car entered may be required to submit to a post-race technical inspection. Failure to comply will result in immediate disqualification of the car and entrant and forfeiture of entry fees paid for that entry.
25. If necessary, a vote by the National Executive Committee members present shall determine the final interpretation and enforcement of any and all rules. If it does not appear in this rulebook, it is not legal for H.O.P.R.A. competition.
26. All items to be added to the agenda for the open meeting must be submitted in writing or email to the National Director no later than March 1<sup>st</sup>. Any additions after that time must be approved by at least three (3) members of the National Executive Committee.

### 3. BOX STOCK CAR CLASS

This class is divided into two divisions: Inline Motor cars and Can Motor cars.

Eligible Inline Motor cars are: Tomy SG+, Tomy Mega G, LifeLike M-chassis, Tyco/Mattel 440x2, Auto World Super III

Eligible Can Motor cars are: Tomy SRT, Tomy Turbo, LifeLike T-chassis

Rules for both divisions:

1. Only allowed changes to stock, out-of-the-package car is the addition of any double-flanged rear tire rims and any slip-on tires.
2. Every part will be exactly as it comes from the original manufacturer for that particular car type/model, including all gears, axles, pickup shoes, pickup shoe springs, motor brushes and motor springs. No cutting or reaming of chassis, axle holes or any bushings. Axle diameter and length must remain stock. No truing, lightening or other modifications to front wheels/tires. See #9 for minimum front tire size for each car type/model. Rear rims and slip-on tires, per #1, are only allowable changes.
3. Armatures will be in factory stock condition as it comes from the original manufacturer for that particular car type/model. No tampering with stock condition.
4. Absolutely no cutting, lightening or any other modification allowed to car's body. Re-paints are permitted. Bodies types (i.e. stock car, sports car, open wheel) are to be determined on a race-by-race basis.
5. Polishing and lubricating of metal components are permitted.
6. Removal of protective plastic heat shields is permitted.
7. Guide pin may be trimmed for clearance purposes.
8. Pick-up shoe spring tension may be adjusted.
9. Minimum diameter for front tires, per particular car type/model:
  - Tomy SRT -- .385
  - Tomy Mega G -- .375
  - Tomy Super G+ -- .385
  - Tomy Turbo -- .380
  - LifeLike T-chassis -- .370
  - LifeLike M-chassis -- .370
  - Auto World Super III -- .410
  - Tyco/Mattel 440x2 -- .410

#### 4. SPEC STOCK CAR CLASS RULES

Legal chassis are: BSRT G3/G3R, Slottech T1/T2/T3 and Wizzard Storm

1. Chassis must be stock and cannot be modified in any way except to add body posts and axle retainers.
2. All magnets must be stock ceramic and "HOPRA Approved" and cannot be cut.
3. The armature shall be stock and cannot be modified in any way - no rewinding, dewinding, truing of commutator, gluing or balancing in any way, or other tampering of the motor shall be allowed. The minimum ohmage allowable shall be 5.8 ohms (measured pole to pole with the armature removed from the car after a five minute cool-down period). Soldered tab armatures are not allowed.
4. The electrical system must be stock or stock replacement for the car. Plated parts are not allowed unless they are stock for the car. The use of big foot brushes or twisted endbells is not allowed.
5. The rear axle and guide pin must be stock. 7/23 gear ratio only is allowed. The front wheels, tires and axle may be any readily available parts. Rear may be readily available solid silicon/rubber replacement tires. Rear wheels may be readily available, double flanged replacement wheels.
6. Lexan bodies are allowed. Open wheel bodies are not legal.
7. The use of glue is not allowed except to mount body posts and to secure armature bushings.



## 5. VINTAGE T-JET CAR CLASS RULES

### Complete Car Regulations:

1. The complete car must weigh at or between 20.0 grams and 24.0 grams.
2. The complete car must freely pass through a standard (1 5/16") HO Tech block.

### Body Regulations:

1. The body must be a copy of a 1:1 car and/or concept cars.
2. Bodies must be manufactured by either the process of casting or injection molding and be made from resin or plastic. No feather light resin allowed.
3. Bodies with cast in handling pans or exaggerated details (such as unrealistic or inappropriate hood scoops, over sized windows, side pipes, sloped sides, or snow plow noses) are not allowed.
4. Bodies must be originally manufactured with the intention of being mounted with the use of 2 screws via 2 body mounting posts on a/an: Aurora Model Motoring (which includes: Vibrator, Thunder Jet, Wild Ones, Tough Ones, and Xlerators), Bachmann, Faller, Model Motoring Thunders Plus, Marx Eldon or Tyco S series HO chassis.
5. No Indy, Formula 1 or Formula style open wheel bodies will be allowed.
6. No ballast or fillers, other than color pigment, are allowed in the plastic or resin bodies
7. The maximum thickness of the sides of the body, including items such as fender flares and running boards, is 0.125"
8. With the body mounted securely to the chassis and viewed from above, the body must cover the chassis except through windows and vents.
9. With the body mounted securely to rolling chassis and when viewed from the side of the body: The upper edge of the top-plate, minus rail cannot be above the top of the body as measured at the rear of the gear top plate. (I.e.: The horizontal top of the gear plate (base) cannot protrude above the rear window opening).
10. The body must be fitted with the manufacturer's original or exact replica bumpers, heads, rollover bars, etc. in their stock locations.
11. Cracked or broken body mounting posts may be repaired or replaced with the use of glue or a plastic sleeve around the original post or a plastic tube in place of the broken post.
12. Other than the plastic post reinforcements stated in Body Rule 12, no additional weight can be added to the body.
13. The body may be lowered and lightened by removing material through the process of grinding, or scraping, as long as Body Rule 10 is not violated. Body cannot be heated or reshaped from the original cast of the body.
14. Bodies that have a separate roof and windshield casting/molding and have molded in interiors (also known as Hardtops, e.g. Aurora's '65 Mustang) may have the interior portion of the body completely removed.
15. Front and rear wheel wells may be opened up for tire wheel-well clearance. This opening may be no larger than 1/8-inch drill bit around entire wheel-well and tire.
16. Wheel-wells must not be modified in such a way as to allow the use of any other wheelbase that is not originally intended by the manufacture of the body.
17. Any body mounting screw may be used. Non-magnetic screws are recommended.
18. Both front and rear screws must be used to secure the body at all times.
19. The front windshield must be plastic or resin, clear or painted, may be glued in place or molded in, and must fill the window frame. Tape windshields are not allowed. Side and/or rear windows may be removed.

### **Chassis Regulations:**

1. Only original Aurora Thunder Jet chassis assemblies with non-plated copper electrical components are allowed. Brush springs may be bent to alter brush tension. Pickup shoe hanger plates may be slightly bent.
2. The rolling chassis' axle and armature holes may be slightly opened up for increased clearance. Bushings are not allowed.
3. The chassis may be trimmed slightly (no more than .010") to allow for crown gear tooth clearance.
4. Any original Aurora T-Jet pancake gray armature with two laminations, with its original commutator, and all of its original unmodified windings may be used. The armature may be, (balanced, and trued)
5. Each armature pole is to be measure across two separate commutator segments. The Average of all three poles must be 16 ohms or greater (The combined total ohm reading of all three armature poles must equal or exceed 48 ohms). All measurements are to be taken at the current available room (ambient) air temperature.
6. Any original Aurora magnets or Johnny Lightning/Auto World/Dash magnets may be used. Johnny Lightning/AutoWorld/Dash magnets may be sanded to fit the chassis. The distance between the magnets must be a minimum of .700; no exaggerated sanding is allowed to close the arm gap.
7. Magnet shims may be used. Shims must be non-ferrous. No shims are allowed either under or on top of magnets.
8. Any flat top and bottom carbon/copper motor brushes are allowed. Brushes may be scored with one score line or an "X". No exaggerated deep cuts or crevices allowed.
9. Any stock or commercially available stock replacement 14 tooth solid brass armature pinion gears, 24 tooth solid brass idler and driven gears, 9 tooth solid brass pinion gears, and 15 tooth crown gears are allowed. The crown gear boss may be trimmed or a spacer may be added to adjust for proper gear mesh. .300" minimum diameter over the entire width on the crown gear. No lighting, no drilling or angle cutting of the crown gear. \*
10. Original Aurora stock drive gear shaft or magnetic replacement shaft may be used.
11. Gear tooth friction surfaces may be de-burred by polishing, filling or sanding.
12. Gears may not be chamfered, lightened or relieved.
13. Any front and rear wheels, tires and axles may be used. Maximum lateral movement in the front wheel assembly is 0.031.
14. Front and rear axle shim washers or spacers are allowed. Front axle, shim washers or spacers must be on the outside of the frame rails. When using shim washers or spacers on the rear axle, they can be on the inside or outside of the rear frame rail. No rear wheel weights or add-on hubcaps.
15. Stock or stock replacement pickup shoes from American Line, BSRT, Slottech, and Wizzard may be used. NO ski shoes. Plated shoes allowed.
16. The pickup shoe spring may be cut, stretched, shimmed, or compressed.
17. Any amount of the vertical gear plate rails above the upper horizontal plane may be removed. The serial/patent numbers and letters must also remain intact.
18. Guide pins must be plastic and must be of a design essentially similar to the original Aurora black plastic front guide pins. Guide pin may be, trimmed or bent. Countersinking screw hole on front guide pin is allowed.
19. Glue may be used on a rolling chassis assembly only for the purposes of attaching gears or guide pin. No gluing of axles allowed. Solder may only be used to attach metal gears to their metal shafts.

## 6. SUPER STOCK CAR CLASS RULES

Legal chassis are: BSRT T2/G3/G3R, Mattel/Tyco 440 X2, Micro Speedworks T+ Slottech Panther/Panther 02/Thundercat T1/T2/T3, Wizzard-Patriot P2/P3/Scorpion/Storm Life-Like Fast Tracker/Pro Tracker

1. The chassis must be stock, readily available, "H.O.P.R.A. Approved" and cannot be machined, sanded or cut except to provide the following:
  - A. Add body mounts.
  - B. Reinforce and/or replace pickup tabs.
  - C. Add adjustable Brush tension.
  - D. Add axle retainer.
2. The guide pin can be a stock replacement part. It may be glued in place but shall remain in any one of the stock positions. The front axle may be attached to the guide pin in the Life Like chassis only.
3. All magnets used shall be stock or stock replacement ceramic "H.O.P.R.A. Approved" and cannot be cut. Mattel/Tyco 440 X2 traction magnets must be of matching polarity.
5. All magnets shall remain in their stock location. No material or method may be used to restrict the movement of the magnets.
6. Any flux collectors used shall be stock and shall remain in their stock location and cannot be modified.
7. The armature must be stock or a hot stock production red wire with crimp/folded/welded tabs. The commutator may be trued, epoxied, and advanced timed. Small cuts or drill marks may be made for balancing only. No machining/cutting along the entire length or circumference of the lams/stacks. Excessive removal of material to reduce weight is not allowed. Minimum 5.8 ohms (measured pole to pole with armature removed from car and checked after a 5 minute cool down period). No dewinding, rewinding, or soldered tabs.
8. Axle bushings are not allowed unless they are stock.
9. There are no restrictions on the armature bushings, gears, axles, wheels and tires.
10. Electrical systems shall be stock or stock replacement. Adjustable brush tension is allowed. Plated parts are allowed. Shunt wires are not allowed. Electrical parts may be lightly sanded for cleaning purposes only.
11. The use of glue shall not be allowed on the chassis or bulkheads except for the body mounts, guide pin and armature bushings.

## 7. MODIFIED CAR CLASS RULES

Legal chassis are: BSRT T2/G3/G3R, Mattel/Tyco 440 X2, Micro Speedworks T+ Slottech Panther/Panther 02/Thundercat T1, Wizzard-Patriot P2/P3/Scorpion/Storm Life-Like Fast Tracker/Pro Tracker

1. The chassis must be stock, readily available, "H.O.P.R.A. Approved" and cannot be machined, sanded or cut except to provide the following:
  - A. Add body mounts.
  - B. Mount any guide pin holder - guide pin shall remain in any one of the stock positions.
  - C. Add armature bushings or ball bearings.
  - D. Drill or cut holes for adjustable brush tension.
  - E. The pickup retaining tabs on the chassis may be reinforced and/or replaced.
  - F. Rear axle retainer.
2. Any "H.O.P.R.A. Approved" ceramic motor magnets and polymer traction magnets may be used.
3. Any flux collector shall be stock and shall remain in the stock location. The flux collector may be modified to adjust for height.
4. The use of glue on the magnets or chassis surrounding the magnets shall not be allowed. Other non-magnetic materials may be employed to restrict the movement of the magnets.
5. Any type of armature shall be legal.
6. Electrical systems shall be stock, or stock replacement. Adjustable brush tension is allowed. Plated parts are allowed. Shunt wires are not allowed
7. There are no restrictions on the armature bushings/ball bearings (may be glued in), guide pin, gears, wheels, tires and axles.
8. Front axles may be attached to the guide pin holder for the Life-Like chassis only.

## 8. COMPRESSION MOLDED POLYMER MODIFIED CAR CLASS RULES

Legal chassis are: BSRT T2/G3/G3R, Mattel/Tyco 440x2, Slottech Panther/Panther 02, Thundercat T3, Tomy AFX Super G+

1. The chassis must be stock, readily available, "H.O.P.R.A. Approved" and cannot be machined, sanded or cut except to provide for the following:
  - A. Add body mounts.
  - B. Mount any guide pin holder - guide pin shall remain in any one of the stock positions.
  - C. Add armature bushings or ball bearings.
  - D. Drill or cut holes for adjustable brush tension.
  - E. The bottom surface of the chassis and bulkheads may be sanded flat. However, the bottom bulkhead tabs shall remain naturally connected to the end bells.
  - F. The pickup retaining tabs on the chassis may be reinforced and/or replaced in their stock position.
  - G. Real Axle retainers.
  - H. Bulkhead/Magnet Clip retaining screws.
  
2. Only "H.O.P.R.A. Approved" compression molded polymer magnets may be used, see below for specific manufacturer part numbers. Magnets may be sanded flat on the bottom surface only so they are flush with the bottom surface of the chassis and bulkheads.

"H.O.P.R.A. Approved" Compression Molded Polymer Magnets for Polymer Modified Car

Manufacturer	Part #	Description	Chassis Type
BSRT	#272	G-Force C4 Traction Magnets	BSRT T2, Mattel/Tyco 440x2
	#263	G-Force P10 Motor Magnets	
	#271	G-Force P10 Traction Magnets	
Slottech	#61	PolyMax Motor Magnets	
	#66	PolyMax Traction Magnets	
BSRT	#278	G-Force P10 Traction Magnets	Tomy AFX Super G+
BSRT	#277	G-Force C4 H-D Motor Magnets	BSRT G3/G3R
	#290	G-Force C4 Motor Magnets	
	#284	G-Force C4 Traction Magnets G-	
	#276	Force P10 H-D Motor Magnets	
	#292	G-Force P10 Motor Magnets	
Slottech	#286	G-Force P10 Traction Magnets	Slottech Thundercat T3
	#81	G13 Motor Magnets	
	#81C	G6 Motor Magnets	
	#86	G13 Traction Magnets	
Slottech	#86C	G6 Traction Magnets	Slottech Panther/Panther 02
	#62-1	PolyMax Motor Magnets	
	#62-2	PolyMax Motor Magnets LW	
	#67	PolyMax Traction Magnets	
	#68	MegaFlux Traction Magnets	

3. All magnets shall remain in their stock location.

4. The use of glue on the magnets or chassis surrounding the magnets shall not be allowed. Other non-magnetic materials may be employed to restrict the movement of the magnets. Any chassis clip used to hold the car together must not touch the magnets or affect the magnetic field.
5. Any type of armature shall be legal.
6. Electrical systems shall be stock or stock replacement parts. Shunt wires are allowed. Adjustable brush tension is allowed.
7. There are no restrictions on the armature bushings/ball bearings (may be glued in), guide pin, wheels, tires, gears and axles.



## 9. NEO MODIFIED CAR CLASS RULES

Legal chassis are: BSRT T2/G3/G3R, Mattel/Tyco 440 X2, Micro Speedworks T+ Slottech Panther/Panther 02/Thundercat T1, Tomy AFX Super G+ Wizzard-Patriot P2/P3/Scorpion/Storm

1. The chassis must be stock, readily available, "H.O.P.R.A. Approved" and cannot be machined, sanded or cut except to provide for the following:
  - A. Add body mounts.
  - B. Mount any guide pin holder - guide pin shall remain in any one of the stock positions.
  - C. Add motor bushings.
  - D. Drill or cut holes for adjustable brush tension.
  - E. The bottom surface of the chassis and bulkheads may be sanded flat. However, the bottom bulkhead tabs shall remain naturally connected to the end bells.
  - F. The pickup retaining tabs on the chassis may be reinforced and/or replaced in their stock position.
  - G. Real Axle retainers.
  - H. Front Axle retainer.
  - I. Bulkhead/Magnet Clip retaining screws.
  - J. Add any readily available front bumper.
2. All magnets shall remain in their stock location.
3. The use of glue on the magnets or chassis surrounding the magnets shall not be allowed. Other non-magnetic materials may be employed to restrict the movement of the magnets. Any clip used to hold the car together must be non-magnetic only.
4. Any type of armature shall be legal.
5. Electrical systems shall be stock or stock replacement parts. Shunt wires are allowed. Adjustable brush tension is allowed.
6. There are no restrictions on the armature bushings/ball bearings (may be glued in), guide pin, wheels, tires, gears, and axles.
7. There are no restrictions on the type of magnet material, cobalt, rare earth or polymer are allowed.

## 10. UNLIMITED CAR CLASS RULES

1. General rules 1 through 12 are not applicable to this class. General rules 13 through 26 are applicable and shall be followed.
2. There are no restrictions on chassis cutting. Scratch built chassis' will be allowed.
3. There are no restrictions on the type of magnets, magnet material, position of magnets, or number of magnets. Cobalt or Rare Earth type magnets will be allowed.
4. There are no restrictions on the armature, bearings, gears, wheels, axles, tires, guide pin and electrical system.
5. Any car or device, which is considered hazardous to the track, the marshals, other drivers or other cars, shall be declared illegal and not allowed to run.



## 11. CONCOURS D'ELEGANCE RULES AND PROCEDURES

1. Concours cars entered may be separate entries. Anyone making a Concours effort may enter a separate race body of any style. Cars may be entered for persons not present. Only one Concours entry shall be allowed per event.
2. All Concours entries shall be in running order when entered and shall be required to run one lap of designed track to be considered a legal entry. Concours entries shall also comply with all requirements set forth in the Unlimited Car Class Rule, with the following exceptions:
  - A. Concours entries may exceed the maximum width and length restrictions of General Rule #9 provided that exceeding these dimensions is appropriate in constructing and HO scale representation of the type of vehicle entered. (I.e. A top fuel dragster may exceed the maximum length of three inches.)
  - B. Added air control devices shall be allowed.
3. Four Concours judges shall be chosen by the Race Promoter from among those not entering the Concours competition. Each judge shall be from a different region of the country. The Concours judges shall assign points to the Concours card individually. The highest and lowest of the four judges' individual scores will be dropped, and the sum of the two remaining scores shall be an entry's final Concours points total. The maximum possible score per judge is 50 points and the maximum possible score per entry is 100 points.
4. In the case of a tie after judging, the two high and low scores shall be used as the tiebreaker. If a tie still exists, the National Director shall appoint a panel of Media Representative, or other impartial individuals as can be secured, and empower this panel with the responsibility to break any ties that remain.
5. Concours judges shall use the following points system to determine Concours placing:
  - A. Internal Detail (0-10 points) - General appearance, neatness, realism of driver, roll cage or bar, and dashboard along with any other interior details will be considered here.
  - B. Exterior Detail (0-10 points) - Areas to be considered include mirrors, numbering, lettering, decals, headlights, bumpers, engines, and any other exterior detail.
  - C. Paint and Finish (0-10 points) - Quality of the paint, neatness of the application of the paint to the body and evenness of the coat will be considered here.
  - D. Chassis (0-5 points) - General appearance of the work done and neatness will be considered here.
  - E. Overall Impression (0-15 points) - Realism and the general aesthetic quality of the car will be considered here. Scale replicas and original paint schemes of equal quality shall be given equal consideration.
6. Once an individual car has won any Concours event, it shall become ineligible to compete in another Concours event.

## 12. BEST APPEARING RACE CAR RULES AND PROCEDURES

1. The Best Appearing Race Car competition is, by definition, "A competition to determine the best looking cars that are entries in a racing event". Before any entry may receive a Best Appearing Race car Award, he or she shall also be an entry for the appropriate racing class, comply with all requirements of Technical Inspection for the Class, complete a qualifying run, and participate to the fullest extent possible in the races scheduled for that class. Obvious "sandbagging" during racing competition in order to minimize the chances for damage to the car is not in the spirit of the Best Appearing Race Car competition and may result in disqualification from the Best Appearing Race car competition as determined by the Race car Director or other high ranking H.O.P.R.A. Official.
2. Each Best Appearing Race Car entry shall compete during qualifying and racing in the same configuration as presented for Best Appearing Race Car judging. A separate race body is specifically not allowed.
3. For Best Appearing Race Car judges shall be chosen by the Race Promoter from among those not entering the Best Appearing Race Car competition. Each judge shall be from a different region of the country. The Best Appearing Race Car judge shall assign points to the Best Appearing Race Car cars individually. The highest and lowest of the four judges' individual scores will be dropped, and the sum of the two remaining scores shall be an entry's final Best Appearing Race Car points total. The maximum possible score per judge is 50 points and the maximum possible score per entry is 100 points.
4. In the case of a tie after judging, the high and low scores shall be used as the tiebreaker. If a tie still exists, then the racer's finishing position in his or her class shall be used as the tiebreaker. If a tie still exists, then the racer's qualifying position in his or her class shall be used as the tiebreaker. If a tie still exists, the National Director shall appoint a panel of Media Representatives, or other impartial individuals as can be secured, and empower this panel with the responsibility to break any ties that remain.
5. Appearing Race Car judges shall use the following points system to determine Best Appearing Race Car placing:
  - A. Exterior Detail (0-15 points) - Areas to be considered include numbering, lettering, decals, etc. Added physical details and interior details are specifically excluded Best from judging as outlined above in Best Appearing Race Car #3.
  - B. Paint and Finish (0-15 points) - Quality of the paint, neatness of the application of the paint to the body and evenness of the coat will be considered here.
  - C. Overall Impression (0-20 points) - Realism and the general aesthetic quality of the car will be considered here. Scale replicas and original paint schemes of equal quality shall be given equal consideration.
6. Once an individual car has won any Best Appearing Race Car event it shall become ineligible to compete in another Best Appearing Race Car event.

### 13. DRIVER RULES

1. The use of abusive language and/or misconduct by drivers toward marshals and/or other drivers will not be tolerated at the race site. A verbal warning will be given by the H.O.P.R.A. director to the violator on his first offense, followed by disqualification on his second. Any act of violence is grounds for immediate disqualification. Any driver that marshals his own car shall receive a lap penalty or be disqualified if another driver's car is damaged.
2. Un-sportsmanlike conduct on the part of any participant (including bystanders and/or spectators) at a H.O.P.R.A. event may result in lap penalties and/or disqualification as determined by the Race Director or other high-ranking H.O.P.R.A. Officials. Verbal abuse or profanity will not be tolerated. Serious or repeat violations of un-sportsmanlike conduct by any participant may result in the participant being prohibited from future H.O.P.R.A. activities as determined by a vote of the H.O.P.R.A. National Executive Committee.
3. All drivers must take turns serving as turn marshals unless otherwise authorized by the Race Director. Substitute marshals must be acceptable to the Race Director. Failure to fulfill marshaling responsibilities may result in lap penalties and/or disqualification as determined by the Race Director or other high-ranking H.O.P.R.A. Officials. It is the duty of the marshals to replace de-slotted cars. Marshals must not repair cars, but shall return the car along with the damaged parts (if available) to the driver.
4. There will be no driver changes. Drivers shall use the car they submit to tech.
5. A line 1' (one foot) from the drivers' stations at the side of the track shall be present in front of which driver shall stand.
6. Any driver is eligible to compete in the Unlimited, Polymer Modified or Modified class as the HO Nationals. Only Amateur drivers shall be eligible to compete in the Amateur Super Stock class at the HO Nationals. Drivers may enter only one Super Stock Class, either Amateur or Pro.
7. Driver's Amateur class eligibility for the HO Nationals.
  - A. Any Amateur driver that has won a National Championship class or finished in the Top Ten three or more times at the Nationals in a Championship class will be classified as a Pro.
  - B. If you enter the Pro Super Stock National Championship Race you will be unable to ever race in the Amateur Class again.
8. Any unknown driver wishing to enter the Amateur class will be given the benefit of the doubt and allowed to compete.
9. Protests shall be made in writing to the highest-ranking National Executive Committee member at the race within one hour after the occurrence. A fee equal to the protestor's entry fee must accompany the protest. The protest will be acted upon by the National Executive Committee members present and their decision will be final. If the protest is won the protest fee will be returned. A protest must follow these guidelines to be considered valid. If a protest is denied the protest fee will go to the H.O.P.R.A. National Organization.

## 14. RACING RULES AND PROCEDURES

1. The order of entry determines starting position in qualifying, the first entry qualifies first.
2. There are two methods of qualifying:
  - A. Two lanes are chosen for qualifying and two drivers qualify at the same time. The drivers are given 30 seconds of practice before their first qualifying run. The drivers then have a one minute qualifying run after which the number of laps and sections completed are recorded. The drivers then switch lanes and are given 30 seconds of additional practice. They then have a second one-minute qualifying run after which the number of laps and sections completed are again recorded. A driver's best run will be used to determine the driver's starting position in the race with the driver's back-up run used to break any ties. If a tie still exists, then the order of entry will break the tie.
  - B. On tracks, which have an automatically tripped timing device, individually timed laps may be used as a method of qualifying. Each driver qualifies individually and may start on any lane. Drivers are also allowed to switch lanes at any time during their qualifying run. Each driver will be given an equal time to qualify between one and two minutes. A driver's fastest lap time race will be used to determine his starting position in the race with his back-up time used to break any ties. In this method, each driver should be ready to qualify when the time of the person preceding him has run out. He will be given a maximum of thirty seconds before his qualifying time starts.
3. No "bye" will be issued in qualifying. Drivers who don't qualify will start the race at the back of the field. Late entries that miss qualifying will also start the race at the back of the field.
4. There are two systems of racing procedures:
  - A. The two bracket system - Drivers are divided into two groups called A and B with the fastest qualifier placed in group A, the second fastest qualifier placed in group B, the third fastest qualifier placed in group A, etc. Initially each race, except the first race in each group is 50% occupied by drivers winning sit-out positions. These races are then filled out by the top finishers making move-ups. The preliminary races in each group are called Consi. Races and the last race in each group is called a Semi, the winners of the Semi plus the drivers with the highest lap totals move up to fill the Main, which is the final race of the event.
  - B. The four-bracket system - This system may be used if there are 24 or more entries racing on a four-lane track, 36 or more entries racing on a six-lane track, or 48 or more entries racing on an eight-lane track. In this system, drivers are divided into four groups call A, B, C, and D respectively, the fifth fastest qualifier is placed in group A, the sixth fastest qualifier in group B, etc. The races are set up the same way that they are in the two bracket system and the method of move-ups remains the same as the two bracket system until the Super-Semis. Then each top finisher from the A and C semis is placed in one Super-Semi call the A-C Super-Semi and each top finisher from the B and D semis is placed in the other Super-Semis called the B-D Super-Semi and then the next highest finishers in all of the semis shall fill out the remaining open positions. The winner of each Super-Semi plus the driver with the highest lap totals from the Super-Semis move up to fill out the Main which is the final race of the event.
5. Initially, lane choices will be determined by qualifying with the fastest qualifier having first choice, etc. Drivers who move up will no longer choose lanes based on qualifying but instead by their order of finish in the previous race. These drivers will choose lanes after those winning sit-out positions.

6. In all H.O.P.R.A. events, each driver will have the opportunity to drive on all lanes during the race. This shall be achieved by drivers moving to adjacent lanes in a systematic manner (it is recommended that drivers move from the outer-most lane to the inner-most lane). A race will consist of as many prescribed segments as lanes used.
7. During lane changes, the power to the track should be off. During this lane change period, the driver is responsible for changing his lane tape and replacing the car to the track at the location it stopped at the end of the previous segment. Marshals or others shall not remove any car from the track after the conclusion of a segment unless specifically authorized to do so by the driver of that car. Marshals shall assist drivers in making lane changes when asked to do so. Replacing a car in an advantageous position will result in lap penalties and/or disqualification as determined by the Race Director or other high ranking H.O.P.R.A. Official. When a car is removed from the track during racing, the same conditions apply.
8. A "Track Call" may be invoked by the Race Director if he determines that a hazardous or unfair situation such as lap counter or other track equipment failure, un-marshal-able car (cars that are out of the immediate area or under the track and cannot be replaced quickly, power shall be turned back on as soon as the car is in hand) exists. Power and segment time will be suspended during a "Track Call". During this time, no car repairs, unless authorized by the Race Director shall be allowed and will result in lap penalties and/or disqualification as determined by the Race Director or other high ranking H.O.P.R.A. Official. Drivers may not declare a "Track Call" or they will be penalized one (1) lap per offense.
9. If a driver or marshal damages another car while replacing the car on the track, power to the track shall be turned off to give the offended driver time to put the car back into running order with a time limit on repairs equal to the length of time of the segment being run.
10. At the conclusion of each race, the cars shall be left on the track where they stopped after the power was shut off until the order of finish is positively determined and the Race Director authorized their removal. Removal of cars prior to the Race Director's authorization will result in the offending car(s) being credited with running 0 sections.
11. The Race Director has the right to ask for the removal of a car from the track, which is excessively interfering with other cars, damaging the track and in any manner, or unnecessarily disrupting the race. The car will only be allowed back on the track after repairs have been made to correct the problem.
12. All Consi. Races will have an equal practice time of between one and two minutes, two minutes of racing per segment, and one minute breaks between segments.
13. All Semi races will have an equal practice time of between one and three minutes, three minutes of racing per segment, and one and one-half minute breaks between segments.
14. All Super-Semi races will have an equal practice time of between one and four minutes, four minutes of racing segment, and two minute breaks between segments.
15. The Main will have a practice time of between one and five minutes, five minutes of racing per segment, and two and one-half minute breaks between segments.
16. Each race shall begin within 30 seconds after the completion of practice.

## 15. TRACK AND EQUIPMENT RULES

1. All tracks shall have four or more color-coded lanes in operating condition, a minimum of six amps per lane, minimum eighteen (18) volts of power, and retaining walls of at least one inch in front of the drivers and two and one-half inches everywhere else. \*
2. Eighteen (18) volt battery power or filtered power supplies shall be used at the H.O.P.R.A. National Championship Race (with the exception of Unlimited and Neo Modified Class competition where only batteries may be used). When power supplies are used they must meet the following specifications of 5 amps minimum per lane (i.e. four (4) lane track must use a twenty (20) amp power supply) for Modified class and below. Polymer Modified class must use ten (10) amps per lane minimum.
3. All tracks shall be equipped for alligator type hookups and dynamic braking.
4. Repairs and/or modifications to the track shall be approved by the track's owner or the highest-ranking H.O.P.R.A. official present at the time.
5. All tracks used for H.O.P.R.A. competition shall have clearly marked track sections for determining the number of sections run at the end of the race.
6. Tire dressings ("glue") must be approved by the track's owner prior to their use. Dressings may not be applied by the racers directly to the track in any fashion. Application of dressings in such a manner resulting in the damage of the track or other cars, or the obvious impediment of other cars, is grounds for lap penalties and/or disqualification as determined by the Race Director or other high-ranking H.O.P.R.A. Official.
7. Only the track power may be used to power the cars.
8. All tracks used for H.O.P.R.A. competition shall be equipped with reliable, computer scoring system. In all situations the scoring system is considered correct unless it can be proven otherwise, the computer shall be corrected if necessary (such as when a car crosses on the wrong lane). If a lap can be verified by a track marshal as having been missed or added, the Race Director must be notified to correct the count.\*
9. Each track used for H.O.P.R.A. National Championship race shall have the Race Director's station located a track side, situated to provide a clear unobstructed view of the entire racing surface. The Race Director's station shall be equipped with a device to provide the Race Director with direct physical and simultaneous control of track power and segment time. The Race Director's only responsibility shall be to control the racing action on the track. The Race Director shall have no marshaling responsibilities. Another individual shall be employed as Race Scorer/Announcer whenever available manpower permits.

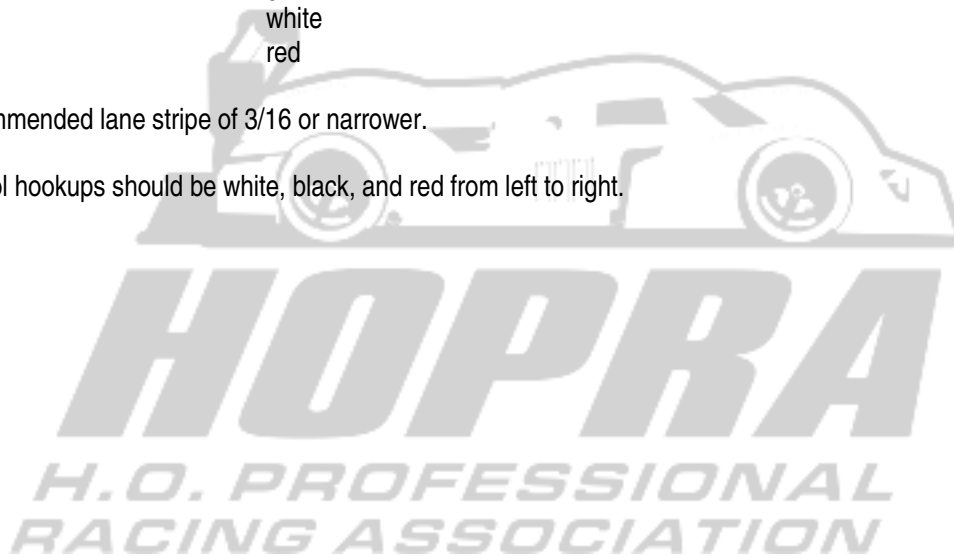
## 16. TRACK AND EQUIPMENT GUIDELINES

1. All tracks used for H.O.P.R.A. competition should be situated so as to provide for complete marshaling positions. These positions should not interfere with drivers or the driver's view of the track.
2. All track used for H.O.P.R.A. competition should allow for driving positions that provide for a clear, unobstructed view of the entire track and adequate space for controllers and other trackside equipment.
3. All tracks used in H.O.P.R.A. competition should have padded retaining walls.
4. The following are recommended lane colors from inside to outside at driver's station starting from left to right.

4 Lane  
yellow  
blue  
white  
red

6 Lane  
yellow  
blue  
orange  
green  
white  
red

5. Recommended lane stripe of 3/16 or narrower.
6. Control hookups should be white, black, and red from left to right.



## 17. NATIONAL CHAMPIONSHIP RACE RULES AND PROCEDURES

1. The National Championship Race shall use the Official H.O.P.R.A. National Rules as voted on by the National Executive Committee.
2. Bids for future National Championship Events shall be submitted on the official National Championship Race bid form.
3. Bids for the following year's National Championship Race shall be submitted to the National Director prior to the present year's National Championships. Incomplete bids may be submitted (complete bids are preferred). Bids for future National Championship Races may be submitted at any time and will be kept on file for future use.
4. In the event that no bids are received for the next year's National Championship Race, the National Director shall appoint a committee composed of National Executive Committee members to find an appropriate site for holding next year's National Championship Race.
5. National Championship races shall be held on standard HO scale racetracks. No form of "trick" tracks shall be allowed. Any Box Stock car shall be able to negotiate all lanes of the track. If a track is to be used that is not of readily available plastic track (i.e. Tyco, Aurora T-Jet, A/FX), the dimensions of the track (track material, rail type, rail width, rail height, space between rails, slot width, slot depth, space between slots, etc.) must be included. Any track not constructed of readily available plastic track shall be installed in a hobby shop or other location accessible to all interested participants.
6. It shall be the responsibility of the H.O.P.R.A. Information Director to coordinate the publication of the H.O.P.R.A. National Championship Race Report. The Race Promoter(s) and H.O.P.R.A. National Executive Committee shall be required to furnish all assistance deemed necessary by the H.O.P.R.A. Information Director. This report shall contain brief summaries of each Championship or other event held at the year's H.O.P.R.A. Nationals. The finishing order and final lap totals for each participant in each Championship Event shall be included. The liberal use of photographs and graphics is encouraged. This report shall be mailed to all participants and sponsors involved with the H.O.P.R.A. Nationals, and to all slot car racing trade publications, with 45 days after the conclusion of the H.O.P.R.A. Nationals.
7. An award for "National Drivers Championship" for the best racer at Nationals. Take the three (3) best finishes from any one driver for the best average finish position. This would encourage more participation.

## 18. OFFICIALS & MEMBERSHIPS

1. Each state or group of states that sanctions a state or regional H.O.P.R.A. sanctioned HO slot car racing series of at least five races involving at least two or more H.O.P.R.A. car classes; which are open to all participants; which are advertised by flyers or ads in appropriate publications prior to their scheduled running; the results of which are published in a like manner and can be verified; may be represented on the National Executive Committee by two members. These members shall reside in the state or group of states, which they represent and shall be a current H.O.P.R.A. member in good standing. New Executive Committee seats shall be requested in writing and forwarded to the National Director 90 days prior to the National Executive Meetings; so as to verify eligibility by the National Executive Committee. All new Executive Committee seats shall be placed on probationary status for a period of one year.
2. Each National Executive Committee seat shall contribute \$10.00 to the National Director for the coming year to cover expenses of the office. Probationary seats shall contribute these funds upon the removal of their probationary status. Failure to contribute these funds within 45 days after the National Executive Committee meeting will result in the automatic placement of the seat on probation until the funds are contributed. Failure to contribute the funds within 180 days after the National Executive Committee Meeting will result in the suspension of that seat until reinstated by a majority vote of the National Executive Committee.
3. It shall be the sole decision of each state or group of states as to how its National Executive Committee Representatives are selected. If a decision cannot be made or if the state prefers H.O.P.R.A. will take an active role in establishing state or group representation by balloting the paid membership to determine that position.
4. Each state or group of states must have at least 5 paid members per executive committee seat/per year to maintain each seat. Members under the Family Membership discount are counted as one unit. To be a H.O.P.R.A. Executive Committee member you must be a current H.O.P.R.A. member in good standing. Major manufacturers (i.e. Scale Auto/BSRT, Slottech, Wizzard Products) of cars/chassis and magnets are not eligible for executive committee seats. Major manufacturers may be represented by a non-voting committee member to provide information and be a liaison between H.O.P.R.A. and the manufacturer. The manufacturer representative shall be appointed by the manufacturer, but may not be the manufacturer themselves.
5. At least one member from that state or group of states shall have attended the previous years H.O.P.R.A. National Championship Race in order to qualify for National Committee representation.
6. Each state or group of states is encouraged to stage a public service or fund raising event each year to promote better public relations. Such an event can replace one event in qualifying for a National Executive Committee seat.
7. Each state or group of states will donate \$100 to help support the H.O.P.R.A. National Champion Race event.
8. It is the duty of the National Executive Committee to establish rules for the annual National Championship Race; to assist in the running of each state's series if needed; to settle all matters of dispute related to official H.O.P.R.A. business; to help insure a solid racing program within every phase of H.O.P.R.A.; to help promote uniformity among the states and in general to promote a feeling of good will and sportsmanship within the sport of HO scale slot car racing, with a sense of fair play and the best interest of the sport in mind at all times. Any National Executive Committee member who fails to respond to an issue put before the National Executive Committee by the National Director on two consecutive occasions or in two out of three

consecutive occasions may be suspended from the National Executive Committee for the remainder of the year. This member shall still receive National Executive Committee mailings and may still correspond with the National Executive Committee but will not have the power to vote unless reinstated by a majority vote of the National Executive Committee.

9. The National Executive Committee shall elect from with itself, by a 2/3 majority vote, a National Director, Assistant Director, Membership Director, Information Director and any other officials and committee heads it deems needed (see page 27 for duties and responsibilities) The National Director may serve up to three consecutive years, and then may be nominated for position after one year off (unless no other nominees for position).
10. The H.O.P.R.A. National Rules shall be published no later than 120 days prior to the holding of the National Championship Race.
11. The National H.O.P.R.A. Membership packages will include the following:

<b><u>Membership Package</u></b>	<b><u>Family Member Package</u></b>
\$10.00	(For additional immediate family members)
Rulebook	\$5.00
Membership Card	Membership Card
Nationals Flyer Mailings	Nationals Flyer Mailings
Newsletters (if published)	Newsletters (if published)
Member Discounts	Member Discounts
2- HOPRA Stickers	2- HOPRA Stickers

11. An annual accounting of H.O.P.R.A. memberships shall be presented and published by the Membership Director or an appointed Senate Member each year at the National Championship Races.
12. The Official H.O.P.R.A. Logo is as appears on the front cover of this rulebook and is the copyrighted symbol of our organization.

**H.O.P.R.A.**  
**H.O. PROFESSIONAL**  
**RACING ASSOCIATION**

## **19. NATIONAL EXECUTIVE COMMITTEE PROCEDURE GUIDELINES**

1. Proposals for all rule revisions and/or new rules shall be submitted to the members of the National Executive Committee in writing and forwarded directly to the National Director no later than March 1<sup>st</sup> for voting at that current years Nationals. It is then the National Director's responsibility to distribute the proposals to all active National Executive Committee members for discussion and testing. Proposals submitted after this date must be submitted by at least three (3) members of the National Executive Committee to be considered for an emergency vote.
2. After March 1<sup>st</sup>, the submitted rule proposals will be distributed by the National Director to the National Executive Committee members for comments. It is recommended that the National Executive Committee members be given a time period of no less than two (2) weeks to review the proposals and return any comments back to the National Director. The National Director will then be responsible for distributing all pertinent comments to all active National Executive Committee members. The comment procedure may be waived as seen fit by the National Director if deadlines do not allow time for the comment process.
3. It is recommended that National Executive Committee members be given a time period of no less than two (2) weeks to review rule proposals and/or comments before being required to cast their votes. Votes on rule proposals shall be forwarded by National Executive Committee members directly to the National Director. It is then the National Director's responsibility to distribute the votes and results to all active National Executive Committee members.

## **20. NATIONAL EXECUTIVE COMMITTEE PROCEDURE RULES**

1. A 2/3 majority of the votes cast shall be necessary to pass or defeat a proposal. Only in an emergency situation as declared by the National Director, when time deadlines do not allow for a re-vote, can this procedure be waived. In the event of an emergency situation where a tie vote exists, the National Director will be allowed to break the tie vote.
2. A 2/3 majority vote by the active members of the National Executive Committee shall be necessary to overturn a decision rendered by the National Director.
3. In the event that the National Director cannot fulfill the term of office, the Assistant National Director shall be appointed to take over the office of National Director for the remainder of the current term. The National Executive Committee shall elect from within itself, a new Assistant Director by a simple majority vote.

## 21. NATIONAL EXECUTIVE COMMITTEE ORGANIZATIONAL CHART

National Director*
Assistant Director*   Membership Director*   Information Director*
State/Regional Representatives**
Manufacturer Representatives (3 non-voting positions)***

\*Filled or voted in from within the current National Executive Committee members.

\*\*Voted in by current state/regional H.O.P.R.A. members.

\*\*\*Appointed by manufacturers (Scale Auto/BSRT, Slottech, Wizzard)

### DUTIES

**National Director** – Oversees the general operation of the organization within the procedural guidelines of the Official H.O.P.R.A. National rules.

**Assistant Director** – Assists the National Director with day-to-day organizational operation and stands in for him/her when requested.

**Membership Director** – Receive membership applications, issues packets, maintains current membership list and makes it available to all state/regional representatives.

**Information Director** – Creates, oversees and updates website, print materials and any other items as requested by Directors and Representatives.

**State/Regional Representatives** – Voice for the current membership in their state/region, present and vote on new rule proposals.

**Manufacturer Representatives** – Gives State/Regional Representatives information on new products, concerns of manufacturers and informs manufacturers of rule proposals and any other information. (Non-voting position)

*H.O.P.R.A.*  
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*“H.O. Slot Car Racing ... The World’s Fastest Motorsport”*