



Class Rules

2009-2010

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HOCOC Approved Divisions

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Any matter, Situation or Spec, not discussed in this rulebook will be determined by the HOCOC Events Director or Event Steward. Their decision is final.

General Rules-All Divisions

1. O.E.M. – Original manufactures equipment for that make of car.
2. Stock – Readily available direct replacement for that make of car.
3. The number of armature magnets cannot exceed two.
4. No Tire glue or dressing.
5. One guide pin per car.
6. Hot Stock Armature – Min. ohms 5.8. May be trued, balanced, expoxied & polished.
7. The procedure for measuring ohms is to average all 3 poles after a 5 min cool-down.

8. Maximum width 1 & 5/16 (1.3125) inch for all classes, except Sportsman for chassis only, body may be wider. Body length 3" max.
9. Any controller may be used providing that it does not increase the available voltage. No auxiliary batteries, capacitors or supplemental power supply that can supply power to the car after track power is shut off is allowed.

T-Jets Classic

Summary: Copper T-Jet with stock gears, minimum 15.0 ohms, any axle, wheel, tire.

The T-Jet class brings back vintage 1960's racing with a mostly stock chassis. Different body styles make up a variety of sub-classes to represent different racing series of the day. This is the slowest chassis we run but it's still big on excitement. The body style used for each scheduled race will be posted in advance.

Chassis Specifications

1. Base Chassis

- 1.1. Manufacturer - Only the copper T-jet chassis from Aurora or the ThunderPlus from Model Motoring Inc., is legal.
- 1.2. Modifications – Chassis base must remain stock without modifications. No venting, lightening or trimming allowed. Chassis gear plate must remain stock without modifications with the exception of the rails running from front to back along each side may be trimmed. Bearing holes must remain stock on the base and plate. No metal bearings allowed. No weight may be added to the chassis.

2. Armature

- 2.1. O.E.M. Aurora, Model Motoring Inc. stock 2 lam motors only with a minimum 15.0 ohms.
- 2.2. Modifications
 - 2.2.1. Balancing – None allowed.
 - 2.2.2. Truing – none allowed
 - 2.2.3. Re-winds/de-winds – None allowed.

3. Electrical System

- 3.1. Base plates – stock copper, no modifications, no soldering, no shunting.
- 3.2. Brushes – copper/carbon composite only and must be O.E.M., Thunder brushes or Wizzard brands.
- 3.3. Shoes - O.E.M. stock copper pick up shoes or similar T-Jet copper replacements such as BSRT brand. Regular or long step permitted. Wizzard shoes allowed.

4. Magnets

- 4.1. Type – Any ceramic magnets are legal including Aurora T-Jet, Model Motoring Inc., Johnny Lightning ThunderJet. Any AFX magnets including Super II's are allowed.
- 4.2. Modifications – none allowed except ends of JL magnets may be sanded to fit chassis.
- 4.3. Shims – non-ferrous material allowed.

5. Gears

- 5.1. O.E.M Aurora, Model Motoring Inc.
- 5.2. Modifications – None allowed. No beveled or lightened gears. Gears may be polished.

Solder or glue may be used to attach gears to shafts. Excessive solder that adds significant weight will not be allowed.

5.3. Arm pinion – stock brass 14 tooth.

5.4. Idler – stock brass 24 tooth.

5.5. Driven – stock brass 24 tooth.

5.6. Drive pinion – stock brass 9 tooth.

5.7. Crown – stock plastic 15 tooth.

6. **Axles** – Any for Int'l Sedans, Mini Stocks (VW Bugs), and Indy cars. Vintage NASCAR (50's) must use the same length axle as O.M.E.

7. Wheels

- 7.1 Open, except for Indy Cars and Vintage NASCAR.
- 7.2 Indy Cars must run the Aurora Truck, Hot Rod or Dune Buggy rims.
- 7.3 Vintage NASCAR must run O.E.M. rims or double flange rims of the same size as O.M.E.

8. Tires

- 8.1 Open, except for Indy Cars and Vintage NASCAR.
- 8.2.1 Indy Car Tires must be black.
- 8.2.2 Indy Car Tires must be slip on silicone or hard rubber.
- 8.2.3 Maximum tire width 0.150 in.
- 8.2.4 Minimum tire diameter 0.480 in.
- 8.3.1 Vintage NASCAR tires must be black.
- 8.3.2 Vintage NASCAR tires must be slip on silicone or hard rubber.
- 8.3.3 Vintage NASCAR tires must be approx. the same size as O.M.E. The entire tire must fit on the rim.

- 1.4. Car must have both bumpers and windshield if they were originally produced for that model.

Body Specifications

1. Hard-shell (Injection, resin cast, styrene) body styles all conform to the same specifications:
 - 1.1. Two screws must be used to mount the body to the chassis.
 - 1.2. Body may be lowered and lightened but not weighted.
 - 1.3. Fender wells may be cut for tire clearance.
 - 1.5 Hard-shell body styles to be used are as follows include:
 - 1.4.1. Vintage NASCARs ('50s).
 - 1.4.2. Indy (bodies from the '50s and '60s).
 - 1.4.3. International Sedans. Any street legal car or prototype of a street legal car.
 - 1.4.4. Mini Stocks (60's VW Bugs)

T- Jet Super Stock

Summary: SS T-Jets using the Aurora T-Jet chassis.

If you are into Super Stock T-Jets then this class is for you. This chassis class will see several types of bodies being used. to represent different racing series of the day. The body style used for each scheduled race will be posted in advance.

General Rules

1. Each car shall pass freely through the Official Test Block: 1 5/16 (1.3125) inch +/- 0.002 inch.

Chassis Rules

1. Chassis must be stock Aurora Thunder Jet with all brass components.
2. Non-ferrous bearings, bushings, shims and spacers are permitted on the axle.
3. Non-ferrous magnet shims are permitted, except for sanded Johnny Lightning magnets.
4. There shall be no modifications to the chassis.
5. Gear plate rails may be cut or sanded only for the purpose of lowering the body and shall only be cut or sanded to the level of the top surface of the gear plate.
6. Brush springs may be adjusted in their original configuration to change the tension on the brushes.
7. Brush springs may be glued to the chassis at a point no more than half the distance from the rivet point to the commutator brush hole in the chassis. No gluing shall be allowed from the point half the distance between the rivet and commutator brush hole to the brush hole.
8. Guide pins shall be of original design. They shall not be metal.
9. Guide pins may be glued to the chassis.
10. Guide pins may be shortened in length to accommodate different tracks.
11. Two mounting screws shall be used to hold the body securely to the chassis.
12. The gear plate clamp may be bent, but not cut or otherwise altered, to improve fitment.

Pickup Shoes and Springs

1. Pickup shoes and springs shall be solid copper and manufactured by Aurora, Model motoring, American Line ,BSRT (model 504 only) or Wizzard.
2. Pickup shoe springs may be cut (have coils removed) to desired length.
3. Pickup shoe springs may be stretched to the desired length.
4. The pickup shoe may be bent, but only for the purpose of adjusting the original contact area to accommodate different rail heights of the various tracks.
5. Pickup shoe travel may only be adjusted by 1) bending the front "window" portion of the shoe that hooks on the front of the chassis, 2) bending the hook which attaches to the chassis' copper hardware, 3) bending the hangers on the chassis into which the rear hook of the shoe connects, or 4) adding heat shrinkable tubing to the top of the front window.

Magnets

1. The only allowable magnets are stock Aurora or Johnny Lightning/Round2 Auto World.
2. Magnets may be sanded for fitment.
3. JL/R2 magnets shall not be shimmed, stock Aurora magnets may be shimmed with non-ferrous material.
4. Magnets may be matched.
5. Magnets shall not be affixed to the chassis by any means.
6. All magnets shall have original factory paint, there shall be no substantial removal of paint.
7. Painting of magnets shall not be allowed.
8. Spacing between magnets shall be at least 0.700 inch +/- 0.002.

Armatures

1. With the exception of rule 3 below only original stock, unaltered armatures with gray laminations may be used.
2. Armatures shall measure 15 ohms or greater at each pole.
3. Armatures may be balanced. You may add weight, cut a vertical notch on one, two or three poles OR you may grind/sand material from one, two or three poles.
4. Armatures shall not be trued. Traces of gray paint must remain visible on all exterior edges of the poles.

Commutator Brushes

1. Commutator brushes shall be manufactured of a copper/carbon compound.
2. Both top and bottom surfaces shall remain flat.
3. Brushes shall remain unmodified in their original out of the package condition.

Gears

1. The armature pinion, idler gear, driven gear and final drive pinion gear shall be brass.
2. The armature pinion gear shall have 14 teeth.
3. The idler gear shall have 24 teeth.

4. The driven gear shall have 24 teeth.
5. The final drive pinion can have 9, 12 or 14 teeth.
6. The crown gear shall have 15 teeth.
7. The crown gear shall not be metal.
8. The crown gear "boss" may be sanded or trimmer to accommodate different gear ratios.
9. The crown gear may be shimmed inside and/or outside the chassis.
10. Gears may be soldered or glued to their respective shafts.
11. Gears may be lapped and polished. They shall not be beveled or otherwise altered.

Tires/Wheels/Axles

1. Axle nuts, spacers or springs must be kept on the outer side of the chassis
2. Spacers shall be only made of plastic, copper, aluminum, brass or steel.
3. All four tires shall touch the test track in the static position.
4. The width of the fully assembled tire/wheel/axle assembly shall not exceed 1 5/16 (1.3125) inches.
5. "Hub caps" or other wheel inserts shall fit entirely within the wheel.
6. Lateral movement of the front tire/axle assembly shall not exceed 1/32 (0.03) inch.
7. Shims may be used on the rear axle both inside and outside the chassis.

Body Specifications

1. Body must be of the hard shell variety with 2 screw posts conducive for mounting the body to the chassis.
2. Two screws must be used to mount the body to the chassis.
3. Body may be lowered and lightened but not weighted.
4. Wheel wells may be cut for tire clearance.
5. Interior may be removed.
6. Car must have both bumpers and windshield.
7. Hard Shell body styles to be used are as follows:
 - a. Grand Americans (Mid 60's - Mid 70's American Muscle and Pony cars)
 - b. Trans-Am (Late 60's - early 70's Trans-Am series cars)
 - c. Dirt Late Models (modern late model dirt short track cars)
 - d. Can-Am (60's Can-Am bodies)

Late-Model Sportsman - National Sportsman Series

Summary: Aurora, MM, JL, AW T-Jet with hop-up gears, minimum 14.0 ohms, any axle, wheel, tire. The Late-model Sportsman allows vintage Aurora T-Jets and re-issues by MM, JL, AW to compete side-by-side. Late-model NASCAR SPRINT Cup bodies and paint schemes are represented for the modern NASCAR fan.

Chassis Specifications

1. **Base Chassis** – Aurora T-Jet copper chassis, ThunderPlus from Model Motoring Inc., and Johnny Lightning / AutoWorld ThunderJet 500 is legal.
 - 1.1. Modifications – Chassis base must remain stock except the chassis floor adjacent To the pick up shoes tabs maybe trimmed 1/8 inch to allow the use of the #504 BSRT pick up shoes.No other venting, lightening or trimming allowed. Chassis gear plate must remain stock without modifications with the exception of the rails running from front to back along each side may be trimmed to facilitate lowering of the body. Bearing holes must remain stock on the base and plate. No metal bearings allowed. No weight may be added to the chassis.
2. **Armature**
 - 2.1. Arm and base chassis must match original manufacturer for Aurora, MM, JL, AW and must remain stock. Aurora base chassis may use any Aurora armature with 2 lams.
 - 2.2. Minimum 14 ohms
 - 2.3. Modifications
 - 2.3.1. Balancing – none allowed
 - 2.3.2. Truing – none allowed
 - 2.3.3. Re-winds/de-winds – none allowed
3. **Electrical System**
 - 3.1. Base plates – stock, no modifications, no soldering, no shunting.
 - 3.2. Brushes – copper/carbon composite only and must be O.E.M., Thunder brushes or Wizzard brands.
 - 3.3. Shoes.- O.E.M. stock pick up shoes and similar T-Jet replacements such as BSRT brand. Regular or long step permitted. Wizzard shoes allowed. Shaping/bending of the shoes allowed.
4. **Magnets**
 - 4.1. Type – Any ceramic magnets are legal including Aurora T-Jet, Model Motoring Inc., Johnny Lightning ThunderJet. Any AFX magnets including Super II's are allowed.
 - 4.2. Modifications – none allowed except ends of JL magnets may be sanded to fit Aurora chassis.
 - 4.3. Shims – non-ferrous material allowed.
5. **Gears**
 - 5.1. Top Plate Gears (driven, idler, and armature) must be O.E.M for Model Motoring, Aurora, and JL. The drive pinion may be any readily available stock 9,12 or 14 tooth brass gear.

- 5.2. Modifications – None allowed. No beveled or lightened gears. Gears may be polished. Solder or glue may be used to attach gears to shafts. Excessive solder that adds significant weight will not be allowed.
 - 5.3. Arm pinion – stock 14 tooth.
 - 5.4. Idler – stock 24 tooth.
 - 5.5. Driven – stock 24 tooth.
 - 5.6. Drive pinion – 9, 12 or 14 tooth.
 - 5.7. Crown – stock plastic 15 tooth.
 - 5.8. Crown gear hub may be shaved or spacers added to maintain proper mesh.
 - 5.9. Any cluster gear shaft may be used.
6. **Axles** – Any.
 7. **Wheels** – Any.
 8. **Tires** – Any tire.

Body Specifications

1. Bodies must be a hard-shell injection mold or resin cast NASCAR NEXTEL Cup style. Only bodies from 1990 to present are legal.
2. The following bodies are legal:
 - 2.1. Tyco/Mattel Lumina, Monte Carlo, Grand Prix, Taurus and T-Bird.
 - 2.2. Life Like Monte-Carlo, Grand Prix, Taurus and Intrepid.
 - 2.3. BRP and other resin cast bodies are legal as long as they are the wide version.
 - 2.4. Narrow Life Like bodies with flares are not legal.
3. Bodies must be attached to the chassis by 2 screws and body posts.
4. Bodies must be mounted squared/evenly.
5. Bodies may be lowered but must retain their stock appearance.
6. Rocker Panels must be intact.
7. Fenders may be trimmed for wheel clearance but when viewed from above no part of the tire may be seen.
8. When viewed from the side both front and rear tires must be fully visible.
9. Bodies should be presented in a professional appearance.
10. Bodies do not have to be a true-to-life model.
11. Full glass must be intact.

Minimum Weight 22 grams

Grand Nationals

Summary: Copper T-Jet with hop-up gears, minimum 5.5 ohms, any axle, wheel, tire. See details below.

The Grand National brings back vintage racing with a super stock T-Jet and a true replica of a vintage NASCAR Grand National series stock car entry from the 60's – 70's.

Chassis Specifications

1. **Base Chassis** - Only the copper T-jet chassis from Aurora or the ThunderPlus from Model Motoring Inc., is legal.
 - 1.1. Modifications – Chassis base must remain stock without modifications. No venting, lightening or trimming allowed. Chassis gear plate must remain stock without modifications with the exception of the rails running from front to back along each side may be trimmed. Bearing holes must remain stock on the base and plate. No metal bearings allowed. No weight may be added to the chassis.
2. **Armature**
 - 2.1. Aurora or MM stock arm.
 - 2.2. Minimum 5.5 ohms
 - 2.3. Modifications
 - 2.3.1. Balancing – none allowed
 - 2.3.2. Truing – none allowed
 - 2.3.3. Re-winds/de-winds – none allowed
3. **Electrical System**
 - 3.1. Base plates – stock, no modifications, no soldering, no shunting.
 - 3.2. Brushes – Any copper or silver composites are allowed. Brushes may be grooved or domed.
 - 3.3. Shoes - Copper pick up shoes and similar T-Jet replacements such as BSRT brand. Regular or long step permitted. Wizzard shoes allowed.
4. **Magnets**
 - 4.1. Type – Any ceramic magnets are legal including Aurora T-Jet, Model Motoring Inc., Johnny Lightning ThunderJet. Any AFX magnets including Super II's are allowed.
 - 4.2. Modifications – none allowed except ends of JL magnets may be sanded to fit chassis.
 - 4.3. Shims – non-ferrous material allowed

5. Gears

- 5.1. Modifications – Gears may be polished, beveled, or lightened. Solder or glue may be used to attach gears to shafts.
- 5.2. Arm pinion – stock brass 14 tooth.
- 5.3. Idler – stock brass 24 tooth.
- 5.4. Driven – stock brass 24 tooth.
- 5.5. Drive pinion – stock brass 9, 12 or 14 tooth.
- 5.6. Crown – stock plastic 15 tooth or 19 tooth (AFX Super II) only.

6. Axles – Any.

7. **Wheels** – Semi or deep dish. Apx. same size and style for all 4.

8. Tires

- 8.1. Manufacturer - any
- 8.2. Types – tires must be slip-on and must be black.
- 8.3. Width requirements - Front tire minimum width is 3/16th inch (0.1875).

Body Specifications

1. **Body must be a replica** of a NASCAR Winston Cup car, ARCA late-model or USAC late-model that competed from 1962-1976.
2. Weights permitted on narrow bodies only but must be attached to the body and not visible from outside the body.
3. Lexan bodies not allowed.
4. Bodies should be presented in a professional appearance.
5. Full glass must be intact.

Coupes (old Time NASCAR Modifieds)

Summary: Any Aurora, JL, MM, AW T-Jet or AFX (non-magna traction) chassis open for modifications. See details below.

Cars must have headers, bumpers, nerf bars, etc. as seen on real coupes. Several vendors sell complete bodies and detail parts.

Chassis Specifications

1. **Base Chassis** - Aurora AFX (non-magnatraction), Aurora copper Tjet or Tuff Ones chassis, Johnny Lightning Tjet, Auto World TJet, Model Motoring Inc. ThunderPlus.
 - 1.1. Modifications are allowed except for the area below the magnets.
 - 1.1.1. Venting – allowed.
 - 1.1.2. Lightening – allowed.
 - 1.1.3. Weights – allowed, including pans.
 - 1.1.4. Bearings allowed.
2. **Armature**
 - 2.1. Manufacturer – Any pancake armature
 - 2.2. Minimum ohms - no limits
 - 2.3. Lams – any number of lams
 - 2.4. Modifications – Balancing, truing, re-winds/de-winds are all allowed.
3. **Electrical System**
 - 3.1. Electrical system may be copper, silver, gold or any combination of materials.
 - 3.2. Shoes – any shoe allowed
 - 3.3. Base plates may be soldered or shunted
 - 3.4. Brush holes may be replaced with cups
 - 3.5. Brushes may be any material and shape but must be present. Only brushes may contact the commutator. No shunts may contact the commutator.
4. **Magnets**
 - 4.1. Any ceramic magnet is allowed.
 - 4.2. Magnets may not be glued.
 - 4.3. Shims – non-ferrous material allowed.
 - 4.4. Shaping and grinding is allowed.
 - 4.5. Magnets are to be used for to drive the motor only, not handling.
5. **Gears** – no restrictions.
6. **Axles** – no restrictions.
7. **Wheels**
 - 7.1. Manufacturer – any.
 - 7.2. Type – AFX cars must use rear wheels that support slip-on silicon tires. T-Jet cars may use silicone-sponge wheels in the rear.

- 7.3. Style – all wheels must be deep dish only on front and back for both AFX and Tjet cars.
- 7.4. Wheel base width is 1 and 5/16 (1.3125) inch maximum.
- 7.5. All 4 wheels must be on the track.
- 7.6. Maximum lateral movement of wheels is 1/32 (0.0313) inch.

8. Tires

- 8.1. Manufacturer - any
- 8.2. Types – AFX cars must use slip-on tires on the rear. T-Jet cars may use any rear tire.
- 8.3. Width - Front tire width must be 3/16 (0.1875) inch minimum.
- 8.4. Black tires only

Body Specifications

1. Car Make/Model – Bodies must be a NASCAR type modified that competed during the years 1965 through 1971.
 - 1.1. Manufacturer – any, including scratch-built.
 - 1.2. Prototypes – not required but encouraged.
 - 1.3. Detailing and numbering – numbers required.
 - 1.4. Appearance – Cars must be neat in appearance. Cars must have the following Details: Front bumpers/push bars, rear bumper, Side nerf bars, air cleaner, fuel cap, hood pins Modeled or painted on, headers, radiator. Windows nets are preferred.
2. Type
 - 2.1. Hard shell injection molded, resin cast and Lexan permitted.
 - 2.2. Modifications allowed including venting, lightening, weighting.
3. Mounting may be done with screw posts, body mounts/tabs, clips, pin mounts/pins, tape, velcro
4. Windshields - optional
5. A/FX chassis tabs must not be exposed through doors.

Fair Grounds

Summary: Aurora Magna-Traction, JL/AW X-Traction with stock gears, minimum 14.0 ohms, any axle, wheel, tire. See details below. This class is based on cars that you would find competing on any given Saturday Night on short tracks both Dirt and Asphalt across America during the 60's and 70's.

Chassis Specifications

1. Base Chassis

- 1.1. Manufacturer – Aurora, Johnny Lightning, Auto World
- 1.2. Modifications – none, except the mounting tabs may be removed and replaced with braces if a narrow body is mounted.
 - 1.2.1. Venting – none.
 - 1.2.2. Lightening – none.
 - 1.2.3. Weighting – none.
 - 1.2.4. Bearings – none.

2. Armature

- 2.1. Manufacturer – O.E.M. Aurora, JL, AW
- 2.2. Minimum ohms - 14.0
- 2.3. Lams – 3 lams.
- 2.4. Modifications
 - 2.4.1. Balancing – none.
 - 2.4.2. Truing – none.
 - 2.4.3. Re-winds/de-winds – none.

3. Electrical System

- 3.1. Manufacturer – O.E.M.
- 3.2. Shoes – any
- 3.3. Base plates – no modifications
- 3.4. Brush cups – none allowed
- 3.5. Brush springs - stock
- 3.6. Brushes - stock
- 3.7. Modifications
 - 3.7.1. Soldering - none
 - 3.7.2. Shunts - none

4. Magnets

- 4.1. Type – ceramic only
- 4.2. Strength – any.
- 4.3. Modifications – none, no reshaping or grinding
- 4.4. Shims – non-ferrous material allowed.

5. **Gears** – no restrictions.

6. **Axles** – no restrictions

7. Wheels

- 7.1. Manufacturer – any.
- 7.2. Types – any.
- 7.3. Wheel base – maximum width 1 and 5/16 inch.
- 7.4. Lateral movement of wheels is 1/32 inch.

8. Tires

- 8.1. Manufacturer - any
- 8.2. Slip-on silicone rear tires only
- 8.3. Width requirements – none
- 8.4. All 4 tires must be on the track.

Body Specifications

1. Car Make/Model - American 2 door model from 1953-1975. Corvettes not allowed. Bodies with bubble fenders are not allowed. Cars should look like those that competed at fair grounds during the 60's and 70's.
 - 1.1. Manufacturer – any.
 - 1.2. Prototypes – not required.
 - 1.3. Detailing and numbering – numbers required.
 - 1.4. Appearance – neat.
2. Type - must be hard-shell injection mold or resin cast.
 - 2.1. Manufacturer - any
 - 2.2. Modifications
 - 2.2.1. Venting - allowed
 - 2.2.2. Lightening - allowed
 - 2.2.3. Weighting – none
 - 2.2.4. Lowering – Bodies may be lowered but tires must not protrude through the top of the fender wells. Bubble fenders not allowed.
3. Mounting
 - 3.1. Screw posts – allowed.
 - 3.2. Body mounts/tabs – allowed.
 - 3.3. Clips – Cobra body mounts allowed.
 - 3.4. Pin Mounts/Pins – none.
 - 3.5. Tape – allowed.
4. Windshields
 - 4.1. Front - Not required and may be removed.
 - 4.2. Back – Not required and may be removed.
5. Bumpers
 - 5.1. Not required and may be removed

SK Modifieds

Summary: Only the TYCO/Mattel 440x2 and the Life-Like "M" chassis legal with certain modifications. Bodies may be lexan and should represent late model asphalt modifieds.

The SK Modifieds class represents late model asphalt modifieds.

Chassis Specifications

1. Base Chassis

- 1.1. Manufacturer – Tyco or Mattel 440-X2, Life-Like "M" chassis
- 1.2. Modifications – The bottom of the chassis may be sanded
 - 1.2.1. Venting - none
 - 1.2.2. Lightening - none
 - 1.2.3. Weighting - none
 - 1.2.4. Bearings - none

2. Armature

- 2.1. Manufacturer – O.E.M. or hot stock replacements allowed.
- 2.2. Minimum ohms 5.8
- 2.3. Modifications
 - 2.3.1. Balancing (epoxy, solder) – allowed
 - 2.3.2. Truing - allowed
 - 2.3.3. Re-winds/de-winds – none allowed

3. Electrical System

- 3.1. Shoes – O.E.M. or stock replacement allowed including silver plated shoes. Shoe tabs may be pinned.
- 3.2. Brush barrels – O.E.M. or threaded brush barrels allowed. Barrels may be epoxied in place. Barrel heat sinks allowed. The 440-X2 chassis may have holes drilled to install brush barrels. Empty holes will be considered venting which is illegal.
- 3.3. Brushes - O.E.M. or stock replacement allowed
- 3.4. Modifications
 - 3.4.1. Tyco Bulkheads may not be altered except for the purpose of drilling to allow the installation of bushings.
 - 3.4.2. Shunting – none allowed

4. Magnets

- 4.1. Type - O.E.M. or ceramic replacements only.
- 4.2. Strength - any
- 4.3. Modifications - none
- 4.4. Flux collectors not allowed except LL M flux collectors which must remain stock.

5. Gears

- 5.1. No restrictions on gears

- 5.2. Spacers permitted

6. Axles

- 6.1. No restrictions on axles
- 6.2. Spacers permitted
- 6.3. Front and/or rear axle may be pinned or retained without adding significant weight.

7. Wheels

- 7.1. No restrictions on wheels
- 7.2. Maximum lateral movement 1/32 (0.0313) inch

8. Tires

- 8.1. O.E.M. or slip-on silicone only
- 8.2. Minimum front tire width is 3/16 (0.1875) inch
- 8.3. All 4 tires must be on the track

Body Specifications

1. Car Make/Model

- 1.1. Bodies must be a NASCAR/East Coast/IMCA Modified body representative of years 1975 to present.
- 1.2. Bodies do not have to replicate a prototype.
- 1.3. Numbers must be on both doors and/or roof and trunk of the vehicle.
- 1.4. Cars must be neat in appearance.
- 1.5. Bodies should have body details such as hood pins, window nets, fuel caps and should be highlighted by painting.

2. Type

- 2.1. Bodies may be of lexan, styrene, paper only

3. Mounting

- 3.1. Pin tubes/Pins allowed
- 3.2. Double-sided tape allowed
- 3.3. Bodies must be securely mounted to the chassis. Poorly mounted bodies will be Black Flagged.

4. Windshields

- 4.1. Windshields and/or netting are not required.

All Pro Late Models

Summary: G-plus, G3, P2, P3, Storm chassis with hot stock arm, any gears, wheels, tire.

This division is modeled after the NASCAR Winston Cup/Nextel Series. The running gear and specs are national rules which will allow a competitor to run this vehicle in many areas throughout the country.

Chassis Specifications

1. Base Chassis

- 1.1. Tomy G-plus, BSRT G3, Wizzard Patriot 2, 3, or Wizzard Storm chassis only.
- 1.2. Modifications
 - 1.2.1. Venting - none
 - 1.2.2. Lightening - none
 - 1.2.3. Weighting - none
 - 1.2.4. Bearings - none
 - 1.2.5. Drilling permitted for pin tubes.
 - 1.2.6. Drilling permitted for rear axle retaining pins.

2. Armature

- 2.1. OEM or Hot Stock armatures only.
- 2.2. Minimum ohms 5.8
- 2.3. Modifications
 - 2.3.1. Balancing (epoxy, solder) legal (hot stock).
 - 2.3.2. No Re-winds/de-winds
 - 2.3.3. Timing must be OEM

3. Electrical System

- 3.1. Stock parts only.
- 3.2. Any stock Shoes
- 3.3. OEM Base plates
- 3.4. Any stock brush barrels
- 3.5. Any stock brush springs
- 3.6. Any stock brushes
- 3.7. Modifications
 - 3.7.1. No Soldering
 - 3.7.2. No Shunting

4. Magnets

- 4.1. Type - O.E.M. or ceramic replacements only.
- 4.2. Strength - any
- 4.3. Modifications - none
- 4.4. Flux collectors not allowed

5. Gears

- 5.1. No restrictions on gears
- 5.2. Modifications
 - 5.2.1. Gears may be trued, drilled, polished.

6. Axles

- 6.1. No restrictions on axles

7. Wheels

- 7.1. No restrictions on wheels.
- 7.2. Wheel base must be OEM.
- 7.3. Maximum lateral movement 1/32 (0.0313) inch.

8. Tires

- 8.1. No restrictions on tires.
- 8.2. All 4 tires must touch the track.

Body Specifications

1. NASCAR type late model stock car bodies only.
 - 1.1. Bodies do not have to be copied from a prototype but should be professional in appearance and have the same details as a NASCAR Nextel type car would have: window nets, gas caps, grilles, etc. Cars do not have to be painted to resemble a certain NASCAR car but must be neatly painted and numbered. Windows must be clear.
 - 1.2. Numbers must be on both doors and the roof.
 - 1.3. Years legal 1990 to present. No pony cars. Full size bodies only (Monte Carlo, Lumina, T-Bird, Taurus, Dodge, Pontiac, etc.)
2. Lexan bodies only. No venting, rear deck panel may not be removed.
3. Mounting
 - 3.1. Pin tubes/Pins allowed
 - 3.2. Double-sided tape allowed
 - 3.3. Bodies must be securely mounted to the chassis. Cars with poorly mounted bodies will be Black Flagged.

Jalopies

Summary: The jalopy class offers both the experience racer and novice a fun, low cost very restricted division. It's a throw back to the early days of stock car racing. This class is referred to as a "poor man's coupe division".

Base Chassis

Manufacturer - Only the copper T-jet chassis from Aurora or the Thunder Plus from Model Motoring Inc., is legal.

Modifications – Chassis base must remain stock without modifications. No venting, lightening or trimming allowed. Chassis gear plate must remain stock without modifications with the exception of the rails running from front to back along each side may be trimmed. Bearing holes must remain stock on the base and plate. No metal bearings allowed. No weight may be added to the chassis. Gear rails may be trimmed, but stock clamp must be in stock location,

Gears

O.E.M Aurora, Model Motoring Inc.

Modifications – None allowed. No beveled or lightened gears. Gears may be polished. Solder or glue may be used to attach gears to shafts. Excessive solder that adds significant weight will not be allowed. Arm pinion – stock brass 14 tooth, Idler – stock brass 24 tooth, Driven – stock brass 24 tooth, Drive pinion – stock brass 9 tooth, Crown – stock plastic 15 tooth.

Armature

Stock 16 ohm gray tipped arms no balancing or truing re-winds/de-winds

Electrical System

Base plates – stock copper, no modifications, no soldering, no shunting.

Brushes – copper/carbon composite only and must be O.E.M., Thunder brushes or Wizzard brands. No X-ing, No Beveled AFX or Silver.

Shoes - O.E.M. stock copper pick up shoes or similar T-Jet copper replacements such as BSRT brand. Regular or long step permitted. Wizzard shoes allowed.

Magnets

Type – Any ceramic magnets are legal including Aurora T-Jet, Model Motoring Inc., Johnny Lightning ThunderJet. Any AFX magnets including Super II's are allowed.

Modifications – none allowed except ends of JL magnets may be sanded to fit chassis.

Shims – non-ferrous material allowed.

Axles

Any Axle Stock or Drill Blank, with only plastic spacers allowed, no wheel weights allowed.

Wheels

JW Delrin Wheels Plastic Wheels Front and Rear (JW's part #W05P-D or #W05P-N) or Aurora Truck, Hot Rod or Dune Buggy rims.

Tires

Rear Tires - Silicone Hot Rod/Truck size Slip-ons (Heister or Equivalent Brand .480 min. Height)

Front Tires - any but must be at least 1/8" wide with a .445 min height

Body

Hard Plastic, Resin or Thick Type Styrene, NO LEXAN Bodies. Can be Hand built. Body must mount to chassis with two mounting screws in original locations...20's 30's or 40's coupe, sedan coach whatever(LOL) "Cut Down Jalopy Style Body, the more detail the better, but doesn't have to have fenders, details such as headers, nerf bars, front and rear bumper, air cleaner or velocity stacks and dirt screen are encourage but not mandatory. Some of the most popular bodies for this division are the Hot Rod Coupe, Willy's, a cast version of the Lancer Sportsman Coupe and the super modified minus the wing and a roof top added.

Pro Stocks (G-Jets)

Summary: The Pro Stocks offer some of the closest racing in HOCOC. The cars use national rules which enables the competitors to compete anywhere in the country.

Base Chassis

Manufacturer – The chassis must be a stock BSRT G3 Flexible chassis with any hardness clip.

Modifications – Chassis cannot be modified except to add body mounts in their stock position and the front axle holes may be reamed to .052

Guide Pin shall be stock or BSRT stock replacement in the stock position.

The use of glue may be used for the body mounts and guide pin only.

BSRT G-Jet marked handling weights shall be used. Weights shall be used in their stock position.

No weights shall be added. Weights shall not be modified. If using the light (.120) traction weights you must use the BSRT traction weight spacers with a minimum thickness of .045

Gears

Pinion gear must be a stock G-Jet 7T or BSRT stock replacement.

Crown gear must be a stock G-Jet or a BSRT 21T. Gears may be lighten and spacers permitted.

Armature

Armature shall be a stock or hot stock BSRT G-Jet narrow gap design and be a minimum of 9 ohms.

Modifications – Armature bushings shall be stock G-Jet or BSRT stock replacement and shall be installed without modification to the chassis and/or bulkhead. Bushings may be reamed and chamfered. No ball bearings.

Electrical System

All Electrical system parts shall be stock or BSRT stock replacement. BSRT helper springs allowed.

Magnets

The armature magnets shall be BSRT stock G-Jet and cannot be cut. Magnets shall remain in their stock position. No method or material may be used to restrict movement of the magnets.

No additional magnets may be used.

Axles

Front axle shall be stock with no modifications. Rear axle open.

Front Tires/Wheels

G-Jet non – independent O-ring rims shall be stock and un-modified. Front tires must be stock and un-modified and be a minimum tire diameter of .350.

Rear Tires/Wheels

Rear tires must be black silicone on black sponge BSRT G-Jet AST tires with a minimum diameter of .450. Rear rims may be lighten.

Body

Lexan bodies only. No venting, rear deck panel may not be removed.

NASCAR type late model stock car or NASTRUCK (NASCAR TRUCKS) bodies only.

Bodies do not have to be copied from a prototype but should be professional in appearance and have the same details as a NASCAR type car/truck would have: window nets, gas caps, grilles, etc.

Bodies do not have to be painted to resemble a certain NASCAR car/truck but must be neatly painted and numbered. Windows must be clear. Numbers must be on both doors and the roof.

Years legal 1987 to present. No pony cars. Full size bodies only (Monte Carlo, Lumina, T-Bird, Taurus, Dodge, Pontiac, etc.)