# Jr Dragster Class rules:

The Junior Dragster program is designed to allow youth, as young as 8 years of age and up to 17, the opportunity to race against their peers in near replicas of the models that the Pros drive. Juniors may compete through the calendar year of their 18th birthday, provided they turn 18 before July 1 of the current year. IHRA Junior Dragsters are restricted to competition in half-scale cars over a distance of 1/8 mile. The competition structure is designed to be conducted on an ET dial-your-own format, or a preset index on a heads-up breakout basis (much like IHRA's Quick Rod class). Functional tail light mandatory on all entries. A photocopy of every competitors birth certificate must accompany all new license applications. Competitors must make 6 passes to obtain or upgrade IHRA license. (2 launches, 2 half track and 2 full passes within ET range for respective license).

## **CLASS DESIGNATIONS**

**BEGINNER:** Age 8 or 9 only; ET restricted to 11.90 seconds or slower based on either ET dial-your-own or heads-up basis. Breakout rules apply. One warning will be issued if a competitor runs quicker than 11.70. If the competitor does this a second time at the same event, they will be disqualified from the event. Any competitor running quicker than 11.50 at any time will be disqualified for the remainder of the event.

<u>ADVANCED:</u> Age 10 to 17; modified engines meeting IHRA rules accepted. Class based on either dial-your-own ET or heads-up Pro start. ET restricted to 8.90 or slower. Breakout rules apply. One warning will be issued if a competitor runs quicker than 8.70. If a competitor runs quicker than 8.70 a second time, at the same event, they will be disqualified from the event. Any competitor running quicker than 8.50 any time will be disqualified for the remainder of the event.

MASTER: Age 12 to 17; must meet all requirements for Advanced, PLUS: minimum 1 full licensed competition season mandatory; the competitor must provide documentation of experience and submit it with all license applications, licensing by IHRA or Track official after 3 approved runs between 7.90 and 8.90; Rack & pinion steering, and steel brake lines are mandatory.

ET 7.90 or slower; One warning will be issued if a competitor runs an elapsed time of 7.70 or quicker. If a competitor does this a second time at the same event they will be disqualified from the event. If a competitor runs 7.50 or quicker they will be disqualified for the remainder of the event and their license will be suspended for 6 months from the date of the infraction.

Due to the radical combinations available for the class additional safety requirements may be mandated if deemed necessary by the technical department.

\*Deep staging not permitted in any index class at any IHRA event. 12.90 index is limited to only 8 and 9 year old competitors.

## **REQUIREMENTS & SPECIFICATIONS**

### **BODY**

<u>BODY:</u> Body and cowl must be structured of aluminum or fiberglass and extend forward to firewall. Driver compartment, frame structure, roll cage, and body must be designed to prevent driver's body or limbs from making contact with wheels, tires, exhaust system, or track surface. Front overhang cannot exceed 15", measured from centerline of front spindle to most forward point of car. Body panels must be removable-fastened to tabs welded to frame. Drilling of frame for mounting body prohibited.

FUNNY CARS are acceptable providing design has been approved by the IHRA technical department prior to competition. Additional safety requirements may be imposed based on design characteristics. Contact the IHRA Technical department for specific details. Maximum Front over hang 25", Minimum height (roof) 35", Maximum Height (roof) 40", Minimum Roof hatch opening 15"x10".

#### **BURNOUTS**

Vehicles cannot be held in place or touched by a parent or crewmember during the burnout. Vehicles are not permitted to burnout past the starting line.

## **DIAL-INS**

The driver and crew are responsible for the accuracy of their dial-in. Dial-ins must be within class and performance limits. Any dial-in below allowable limits will have to be changed to an allowable dial-in before staging.

Dial-ins, and Competition Numbers must be at least 4" tall and clearly posted on both sides of the car, and visible from the control tower.

#### **DRIVER**

The driver must remain in the confines of the roll cage at all times and safety equipment may not be removed until the vehicle has come to a complete stop off the racing surface.

<u>ARM RESTRAINTS:</u> Mandatory. Must be worn and adjusted in such a manner that driver's hands and/or arms cannot be extended outside of roll cage and/or frame rails. Arm restraint shall be combined with the driver restraint system such that the arm restrains are released with the driver restraints. Refer to manufacturer for instructions.

**CREDENTIALS:** Valid IHRA Competition Certificate and IHRA Jr. Membership mandatory.

<u>HELMET:</u> Helmet meeting SNELL 90, 95 or newer or K-98, SFI 31.1, 31.2, or 24.1 mandatory. Either a full face helmet, shield or goggles mandatory. SFI Spec 31.1 = SNELL SA, open face helmet SPI Spec 31.2 = SNELL SA full-face helmet SFI Spec 41.1 = SNELL M, open-face helmet SFI Spec 41.2 = SNELL M full-face helmet.

**NECK COLLAR:** Mandatory.

<u>PROTECTIVE CLOTHING:</u> All drivers are required to wear a jacket meeting SFI Spec 3.2A-1 as well as full-length pants, shoes, socks and gloves. The use of nylon or flannel pants is prohibited. Competitors running 8.89 or quicker must utilize a minimum of 3.2A-1 pants and a full face helmet in addition to the above requirements. See class requirements for additional details.

RESTRAINT SYSTEM: SFI 16.1 certified Five-point minimum, 1 3/4" wide minimum driver restraint system mandatory. All seat belt and shoulder harness installations must be mutually compatible, originally designed to be used with each other. Only those units that release all five attachment points permitted. When arm restraints are worn with a restraint system that utilizes a "latch lever," a protective cover must be installed to prevent arm restraint from accidentally releasing the latch lever. All harness sections must be mounted to the frame cross member, or reinforced mounting, and installed to limit driver's body travel both upward and forward. Wrapping of belts around frame rail prohibited. Under no circumstances are bolts to be inserted through belt webbing permitted for mounting.

**DRIVETRAIN** CHAIN/BELT GUARD: All cars must be equipped with a guard to cover the width and at least the top run to the center line of the sprocket of any chains or belts. Guards must be minimum .060" steel, or . 125" aluminum, and must be securely mounted; no tie wraps. Moving engine/drivetrain parts must be protected by frame rails or steel or aluminum guards to avoid unintentional contact.

<u>CLUTCH:</u> All cars must be equipped with a dry centrifugal-type engine clutch. Chain or belt drive only. Axle clutches prohibited.

<u>FLYWHEEL:</u> Aftermarket billet flywheel mandatory unless OEM type carburetor is used. Cast aluminum flywheel prohibited. Modification to stock units other than keyway modifications is prohibited.

TRANSMISSION: Gear-type prohibited. Torque converter belt assembly units allowed.

**BRAKES & SUSPENSION:** Two-wheel hydraulic steel drum or disc brakes, or IHRA accepted mechanical brakes mandatory. Steel brake lines mandatory on 8.89 or quicker. No part of lines may run below bottom frame rails. Drilling of brake components prohibited. Live axle may have brakes on one wheel only if 7" minimum go-cart disc brake is used.

**ELECTRICAL** <u>IGNITION SHUTOFF:</u> A positive ignition shutoff switch, within easy reach of the driver, mandatory. A second shutoff switch on the center top portion of the deflector plate within easy reach of the crew or race official mandatory. All entries must have a mechanical shutoff switch to ground the spark plug located within easy reach of the driver. FC additional switch must be on the upper rear drivers side of the vehicle labeled as to function.

TAIL LIGHT: Functional tail light mandatory. It must be visible from the rear of the car.

**ENGINE** ENGINE: All vehicles restricted to a maximum of one, rear-mounted, five horsepower based, four-cycle engine. Porting, polishing and relieving of block is permitted. Welding to intake port is permitted. Machining of deck surface permitted. Adding material to deck surface in any matter will be prohibited. All components must be completely isolated from the drivers compartment. This includes fuel system. Accepted aftermarket engines: Metro Racing flathead, McGee Racing flathead, Tecumseh flathead, Pure Power Racing flathead, LPW Racing Products, JR Race Car flathead, Huddleston Performance flathead and R&S Machine flathead Monster Racing, SR 71 Racing, Soltz racing and M-1 machine block.

<u>CAMSHAFT:</u> Any camshaft permitted. Any valve spring permitted. No overhead cams permitted. Any size valves permitted.

<u>CARBURETOR:</u> Any means to pass fuel or air to the engine other than normally aspirated carburetor is prohibited. Auxiliary vacuum fuel pump allowed. Pressurized and/or fuel injection systems prohibited. Electric fuel pumps prohibited.

CYLINDER HEAD: Aftermarket units permitted. No overhead valve head permitted.

<u>FUEL:</u> Gasoline or alcohol only. Nitrous oxide and or nitromethane and/or propylene oxide prohibited in all classes. Fuel tank must be behind driver's compartment, below the shoulder hoop of roll cage and securely mounted within frame rails. Maximum capacity of one gallon, must have screw-on or positive locking cap. All vents must be routed downward, away from driver and extend beyond the bottom of the fuel cell. No vented fuel caps permitted, except on Briggs & Stratton or Tecumseh stock tanks.

<u>IGNITION SYSTEM:</u> Magneto or battery ignition systems permitted. Maximum one spark plug. MSD Ignition # 41510, 41500, and 42231 are the only accepted units. If the system has a low side rpm limiter it must be set to 0. Accepted coils: MSD 4291, 8232, and Master Blaster 2 and 3. Any alterations or additions to the systems are prohibited.

**OIL SYSTEM:** Oil additives for the intent of producing power prohibited.

**STARTER:** Pull rope or remote electric starters mandatory. Any driver activated/operated starting system prohibited.

## SUPERCHARGER-TURBO CHARGER-NITROUS OXIDE: Prohibited.

<u>THROTTLE:</u> All vehicles must be equipped with a positive throttle return spring which shall close throttle when released. Throttle control must be operated manually by driver's foot: electronics, pneumatics, hydraulics, or any other device may in no way affect operation of the throttle. Throttle stops, other than mechanical (i.e. a positive stop under throttle pedal) prohibited. Must be mounted securely (wire ties prohibited).

**FRAME BALLAST:** Must be secured to frame with a minimum of one 3/8 bolt per 5 pounds. Hose clamps/ties/wraps/etc. may not be used to attach ballast to the entry. No ballast may be installed on the vehicle higher than the top of the rear tires.

CATCH CANS: and lines must be securely fastened.

<u>DEFLECTOR PLATE:</u> A deflector plate of a minimum 1/16" aluminum must be installed between roll cage and engine extending from lower frame rail to the top and width of driver's helmet. Carbon fiber prohibited.

**GROUND CLEARANCE:** Minimum three (3) inches front of car to 12 inches behind centerline of front axle. (2) inches for remainder of car.

ROLL CAGE: Mandatory five-point roll cage. Upper frame rails-minimum 1 1/8" diameter by .083. Diagonals-minimum 3/4" by .083". Uprights in driver's compartment must be spaced by 20" or less. Must conform to standard dragster configuration as outlined else where in this guide. Mild steel chassis prohibited in the Master classification. Note: cm may be used in place of .083 ms.

**SHEET METAL:** Driver compartment interior must be aluminum, steel or fiberglass.

<u>STEERING:</u> All components must have a positive through-bolt or welded connection. All rod ends must be of aircraft quality or better, and they must have a bolt through with lock nut or drilled and cotter keyed. Steering must also have washers on bolts to keep rod ends from pulling through. Minimum Spindle diameter is 1/2".

<u>WHEELBASE:</u> Dragsters Minimum 90". Maximum 150" on long side. Maximum 2" wheel base variations from left to right. Funny Cars 70" to 95", Roadsters 65" to 95 (2" variation maximum.)

**INTERIOR SEAT:** Properly braced and supported seat constructed of aluminum or fiberglass mandatory. **UPHOLSTERY:** Optional.

### **RESTARTS**

After initial start-up, one chance will be given to restart the car within a reasonable time at the starter's discretion. The crew person should keep the starter close by in case its needed. Push starting any vehicle is prohibited.

### **STAGING**

Once an entry reaches the front of the staging lanes for a run, it must be prepared to fire and race. In order to be a legitimate race winner, the competitor must start and self stage the vehicle under applied power. This rule also applies to single runs. All competitors will be given reasonable time to re-fire their entry, provided it is not pre-staged. The amount of reasonable time is determined by the starter. Crew members are prohibited from touching the vehicle after it is pre-staged.

Crew members touching the vehicle once it is pre-staged will be disqualified.

**STAGING:** "Auto Start" will be used in all classes at all IHRA events. Once both cars are pre-staged and the first car fully stages, the second car has a predetermined amount of time (15 seconds) to stage before the tree is automatically activated. This predetermined amount of time is referred to as "Time Out." If the second car fails to stage before the system "Times Out," it will be given a red light. If either car rolls deep after "Auto Start" has been activated, the competitor accepts the deep staging and will not be pulled back.

"Courtesy Staging" is mandatory at all Junior events in all categories. If a competitor unintentionally lights both bulbs before the opponent stages, the starter will pull the vehicle back and allow to re-stage. This is considered a "pull-back" and will only be permitted one time. The starter has full control and is the only one who may pull back the car whether it is pre-staged, staged, or over staged.

<u>DEEP STAGING:</u> Is allowed but not guaranteed. The auto start system will be activated when both cars are pre-staged, so if you are staging deep you should do it in a timely fashion. Crew member may assist the entry in the pre-staging of the vehicle. Once the entry is pre-staged, crew

members must be behind the vehicle and out of both competitors view. Pull backs in the case of over staging are permitted one time if time permits. If the auto start system cycles during the pull back, the run will stand. THE FINAL STAGING MOTION, USING APPLIED POWER, MUST BE IN A FORWARD MOTION GOING FROM PRE-STAGE TO STAGE.

**SUPPORT GROUP <u>COMMUNICATIONS</u>**: 2-way communication of any kind is prohibited. The use of any handheld portable device such as an MP3 player or iPod is also prohibited on race track or any time the competitor is seated in the vehicle.

**COMPUTERS:** Prohibited. See General Regulations for specific information.

**DELAY BOXES:** Prohibited.

<u>DATA RECORDERS:</u> Permitted. May be utilized to record engine RPM, cylinder head and exhaust temperature. No sensor of any type may be used on teh front wheels or spindles. All data recorders and related components including switches, push buttons and wires must be located outside of teh drivers compartment and isolated from the drivers view. Data recorders may only be activated by a crew member and must be done before the entry Pre Stages. The units may not display any information to the driver or remote location. A tachometer that incorporates download capabilities is classified as a data recorder. (See General Regulations: Data Recorders/Electronic Devices for specific information.)

<u>GAUGES:</u> Engine and Cylinder head temperature gauges are permitted. A tachometer meeting specific guidelines is also permitted. (See General Regulations: Data Recorders/Electronic Devices for specific information.)

STAGING DEVICES: Mechanical, hydraulic, electric or pneumatic staging systems prohibited.

**TIRES & WHEELS TIRES:** Rear tires; 18" diameter X 7 1/2" wide minimum, measured at widest or tallest point. All front tires must have a manufacturer's maximum inflation rating. Tires may not be inflated above manufacturer's rating. All tires must be pneumatic. No solid tires. Treatment of tires in the lanes, burnout area or starting line is not permitted and tire covers must be removed prior to leaving the head of staging area. **WHEELS:** Front wheels, five-inch diameter minimum with a minimum spindle diameter of 1/2". Front spindle must be able to retain a cotter pin, or use a nylon locking-type nut, Rear wheels, eight-inch diameter minimum. No modifications allowed to any wheels.

## **TOWING**

Tow vehicles in the form of golf cart, three or four-wheel support vehicle is mandatory. Full-size tow vehicles prohibited. Driving of Jr. Drag Racing vehicle through pits is prohibited. Tow vehicle operated "ONLY" by an adult or street-licensed individual. Any time a Jr. Drag Racing vehicle is being towed, the driver must be seated in the cockpit. No passengers. The tow strap may not be attached to any point of the roll cage. It is recommended that all entries utilize a fluorescent or brightly colored flag attached to the entry any time the vehicle is being towed. Minimum height of flag is five feet.

## **WARM-UPS**

Any time a car is started, whether in the pits or in the staging lanes, a qualified driver must be seated in the vehicle.