



International R/C Speed Challenge

COMPETITION Rules

Class Definitions

Overview

The ISC's intention is to establish a method and a set of classes to ensure there is a standard for the running of R/C vehicle top speed straight line events.

The ISC's intention is to provide technical specification guidelines for the equipment required to accurately measure the velocity of an RC vehicle.

The ISC will list the official overall and class fastest speeds achieved and ensure ratification of the records to the ISC standards so that the speed is a true accurate measurement and that the car complies with the appropriate class definition

Legal

By entering vehicles and paying the entry fee, you agree that you will follow all ISC rules.

By participating in any ISC event, you agree to these rules as well as any decisions made by the event officials. The ISC, race facility owners or operators, event sponsors or any officials shall not be held responsible or liable for loss, damage, injury or death resulting from competing in an ISC sanctioned event.

Event Officials- The designated Event Officials have the authority to render decisions regarding all aspects of safety and competition, and behavior of the contestants. This authority includes the right to expel, or disqualify any contestant from the event. Participants and spectators agree to be bound by the decisions of the designated event officials. Inappropriate or aggressive behavior by any participants or spectators may result in a suspension from ISC sanctioned competition.

Event Cancellation – Events cancelled due to weather or acts of God may or may not be rescheduled. Entry fees will be refunded in part or whole if the event fails to take place (cancelled event being no official times posted) A partial cancellation (one day of a multi day event) may or may not result in a partial refund as it is dependent upon the event site management policy

General Rules

Straight line competitions are generally held at a dragstrip, airfield or street (with city approved permits).

Pre-Event inspection - All vehicles will be inspected before the event. If the vehicle is found to be illegal for the desired class, the participant shall have the opportunity to correct the infraction before the vehicle makes an official pass. If the infraction is not corrected, the vehicle will be moved to the appropriate class.

Pre-Run inspection – An Event Official has the right to check any vehicles BEFORE as well as AFTER each official pass to ensure the vehicle complies to class rules.

Post-Run inspection – Winners/record setters of any IC Classes maybe required to open the heads of their engines for measurement. If found illegal, the vehicle will be disqualified from the event.

One entry per class per driver. Multiple entries in a class by one driver are not allowed. In the event of unreparable damage to a car, a competitor may petition the race director to substitute his own backup car, one substitution only, of a car not entered or run before at that event.

Protests - The protester will pay a fee of \$50 U.S.(or equivalent exchange rate), which is given to the protested person if the car is found to be legal, and returned to the protester if illegal. The Event Official has the final call on appropriate actions if found illegal.

The Event Officials -shall make every effort to base their decision on (1) the original intent of the rule in question, and (2) whether it renders a competitive advantage to the individual subject to the dispute.

The Event Officials shall make the final decision in regards to what is legal, safe or fair

General Construction Rules

All vehicles must be remotely controlled. No guidelines, guide rails laser, GPS or retaining wires are allowed

All vehicles must be fitted with a failsafe device that will stop the vehicle by application of the brakes. It must also cut the power to the drive motor in the event of a signal loss.

All vehicles must have installed suitable radio equipment with adequate range to ensure the vehicle will stay under the control of the operator during its run.

All vehicles must be inspected for safety by an event official before being allowed to compete, including but not limited to: Proper braking operation, proper failsafe operation, throttle return spring operation, general integrity of the vehicle, and radio range demonstration.

Steering gyros allowed in all classes

There are no nitro content fuel restrictions in IC classes with the exception of 2wd & 4wd Production classes which are limited to 30% nitro fuel which will be supplied by the ISC for official events. No exhaust restrictions in IC classes

Bikes to have 2 wheels, other vehicles 3 or more wheels

A body must remain mounted on the vehicle during each pass through the speed trap.

IC engines must have a throttle return spring installed, which will close the throttle and apply the brakes.

All Vehicles must be wheel driven

No chase vehicles, no push vehicles no power assistance, such as bungee, catapult, etc.

No Hybrid power plants

Lipo batteries shall be in hard cases (except receiver packs) unless other wise announced before the event.

Any contact with the timing or safety equipment by a car during a run will result in a zero speed recorded for that run.

In the interest of the safety of all participants and spectators, any safety concerns including but not limited to: Proper braking, failsafe and throttle return spring operation, as well as a radio range demonstration may be requested to be performed by any participant at any time during the event by an event official.

The Event Officials shall make the final decision in regards to what is legal, safe or fair



OVERVIEW: **Official ISC Standard Classes**

Electric Standard

Electric Open

6 cell 1:10 scale

4 cell 1:10 scale

2 cell 2wd 1:12 – 1:10 scale *production class

2 cell 4wd 1:12 – 1:10 scale *production class

1 cell 2-4wd 1:12 – 1:10 scale * production class

Internal Combustion Standard

IC Open

IC Big Block

IC Small Block Open

IC Small Block Production 2wd

IC Small Block Production 4wd

Specialty Classes

Mini Electric or IC 1:12 scale & smaller

Open Wheel Electric 1:10 scale *production class

Open Wheel IC 1:10 scale *production class

Off-Road Truck Electric 1:10 scale *production class

- Off-Road Truck IC 1:10 scale *production class**
- Large Scale Electric 1:9 to 1:5 scale**
- Large Scale Electric 1:9 to 1:5 scale (open wheel/truck)**
- Large Scale IC Powered 1:9 to 1:5 scale**
- Motorcycle up to 1:4 scale, Electric or IC**
- Quarter Scale Electric or IC 1:4 scale and larger**

PRODUCTION CLASSES:

The intent of the "Production" designated I.C. and Electric classes are to provide a place to compete with essentially "stock" out-of-the-box vehicles. All the major chassis components shall be either supplied by the original manufacturer or aftermarket upgrades designed for that particular make / model car. Custom made parts and mixing or matching parts between models and manufacturers not allowed. Fuel tank, receiver and servos may be relocated, but all other components must be in their original location. Tires, gearing, exhaust, fuel are unrestricted.
 (Amended 1-21-10)

CLASS SPECIFICATIONS:

Standard Electric Classes

Electric open

Any size electric motor or multiple motors
 Any number of cells.
 Commercial or Custom chassis and body

Electric 4 cell & 6 cell

Single electric motor any size
 Li-poly or NiMh/Nicad
 Commercial or Custom chassis and body

Electric 2 cell 2wd

2 wheel drive only (Can be a 4WD kit with drive power removed from the front OR rear wheels)
 Single electric motor of 540 can size (maximum 2.08"L x 1.41"D; 53mm x 36mm)
 Maximum battery capacity: 10000 mah
 Maximum cell count: One (1) single, 2 cell Li-poly or 6 cell NiMh/Nicad pack.
 Maximum cell Voltage is 8.40V for Li-poly
 1/10 scale production kit electric chassis with commercially available upgrades, which do not lengthen the wheelbase by more than 1 inch.
 Commercially available body.

Electric 2 cell 4wd

4 wheel drive only

Single electric motor of 540 can size (maximum 2.08”L x 1.41”D; 53mm x 36mm)

Maximum battery capacity: 10000 mah

Maximum cell count: One (1) single, 2 cell Li-poly or 6 cell NiMh/Nicad pack.

Maximum cell Voltage is 8.40V for Li-poly

1/10 scale production kit electric chassis with commercially available upgrades, which do not lengthen the wheelbase by more than 1 inch.

Commercially available body.

Electric 1 cell

Single electric motor of 540 can size (maximum 2.08”L x 1.41”D; 53mm x 36mm)

Maximum battery capacity: 10000 mah

Maximum cell count: One (1) single, 1 cell Li-poly

Maximum cell Voltage is 4.20V for Li-poly

1/12 - 1/10 scale production kit electric chassis with commercially available upgrades, which do not lengthen the wheelbase by more than 1 inch.

Commercially available body.

CLASS SPECIFICATIONS:

Standard Internal Combustion Classes

IC Open

Any size engine or engines, which use the expansion of gasses as its prime mover such as IC, Turbine with gearbox, Wankel, etc...

Maximum vehicle length 39.37 inches (1000 mm)

Maximum vehicle width 11.81 inches (300 mm)

Commercial or Custom chassis and body

IC Big Block

Single, Commercially available, IC engine up to 0.32 Cu in displacement

Maximum vehicle length 39.37 inches (1000 mm)

Maximum vehicle width 11.81 inches (300 mm)

Commercial or Custom chassis and body

IC Small Block Open

Any size engine or engines, which total no more than 0.18 cu. in. displacement (small block mounting, .43 in X 1.2 in)

Maximum vehicle length 39.37 inches (1000 mm)

Maximum vehicle width 11.81 inches (300 mm)

Commercial or Custom chassis and body

IC Small Block Production 2wd

2 wheel drive only (Can be a 4WD kit with drive power removed from the front OR rear wheels)

Single, Commercially available, IC engine up to 0.18 Cu in displacement (small block mounting, .43 in X 1.2 in)

Stock based 1:12 to 1:8 scale production I.C. kit chassis with commercial available upgrades, which do not lengthen the wheelbase by more than 1 inch.

Commercially available body

Superchargers or nitrous not allowed

30% maximum nitro fuel

IC Small Block Production 4wd

4 wheel drive only

Single, Commercially available, IC engine up to 0.18 Cu in displacement (small block mounting, .43 in X 1.2 in)

Stock based 1:12 to 1:8 scale production kit I.C. chassis with commercial available upgrades, which do not lengthen the wheelbase by more than 1 inch.

Commercially available body

Superchargers or nitrous not allowed

30% maximum nitro fuel

CLASS SPECIFICATIONS:

Specialty Classes

Mini

1/12 scale or smaller

Based on a production kit or RTR scale vehicle

Electric: single electric motor any size, any number of cells, or IC powered

Open Wheel Electric

1:10 scale, single electric motor any size, any number of cells

Based on a production kit or RTR 2wd or 4wd

Body must not cover any part of the wheel, Commercially available body.

Open Wheel IC

1:10 scale

Based on a production kit or RTR 2wd or 4wd

Body must not cover any part of the wheel, Commercially available body.

Off road Truck Electric

1:10 scale

Based on a production kit or RTR 2wd or 4wd

Electric: single electric motor any size, any number of cells

Commercially available body.

Off road Truck IC

1:10 scale

Based on a production kit or RTR 2wd or 4wd

IC powered

Commercially available body.

Large Scale Electric

1:9 scale to 1:5

Any size single (1) electric motor

Any number of cells.

Commercial or Custom chassis and body

Based on a production kit or RTR scale vehicle

Large Scale Electric (open wheel/truck)

1:9 scale to 1:5

Any size single (1) electric motor

Any number of cells.

Commercial or Custom chassis and body
 Based on a production kit or RTR scale vehicle
Large Scale IC
 1:9 scale to 1:5 Commercial or Custom chassis and body
 Based on a production kit or RTR scale vehicle
Motorcycle
 Up to 1:4 scale
 Motorcycles must have two wheels only
 Electric or IC powered
Quarter Scale.....
 IC or Electric powered
 1:4 and up

Speed Measurement

*For a speed to be deemed official, it must be made during an ISC sanctioned event.
 For a record to be ratified by the ISC, the speed measurement must meet the following minimum standards*

Straight line Competitions:

A minimum of 1 optical timing trap, with photos or video of sensor placement to provide proof of an accurate ISC approved set up. The distance between the gates shall be no less than 20 feet. The device must be approved by the ISC. In order to have a speed recognized as official, it must have a “back-up” time recorded at the same event. If dual speed traps are used for immediate backup, recorded speeds must be within 2% of the faster run. If a single system is used, two passes are required but the required backup is 3% of the faster speed. If recorded speeds are out of the scope of the required backup, then the slower of the speeds will count as official.

The purpose of a back-up speed is to eliminate the chance for any unforeseen errors, such as debris moving through the lights or other optical anomalies.

*****It is suggested (but not required) that ALL runs be recorded on video*****

Radar guns, GPS, Speedometers etc – Are Not allowed to be used as ISC official speed measurement devices

Official records

Requirements for an Official ISC Event

An Official from the ISC directing committee must be present to perform or coordinate pre-run tech and safety inspections, inspect and verify certification of the timing systems, oversee protests, and serve as the final word on any and all aspects of the event and participants.

The ISC Official may delegate tech and safety inspections to a qualified ISC member, but the ISC Official has final say on any matter.

ISC Certified single or dual optical speed traps must be used.

The specific location must allow common sense safety procedures to be followed.

A Race Director or ISC Official must be present to install and operate the traps, and record speeds for each of the competitor’s runs.

An electronic and/or hard copy of all official runs must be delivered to the ISC Official

immediately upon conclusion of the event.

The ISC Official will make the final decision to open or close the track/surface for official runs at any time during the event for weather, safety, surface prep/inspection or any other reason.

Any events seeking the designation of an ISC Official Event must be approved by a majority vote of the ISC directing committee. The ISC logo and “ISC Official Event” may not be used in conjunction with any event until approved by the directing committee.

