

United Kingdom and International Timing Adjudication Limited – UK&ITA World technical and sporting regulations (© UKITA)

UK & International Timing Adjudication (UK&ITA) – 2-R-A WORLD Land Speed Records.

The 2-R-A-T WORLD land speed records are the pinnacle of achievement in Straightliners speed sport for all types of vehicles, (regardless of the number of wheels).

UK&ITA 2-R-A-T WORLD land speed records will continue to be challenged in future, when the two-part ‘Speed Week’ is being held on runway 2 – 6 of Elvington Airfield, near York. Dates can be found on our calendar which is on under upcoming events on the website www.straightliners.events

There will be two further land speed record events, in June and September of this year, to be hosted on Campbeltown Airfield Runway 2 – 9 on the Kintyre peninsula in Scotland. [This location is also known as Machrihanish, which is the closest habitation]. Please see calendar for dates.

[There is a separate document for drivers and riders of vehicles that are attempting or have achieved **UK&ITA National 2-R-A Land Speed Records**. There is another document for all types of **thrust propelled vehicles** (non wheeldriven bikes, karts and cars)].

The World land speed records available to bikes, cars, karts are:

Imperial short distances are:

Standing start 1/8-mile	elapsed time
Standing start 1/4-mile	elapsed time
Standing start 1/2-mile	elapsed time
Standing start 1-mile	elapsed time
Standing start 1.25-mile	elapsed time
1/2-mile speed trap	top speed
1 mile speed trap	top speed
1.25-mile speed trap	top speed
Flying start 1/4-mile	average speed
Flying start 1/8-mile	average speed
Flying start 1/2-mile	average speed

Metric short distances are:

Standing start 100 m	elapsed time
Standing start 250 m	elapsed time
Standing start 500 m	elapsed time
Standing start 1 km	elapsed time
Standing start 2 km	elapsed time
500 m speed trap	top speed
1 km speed trap	top speed
2 km speed trap	top speed
Flying start 100 m	average speed
Flying start 250 m	average speed
Flying start 500 m	average speed
Flying start 1 km	average speed

Timed distances are from the startline and the positioning starting ‘wand’.

The UK&ITA produce two WORLD LSR listings - for solid artificial surfaces (tarmac runway) and for natural surfaces (tidal sand beach). These will be known as **UK&ITA WORLD-2-R-A-T** for tarmac and **UK&ITA WORLD-2-R-A-S** for sand, land speed records.

The attempts on **WORLD** records from UK&ITA over the short distances on tarmac, called **UK&ITA WORLD - 2-R-A-T records**, can be made on the tarmac and concrete of Elvington Airfield Runway 2 - 6 near York, England or the tarmac and concrete of Campbeltown Airfield Runway 2 - 9, Kintyre, Scotland.

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Riders and drivers will need to provide printed results or relevant timing ticket as evidence that they are competent with the vehicle which they will use for their World land speed record attempt(s). Observed running, on sighting passes, may be possible at the commencement of the running day.

Drivers and riders are encouraged to make use of Straightliners Top Speed Test Days that are held on the runway of Elvington Airfield, in March and April, June, July and August each year to get 'up to speed'.

UK&ITA: 2-R-A-WLSR (© UK&ITA 2021) records will be the average elapsed time or average speed of (any) two passes or runs, made by a Straightliners member within a period not exceeding sixty minutes, who is registered with the Club and is speed licenced as a rider or driver on or in their nominated vehicle. (For electric motored vehicles (EVs) and for thrust propelled vehicles a 120-minute period is allowed).

Each course location has been professionally surveyed to ensure that there is no assistance from the gradient of the land. Wind assistance is prevented by measurement of speed in the direction of travel of vehicles (west to east), which if too high will see a halt called to record passes, or runs.

GUINNESS World Records (GWR) speed record contenders, with vehicles which have sometimes been called 'unusual', who have registered their speed attempt with that company, will be welcomed by UK&ITA. Operating to the specific guidelines each registered contender will have received in print from GWR and copied to the Straightliners head office well in advance of any attempt, and having registered their speed attempt with GWR they will be welcomed by UK&ITA.

All record breaking can be weather (and in particular wind and rain) affected. Running of any land speed record event will be halted, by the event Officials, if the conditions are deemed unsafe.

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Establishing a UK&ITA – WORLD-2-R-A-T short distance record occurs when no elapsed time or flying speed or top speed has been recorded in the class (see the categories and classes in this document). A rider or driver may obtain a **UK&ITA World land speed record** in their class at the conclusion of the event day, provided the rider or driver makes two satisfactory passes or runs within sixty minutes (electric vehicles (EV) and thrust propelled vehicles have a hundred and twenty minute period), where the two times or two speeds will be averaged.

UK&ITA WORLD 2-R-A-T RECORDS will need to be quicker or faster than **any** existing vehicle cubic capacity or weight class UK&ITA NATIONAL 2-R-A-T record, which will have been printed in the UK&ITA Record Book or are included on any updated speed record listing.

The quickest or fastest of each class entry at the end of a particular 24hr event day may be confirmed as a **UK&ITA WORLD-2-R-A-T land speed record holder**.

Breaking an existing UK&ITA – WORLD-2-R-A-T LSR.

A rider or driver must make their first pass, or run, which exceeds any published or confirmed class WORLD 2RAT record speed by 1% (speed in mph x 1.01), or is quicker than an elapsed time record using the same margin of 1% (elapsed time x 0.99).

This first pass can then be averaged with any other later pass, or run, made within the allowed total time of sixty minutes (Electric vehicles & thrust propelled vehicles will have 120 minutes).

A new land speed record will be awarded if the two-run-average is at a greater speed than an existing record by 0.001 mph and it is the best in class on a particular 24hr event day. An elapsed time record must be a lesser time by 0.001 seconds and has to be the best in a class on a particular 24hr event day.

Elements which provide vehicle motive power - the engine block; operating cylinder numbers; turbine casing; liquid or gaseous fuel type; electric motor size; battery pack configuration, and any or all parts which provide vehicle motive power, **shall remain the same** throughout each sixty-minute (or 120 minute) attempt.

Any person making any major vehicle change will be required to recommence their complete bid. Vehicle bodywork and ballast weight may not be removed or altered during the time periods stated.

Short Distance UK&ITA WORLD 2-R-A-T WORLD Land Records (© UK&ITA 2021/2).

The WORLD speed records are available to an entrant of a solo bike; sidecar; scooter; moped; cyclecar; trike; Quad bike; wheeldriven car; kart; car or special automobile, for a range of cubic capacity and weight classes.

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The different types of World land speed record vehicle categories are as follows:

Vehicle categories I to VII by name and the classes by cubic capacity or by vehicle unladen weight

MOTORCYCLES I to V

I

Solo two wheeled motorcycle, single track, maximum of two engines:

(*all* bike configurations and body styles are permitted and included).

A. 50cc; 100cc; 125cc; 175cc; 250cc; 350cc; 500cc; 750cc; 1000cc; 1350cc; 1500cc; 1650cc; 2000cc; 3000cc, unlimited capacity.

B. Electric; **C.** Gas turbine; **D.** Thrust– non wheeldriven (Jet **J** or Rocket **R**)

[Unladen weight:] up to 150kg; over 150 and up to 300kg; over 300kg

I

Sidecars, two tracks (front wheel ‘covered’ by rear wheel). 60kg ballast fixed on the sidecar.

A. 250cc; 350cc; 500cc; 750cc; 1000cc; 1350cc capacity.

B. Electric;

[Unladen weight:] up to 150kg; over 150 and up to 300kg; over300kg

III

Scooters and Mopeds: automatic and geared

A2 Scooters: 50cc; 100cc; 175cc; 250cc; 300cc; 500cc (geared only); 800cc (automatic only) capacity.

A3 Moped: 50cc capacity.

B. Electric;

[Unladen weight:] up to 150kg; over 150 and up to 300kg; over 300kg

IV

Cyclecars and Trikes (three wheeled, three track motorcycles – rider only carried)

A. 250cc; 350cc; 500cc; 600cc; 750cc; 1000cc; 1350cc; 1500cc; 1650cc; 2000cc; 3000cc; 4000cc capacity.

B. Electric; **C.** Gas turbine;

[Unladen weight]: up to 150kg; over 150 and up to 300kg; over 300 and up to 500kg; over 500kg

V

Quad bikes, single engine driving the rear wheels

A. 250cc; 350cc; 500cc; 600cc; 750cc; 1000cc; 1350cc; 1500cc capacity.

B. Electric; **C.** Gas turbine;

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[Unladen weight:] up to 150kg; over 150 and up to 300kg; over 300 and up to 500kg; over 750kg.

CARS or SPECIAL Automobiles (VI)

VI

Cars or special automobiles, wheeldriven, four or more wheels, maximum of two engines.

A. 100cc; 125cc; 175cc; 250cc; 350cc; 500cc; 1000cc; 1500cc; 2000cc; 3000cc; 4000cc; 5000cc; 6000cc; 7000cc; 8000cc; 10000cc; over 10000cc.

B. Electric; **C.** Gas turbine; **D.** Thrust – non wheeldriven (Jet **J** or Rocket **R**)

[Unladen weight, maximum] 500kg; 1000kg; 1500kg; 2000kg; 2500kg; 3000kg; 3500kg; 4000kg; 4500kg; 5000kg; over 5000kg

Karts (VII)

VII.

Karts, including Historic, Classic, Circuit, Diesel and ‘Drag’, single engine driving rear wheels

A. 100cc; 125cc; 175cc; 250cc; 500cc; 1000 cc; 1300cc.

B. Electric; **C.** Gas Turbine; **D.** Thrust propelled – non wheeldriven (Jet **J** or Rocket **R**)

[Unladen weight:] up to 300kg; over 300 and up to 500kg; over 500 and up to 750kg.

Riders and drivers must ensure that they enter the vehicle they are using at an event in the correct class.

The cubic capacity of any and all internal combustion engine(s) may be checked by a technical official immediately after a record attempt has been made, or a seal could be applied to the power unit by a technical official to allow for inspection at a later, agreed, date.

The single object sidecar ballast will be checked for weight (132lb, 60kg) and for the security of fixing.

Where classes are defined by “unladen weight”, a printed and dated weighbridge ticket could suffice to confirm the correct class has been entered. A technical official may accompany an entrant to a weighbridge for weight checking purposes.

Vehicles may use natural aspiration or forced induction. Most fuel types are acceptable including methanol, nitromethane, nitrous oxide injection, octane booster, hydrogen, LPG, all for use in reciprocating 2 and 4 stroke engines, diesel cycle or rotary engines.

On airfield runways no track surface preparation will be carried out, although the surface will be swept to remove any foreign object debris (FOD). Burnouts and tyre spinning will **NOT** be permitted by vehicles when moving to the start area or made across the starting line. A burnout ‘box’ may be positioned by the organisers for tyre warming, where burnouts shall last no more than 5 seconds. Electric tyre warming blankets may be used in the pre-stage paddocks.

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NO pulse jet power units. NO Solid fuel rockets. NO bi-propellant systems; NO hypergolic rocket fuels.

Thrust propelled vehicles may be entered for any event. The time at which such ‘noisy’ vehicles can be operated will be stated in event Supplementary Regulations and confirmed at the morning competitors briefing.

The organisers will recognise average speeds or times for an electric vehicle (EV) or for thrust propelled vehicle within a period of 120 minutes.

It is the thrust vehicle team’s responsibility to arrange for any necessary training sessions for the fire and rescue teams.

Training and safety equipment needs will depend on the fuel used and the hazards presented. These should be specified in the entrant’s vehicle Safety Plan.

When vehicles are using unconventional fuels or liquid oxidiser (for example high test peroxide (HTP)), the fire and rescue personnel must be trained by the vehicle owner and then equipped to deal with such components being used.

UK&ITA – WORLD-2-R-A-T records are the average time or speed of (any) two passes, or runs, made by a Straightliners member, within a period not exceeding sixty minutes. (EV and Thrust power vehicles will have a 120-minute period). All competitors shall be Straightliners Club Members and shall be registered with the Club as a rider or driver for their nominated competition vehicle.

All timing starts from the movement in the ‘wand’ and then from the breaking of the across track timing beams. For attempts on the standing start records, bikes and other vehicles will be positioned against the timing ‘wand’ at the start line by an official of the event. Vehicles may be fitted with a vertical timing strut.

Only authorised **‘service’ parts and replenishment materials** can be changed on, or added to, the vehicle when work is carried out for maintenance purposes. This permitted work is primarily to ensure vehicle safety before each powered pass, or run, that is being made in the sixty minutes of the attempt (or 120 minutes where appropriate).

Vehicles will remain under official UK&ITA observation in all paddock areas and **any attempt to cover or to shield a complete vehicle or part of a vehicle from view** at any time could lead to immediate exclusion and the removal of all speed or times from the results.

Should any vehicle **exceed the event noise limit at any time during a speed record attempt**, the attempt will be halted by Officials, until that defect is corrected and the vehicle is re-approved. No time extension to the sixty-minute attempt time period will be given.

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Any registered entrant at the World speed record event may **protest the legality of another vehicle of the same type (category or group)**. A fee may be requested by UK&ITA to meet the costs of any intrusive technical inspection, or to meet the cost of any necessary technical officials meeting(s).

Any WORLD record speed or time of a **vehicle under protest** would remain 'provisional' until an outcome has been agreed and the parties involved have been informed of the decision taken by UK&ITA Officials, which will be final and binding on all.

The time or speed achieved by any vehicle under protest, would however be used as the target for others to exceed for the remainder of the day or for the whole event.

For more information or to register your interest in competing at a *World speed record event* please use the following contacts:

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