

## Frequently Asked Questions about racing

### DRAG RACING 1.01

A drag race is an acceleration contest between two vehicles on a track or drag-strip. The race begins from a standing start between two vehicles over a distance of normally 1320feet or 402.336meters.

The races are started by means of an electronic device commonly called a Christmas Tree because of its multicoloured starting lights. On each side of the Tree are seven lights: two small amber lights at the top of the fixture, followed in descending order by three larger LED lights, a green bulb, and a red bulb.

Two light beams cross the starting-line area and connect to trackside photocells, which are wired to the Christmas Tree and electronic timers in the control tower. When the front tyres of a vehicle break the first light beam, called the pre-stage beam, the pre-stage light on the Christmas Tree indicates that the racer is approximately seven inches from the starting line.

When the racer rolls forward into the stage beam, the front tyres are positioned exactly on the starting line and the stage bulb is lit on the Tree, which indicates that the vehicle is ready to race. When both vehicles are fully staged, the starter will activate the Tree, and each racer will focus on the three large amber lights on his or her side of the Tree.

Depending on the type of racing, all three large amber lights will flash simultaneously, followed four-tenths of a second later by the green light (called a Pro Tree), or the three bulbs will flash consecutively four-tenths of a second apart, followed four-tenths later by the green light (called a Sportsman, or Full Tree). In New Zealand, all classes use the Full tree except for Top Alcohol and Top Doorslammer.

Two separate performances are monitored for each run: elapsed time and speed. Upon leaving the staging beams, each vehicle activates an elapsed-time clock, which is stopped when that vehicle reaches the finish line. The start-to-finish clocking is the vehicle's elapsed time (E.T.), which serves to measure performance. Speed is measured in a 66-foot "speed trap" that ends at the finish line. Each lane is timed independently.

The first vehicle across the finish line wins, unless, in applicable categories, it runs quicker than its dial-in or index (see [glossary](#)). A racer also may be disqualified for leaving the starting line too soon (red light), leaving the lane boundary (either by crossing the centre-line, touching the guard-wall or guardrail, or striking a track fixture such as the photocells), failing to stage, or failing a post-run inspection.

### What is a Drag Race?

In basic terms, a drag race is an acceleration contest from a standing start between two vehicles over a measured distance at a specifically designed drag race facility. The accepted standard for that distance is either a quarter-mile or an eighth-mile. These contests are started by means of an electronic device commonly called a "Christmas Tree." Upon leaving the starting line, each contestant activates a timer which is, in turn, stopped when the same vehicle reaches the finish line. The start-to-finish clocking is the vehicle's E.T. (elapsed time), which serves to measure performance and often serves to determine handicaps during competition.



As a vehicle approaches the starting line it breaks the first light beam and the "Pre-Stage" light on 'Christmas Tree' is lit.



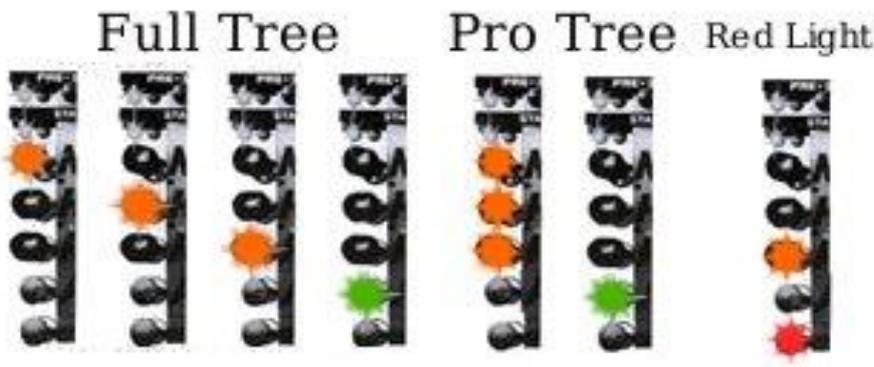
Driver slowly inches car forward until the second light beam is broken and the "Staged" lights come on.

### WHAT IS E.T. or DIAL-YOUR-OWN (D.Y.O) RACING?

By far the most popular form of drag racing is a handicapped form of competition known as "E.T. Bracket Racing" or "D.Y.O Racing". In this form of racing, two vehicles of varying performance potentials can race on a potentially even basis. The anticipated elapsed times for each vehicle are compared, with the slower car receiving a head-start equal to the difference of the two. With this system, virtually any two vehicles can be paired in a competitive drag race. The catch is, you must still cross the finish line first without going faster than your posted time. If a racer goes faster than the time he or she nominates, this is an automatic loss also known as a **break out**. If both racers break out, then the racer who breaks out by more is deemed the loser.

**For Example:** Car **A** has been timed a 17.78, 17.74, and 17.76 seconds for the quarter-mile, and the driver feels that a "dial-in" of 17.75 is appropriate. Meanwhile, the driver of car **B** has recorded elapsed times of 15.27, 15.22 and 15.26 on the same track and he has opted for a "dial-in" of 15.25. Accordingly, car **A** will get a 2.5-second head-start over car **B** when the "Christmas Tree" counts down to each car's starting green lights.

If both vehicles cover the quarter-mile in exactly the predetermined elapsed time, the win will go to the driver who reacts quickest to the starting signal. That reaction to the starting signal is called "reaction time." Both lanes are timed independently of one another, and the clock does not start until the vehicle actually moves. Because of this, a vehicle may sometimes appear to have a mathematical advantage in comparative elapsed times but actually lose the race. This fact makes starting line reflexes extremely important in drag racing!



After both cars are staged the Starter activates "Christmas Tree" and three amber lights and one green are sequenced. With a full tree the oranges come on one by one. With a pro tree used by professional racers all 3 oranges come on together. There is normally a 400millisecond delay between lights (this is known as a .4 Tree). Drivers use amber lights as a guide to anticipate the green coming on. If you cross the start line before the green is on the tree will stop counting and a bright red "foul" light shows.

### What is "Break-Out" and/or "Red Light"?

Should a driver go quicker than his/her predetermined "dial-in" it is a "break-out," and an automatic loss (provided the other racer didn't red light). In the case of both vehicles making their runs under their dial-ins, the win goes to the driver who breaks out the least.

A foul start (or "red light") is the most common form of disqualification. This happens when the driver reacts to the "Christmas Tree" too quickly and drives his car away from the starting line before the green "go" signal. When dual infractions occur, say a red light and then a break out, the red light takes precedent over the break-out.