



THE MEANING OF 'L' IN DRIVING

An L-plate is a square plate bearing a sans-serif letter L, for learner, which must be affixed to the front and back of a vehicle in many countries if its driver is a learner under instruction.

L-platers are restricted in some states to a maximum speed of 80(NSW)/110 depending on if you are with an instructor 100 km/h is allowed in certain states and territories, and these values are shown on the respective plates. In QLD and the ACT, there is not restrictions to speed other than the speed limits on the road.

In NSW you need to complete a minimum 120 driving experience hours. The 120 hour minimum driving experience requirement remains the same for all Learner drivers - if you are under 25 years old, you will still need to hold your L-Licence for at least 12 months before attempting to take the Driving Test.

Additionally, learner drivers who are 25 and over are now exempt from completing the Learner driver log-book and any tenure requirement, as of 19 December 2009. They are still required to complete all other formal licensing requirements and are encouraged to use the log book and obtain as much on-road practice with a supervising driver or driving instructor as possible.

THE CHAUFFEUR

A chauffeur is a person employed to drive a passenger motor vehicle, especially a luxury vehicle such as a large sedan or limousine. Originally such drivers were always personal servants of the vehicle owner, but now in many cases specialist chauffeur service companies, or individual drivers provide both driver and vehicle for hire, although there are service companies that just provide the driver. The term “chauffeur” comes from the French term for stoker because the earliest automobiles, like their railroad and sea vessel counterparts, were steam-powered and required the driver to stoke the engine. Early petrol/gasoline-powered motor cars, before the advent of electric ignition, were ignited by ‘hot tubes’ in the cylinder head which had to be pre-heated before the engine would start. Hence the term ‘chauffeur’ which, in this context, means something like ‘heater-upper’. The chauffeur would prime the hot tubes at the start of a journey, after which the natural compression cycle of the engine would keep them at the correct temperature. The chauffeur also maintained the car, including routine maintenance and cleaning, and had to be a skilled mechanic to deal with breakdowns and tire punctures enroute; very common in the earliest years of the automobile. Only the very wealthy could afford the first automobiles, and they generally employed a chauffeur rather than driving themselves. A 1906 article in the New York Times reported that “...the chauffeur problem to-day is one of the most serious that the automobilist has to deal with.”, and complained that “...young men of no particular ability, who have been earning from \$10 to \$12 a week, are suddenly elevated to salaried positions paying from \$25 to \$50...”—and recommended the re-training of existing coach drivers.

THE GREEK NATIONAL ROAD 91

Greek National Road 91 (GR-91) is a highway running from the southernmost limit of the Athens metropolitan Area, in Vouliagmeni up to Sounio. It is a continuation of Poseidonos Avenue (Poseidon’s Ave.). It was first constructed in the 1950s as a one lane per direction road, but was later extended to two lanes per direction for half of its length. It has many extremely dangerous curves, and accidents happen on an almost daily basis. It is considered the deadliest road in Attica. Currently, there are no plans to replace it with a bypass or reconstruct certain dangerous parts, but there has been an effort to increase police presence to prevent illegal racing and violation of speed limits which were common phenomena over the last 10 years. The highway becomes busier during the summer, as most of the places it connects are popular vacation spots. Apart from a world-renowned archaeological site, Sounion is an upscale summer home location for Athenians. Construction flourished between the 1960s and 1970s, with massive yet minimal villas and condos erected. Sounion is one of the most expensive areas in Greece, with the value of some homes exceeding twenty million euros. Several Greek films were shot on the road particularly between the 1950s and the 1980s.

THOUGHTS ON CAR DRIVING

Imagine that you are driving your car at a good clip down a boulevard running through the residential section of a city. The road is wide and uncluttered by traffic. Your car purrs along smoothly. Suddenly, with no warning whatever, a woman darts out from the sidewalk and throws herself directly into your path. What will your reactions be? What will be the effect on your nerves? How will the shock of the experience affect your subsequent driving? Can you imagine?

CARS/DRIVE

*Who's gonna tell you when
It's too late*

*Who's gonna tell you things
Aren't so great
You can't go on*

*Thinking nothing's wrong
Who's gonna drive you home tonight*

*Who's gonna pick you up
When you fall*

*Who's gonna hang it up
When you call*

*Who's gonna pay attention
To your dreams*

*Who's gonna plug their ears
When you scream*

*You can't go on
Thinking nothing's wrong
Who's gonna drive you home tonight*

*Who's gonna hold you down
When you shake*

*Who's gonna come around
When you break*

Who's gonna drive you home tonight

DONT'S IN DRIVING

Don't fight traffic. Instead of fretting and fuming save your nerves for more important things.

Don't drive under physical strain. Make yourself as comfortable as you can with seat adjustments and cushions.

Don't argue with other driver. Bawling out the other fellow does no good.

Don't tolerate "bugs" in your car. A smoothly running machine is good insurance against traffic jitters.

Don't drive a noisy car. Knocks, squeaks, and rattles dull your senses and slow up your reactions in emergencies.

Don't neglect to wear glasses if you need them. Eye strain adds to general nervous strain when you are driving.

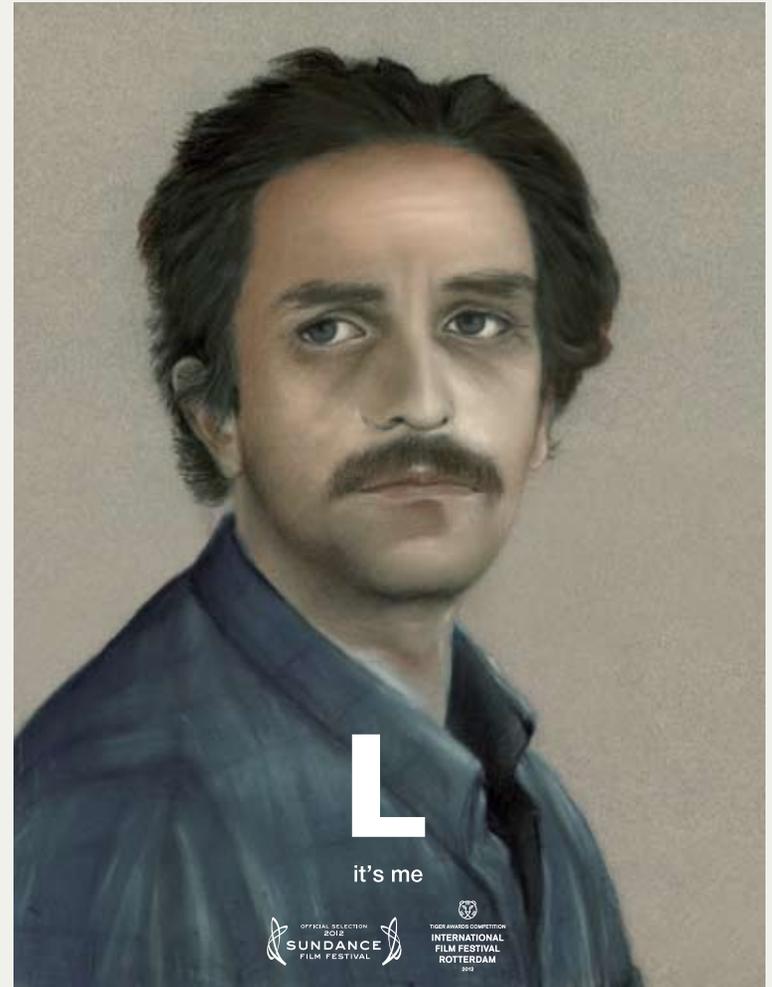
Don't drive so fast that you lose the feeling of complete control over your car. Confidence is what keeps your nerves calm.

THE CAR MIRROR

The passenger-side mirror on a car is typically a convex mirror. In some countries, these are labeled with the safety warning "Objects in mirror are closer than they appear", to warn the driver of the convex mirror's distorting effects on distance perception. Convex mirrors are preferred in vehicles because they give an upright, though diminished, image. Also they provide a wider field of view as they are curved outwards.

ORIGIN OF THE AUTOMOBILE

An automobile, autocar, motor car or car is a wheeled motor vehicle used for transporting passengers, which also carries its own engine or motor. Most definitions of the term specify that automobiles are designed to run primarily on roads, to have seating for one to eight people, to typically have four wheels, and to be constructed principally for the transport of people rather than goods. The term motorcar has also been used in the context of electrified rail systems to denote a car which functions as a small locomotive but also provides space for passengers and baggage. These locomotive cars were often used on suburban routes by both interurban and intercity railroad systems. There are approximately 600 million passenger cars worldwide (roughly one car per eleven people). Around the world, there were about 806 million cars and light trucks on the road in 2007; the engines of these burn over a billion cubic meters (260 billion US gallons) of petrol/gasoline and diesel fuel yearly. The numbers are increasing rapidly, especially in China and India. The word automobile comes, via the French automobile from the Ancient Greek word *αὐτός* (*autós*, “self”) and the Latin *mobilis* (“movable”); meaning a vehicle that moves itself. The alternative name car is believed to originate from the Latin word *carrus* or *carrum* (“wheeled vehicle”), or the Middle English word *carre* (“cart”) (from Old North French), in turn these are said to have originated from the Gaulish word *karros* (a Gallic Chariot). The large-scale, production-line manufacturing of affordable automobiles was debuted by Ransom Olds at his Oldsmobile factory in 1902 based on the assembly line techniques pioneered by Marc Isambard Brunel at the Portsmouth Block Mills, England in 1802. The assembly line style of mass production and interchangeable parts had been pioneered in the U.S. by Thomas Blanchard in 1821, at the Springfield Armory in Springfield, Massachusetts. This concept was greatly expanded by Henry Ford, beginning in 1914.



A Beben Films production
Written by Efthimis Filippou & Babis Makridis
Directed by Babis Makridis

2012 / Greece / 87' / 35mm / Colour / Dolby Digital
1:85:1 Language: Greek (Subtitles)

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The first Grand Prix Automobile de Monaco was an invitation only event, but not all of those invited decided to attend. The leading Maserati and Alfa Romeo drivers decided not to compete but Bugatti was well represented. Mercedes sent their leading driver, Rudolf Caracciola, to drive a Mercedes SSK. Caracciola drove a fighting race, bringing his SSK up to second position at the end of the race, despite starting in fifteenth. The race was won by “Williams” (pseudonym of William Grover-Williams) driving a Bugatti Type 35B painted dark green (what would erroneously become referred to as British racing green). Another driver who competed using a pseudonym was “Georges Philippe”, the Baron Philippe de Rothschild. Chiron was unable to compete, having a prior commitment to compete in the Indianapolis 500 on the same day. However, Chiron did compete the following year, when he was beaten by René Dreyfus and his Bugatti and finished second, and took victory in the 1931 race driving a Bugatti. As of 2011, he remains the only native of Monaco to have won the event.

The race quickly grew in importance. Because of the large number of races which were being termed ‘Grands Prix’, the AIACR formally recognised the most important race of each of its affiliated national automobile clubs as International Grands Prix, or Grandes Épreuves, and in 1933 Monaco was ranked as such alongside the French, Belgian, Italian, and Spanish Grands Prix. That year’s race was the first Grand Prix where grid positions were decided, as they are now, by practice time rather than the established method of balloting. The race saw Achille Varzi and Tazio Nuvolari exchange the lead many times before being settled in Varzi’s favour on the final lap when Nuvolari’s car caught fire. The race became a round of the new European Championship in 1936, when stormy weather and a broken oil line led to a series of crashes, eliminating the Mercedes-Benzes of Chiron,

Fagioli, and von Brauchitsch, as well as Bernd Rosemeyer's Typ C for newcomer Auto Union; Rudolf Caracciola, proving the truth of his nickname, Regenmeister (Rainmaster), went on to win. In 1937, von Brauchitsch duelled Caracciola before coming out on top. It was the last prewar Grand Prix at Monaco, for in 1938, the demand for £500 (about US\$2450) in appearance money per top entrant led AIACR to cancel the event, while looming war overtook it in 1939, and the Second World War ended organised racing in Europe until 1945.

HISTORY OF THE CAR STEERING WHEEL

A steering wheel (also called a driving wheel or hand wheel) is a type of steering control in vehicles.

Steering wheels are used in most modern land vehicles, including all mass-production automobiles as well as light and heavy trucks.

The steering wheel is the part of the steering system that is manipulated by the driver; the rest of the steering system responds to such driver inputs. This can be through direct mechanical contact as in recirculating ball or rack and pinion steering gears, without or with the assistance of hydraulic power steering, HPS, or as in some modern production cars with the assistance of computer controlled motors, known as Electric Power Steering. With the introduction of federal vehicle regulation in the United States in 1968, FMVSS 114 required the impairment of steering wheel rotation (or transmission locked in "park") to hinder motor vehicle theft; in most vehicles this is accomplished when the ignition key is removed from the ignition lock. The first automobiles were steered with a tiller, but in 1894 Alfred Vacheron took part in the Paris-Rouen race with a Panhard 4 hp model which he had fitted with a steering wheel. That is believed to be one of the earliest employments of the principle.

From 1898 the Panhard et Levassor cars were equipped as standard with steering wheels. C S Rolls introduced the first car in Britain fitted with a steering wheel when he imported a 6 hp Panhard from France in 1898. Arthur Constantin Krebs replaced the tiller with an inclined steering wheel for the Panhard car he designed for the Paris-Amsterdam race which ran 7–13 July 1898.

In 1898, Thomas B. Jeffery and his son, Charles T. Jeffery, developed two advanced experimental cars featuring a front-mounted engine, as well as a steering wheel that was mounted on the left-hand side. However, the early automaker adopted a more "conventional" rear-engine and tiller-steering layout for its first mass-produced Ramblers in 1902. The following year, the Rambler Model E was largely unchanged, except that it came equipped with a tiller early in the year, but with a steering wheel by the end of 1903. By 1904, all Ramblers featured steering wheels. Within a decade, the steering wheel had entirely replaced the tiller in automobiles. At the insistence of Thomas B. Jeffery, the position of the driver was also moved to the left-hand side of the car during the 1903 Rambler production. Most other car makers began offering cars with left-hand drive in 1910. Soon after, most cars in the U.S. converted to left hand drive. Steering wheels for passenger automobiles are generally circular, and are mounted to the steering column by a hub connected to the outer ring of the steering wheel by one or more spokes (single spoke wheels being a rather rare exception). Other types of vehicles may use the circular design, a butterfly shape, or some other shape. In countries where cars must drive on the left side of the road, the steering wheel is typically on the right side of the car (right-hand drive or RHD); the converse applies in countries where cars drive on the right side of the road (left-hand drive or LHD). In addition to its use in steering, the steering wheel is the usual location for a button to activate the car's horn. Modern automobiles may have

other controls, such as cruise control and audio system controls built into the steering wheel to minimize the extent to which the driver must take their hands off the wheel.

The steering wheels were rigid and mounted on non-collapsible steering columns. This arrangement increased the risk of impaling the driver in case of a severe crash. The first collapsible steering column was invented in 1934 but was never successfully marketed. In 1968, United States regulations (FMVSS Standard No. 204) were implemented concerning the acceptable rearward movement of the steering wheel in case of crash. Collapsible steering columns were required to meet that standard.

Power steering gives the driver an easier means by which the steering of a car can be accomplished. Modern power steering has almost universally relied on a hydraulic system, although electrical systems are steadily replacing this technology. Mechanical power steering systems (e.g., Studebaker, 1952) have been invented, but their weight and complexity negate the benefits that they provide.

While other methods of steering passenger cars have resulted from experiments, for example the “wrist-twist instant steering” Mercury Park Lanes controlled by two 5-inch (127 mm) rings, none have yet been deployed as successfully as the conventional large steering wheel. The steering wheel is centrally located on certain high-performance sports cars, such as the McLaren F1, and in the majority of single-seat racing cars.

As a driver may have his hands on the steering wheel for hours at a time these are designed with ergonomics in mind. However, the most important concern is that the driver can effectively convey torque to the steering system; this is especially important in vehicles without power steering or in the rare event of a loss of steering assist. A typical design for circular steering wheels is a steel or magnesium rim with a

plastic or rubberized grip molded over and around it. Some drivers purchase vinyl or textile steering wheel covers to enhance grip or comfort, or simply as decoration. Another device used to make steering easier is the brodie knob.

A similar device in aircraft is the yoke. Water vessels not steered from a stern-mounted tiller are directed with the ship's wheel, which may have inspired the concept of the steering wheel.

Early Formula One cars used steering wheels taken directly from road cars. They were normally made from wood (necessitating the use of driving gloves), and in the absence of packaging constraints they tended to be made as large a diameter as possible, to reduce the effort needed to turn. As cars grew progressively lower and cockpits narrower throughout the 1960s and 1970s, steering wheels became smaller, so as to fit into the more compact space available.

CAR CLASSIFICATION

Microcar / Subcompact car / Compact car / Mid-size car / Entry-level luxury car / Full-size car / Mid-size luxury car / Full-size luxury car / Sports car / Grand tourer / Supercar Convertible Roadster / Minivan / Mini SUV / Compact SUV / Mid-size SUV / Full-size SUV / Mini pickup truck / Mid-size pickup truck / Full-size pickup truck / Full-size Heavy Duty pickup truck.

FAMOUS PEOPLE WHO DIED IN ROAD ACCIDENTS

Albert Camus (1913–1960), French-Algerian writer.
James Dean (1931-1955), American actor
Kenneth Craik (1914–1945), British philosopher and psychologist.
Diana (1961-1997), Princess of Wales, member of British royal family.
Yutaka Kanai (1959–1990), Japanese athlete.
Kemistry (1963/4–1999), English DJ.
Valeri Kharlamov (1948–1981), Russian ice hockey player.
Terrence Kiel (1980–2008), American football player.
Witold Kiełtyka (1984–2007), Polish death metal drummer.
Ken Kifer (1945–2003) writer, bicyclist and webmaster.
Sam Kinison (1953–1992), American comedian.
Andy Kirby (1961–2002), NASCAR racing driver.
Hugo Koblet (1925–1964), Swiss cycling champion.
Mary Jo Kopechne (1940–1969), passenger of Senator Ted Kennedy.
Lou Kolls (1896–1941), Baseball umpire.
Nikola Kotkov, (1938–1971), Bulgarian footballer.
Nicolae Labiş (1935–1956), Romanian poet.
Scott LaFaro (1936–1961), American jazz musician.
Martin Lamble (1949–1969), British rock drummer.
Mark Langford (1964–2007), Controversial British company director.
T. E. Lawrence (1888–1935), British army officer.
Iry LeJeune (1928–1955), American Cajun accordionist.
Julia Lennon (1914–1958), mother of John Lennon.
Alan J. Pakula (1928-1998), Film Producer.
Judy Tyler (1932–1957), American actress.
Nicola Trussardi (1942–1999), Italian Fashion Designer.
Viktor Tsoy (1962–1990), Russian Poet and Rock-musician.
Yegor Ivanovich Zolotarev(1847-1878), Russian mathematician.

TYPES OF CAR WASH

1. Hand car wash facilities, where the vehicle is washed by employees.
2. Self-service facilities, which are generally coin-operated, where the customer does the washing, including “jet washing”.
3. In-bay automatics, which consist of an automatic machine that rolls back and forth over a stationary vehicle - often seen at filling stations and stand-alone wash sites.
4. Tunnel washes, which use a conveyor to move the vehicle through a series of fixed cleaning mechanisms.
5. Chemical car wash, also known as waterless car wash, uses chemicals to wash and polish car surface. Thought to have originated in Australia and claims to be an eco-friendly car wash method.
6. Steam car washes use a jet of steam and micro fiber towels, some include detergent injection. Known to have originated from South Korea, steam car washes have been especially popular as a low-investment, eco-friendly car wash solution in Asia, Middle East and Europe thanks to its sanitizing features and mobility.
7. Mobile Car Washes, often also serving as mobile detailing systems, which carry plastic water tanks and use pressure washers. Sometimes these systems are mounted on trailers, on trucks, or in vans. Generally these operators also have a generator to run a shop vac., buffers and other tools as well.

“AUTOSTOP” SONG

Autostop was the Greek entry in the Eurovision Song Contest 1980, performed in Greek by Anna Vissi and The Epikouri. With music by Jick Nacassian and lyrics by Rony Sofu, the “Autostop” was Greece’s

sixth entry in the Contest. It is an up-tempo number in praise of the tradition of hitch-hiking throughout Europe. Vissi suggests that it is the best way of seeing the world, and sings that one can even go as far as China. The song is also memorable for the frequent repetition of the title, with the word being sung 37 times. Also of note is the fact that Lia Vissi, Vissi's older sister, made an appearance as one of the backing singers, having done the same one year before. Both sisters would go on (at the 1982 Contest in Anna's case and the 1985 Contest in Lia's) to represent their country of birth, Cyprus. The Eurovision Song Contest 1980 took place in The Hague, Netherlands on April 19, 1980. "Autostop" was performed third out of the nineteen entries of the night and followed Turkey's Ajda Pekkan with "Pe'r Oil" while preceding Luxembourg's Sophie & Magaly with "Papa Pingouin". At the close of voting, the performance had received 30 points, placing 13th in a field of 19. It was succeeded as Greek representative at the 1981 Contest by Yiannis Dimitras with "Feggari Kalokerino". As mentioned above, Anna Vissi returned to the Contest in 1982, then representing her native Cyprus with "Mono I Agapi", and a third time in 2006 with "Everything", again singing for Greece.

THE CAR DRIVING GLOVES

Gloves were originally worn to keep the hands clean when driving a motor car. Early racing cars used steering wheels taken directly from road cars. They were normally made from wood necessitating the use and development of driving gloves. A driving glove is a hand covering used to give a driver increased control of the vehicle. Gloves have separate sheaths or openings for each finger and the thumb; if there is an opening, but no covering sheath for each finger, they are called "fingerless gloves."

SAILING

Sailing yachts can range in overall length (Length Over All—LOA) from about 6 metres (20 ft) to well over 30 metres (98 ft), where the distinction between a yacht and a ship becomes blurred. The invention of sailing is prehistoric, but the racing of sailing boats is believed to have started in the Netherlands some time in the 17th century. Soon, in England, custom-built racing "yachts" began to emerge. In 1851, a challenge to an American yacht racing club in New York led to the beginning of the America's Cup, a regatta won by the New York Yacht Club until 1983, when they finally lost to the Royal Perth Yacht Club of Australia, which entered the Australia II into the contest. Meanwhile, yacht racing continued to evolve, with the development of recognised classes of racing yachts, from small dinghies up to huge maxi yachts. Although there are many different types of racing vessels, they can generally be separated into the larger yachts, which are larger and contain facilities for extended voyages, and smaller harbour racing craft such as dinghies and skiffs. Smaller boats are not generally referred to as yachts, although all recreational boats (as opposed to commercial or military vessels) are yachts. These days, yacht racing and dinghy racing are common participant sports around the developed world, particularly where favorable wind conditions and access to reasonably sized bodies of water are available. Most yachting is conducted in salt water; but smaller craft can be -and are- raced on lakes and even large rivers. Dinghy races are conducted on sheltered water on smaller craft with crews of between one and three people. The common arrangement for racing boats is the sloop, a boat with one mast. Some dinghies have only one triangular sail, but most have two configured as a sloop; some dingies and almost all larger racing boats carry a spinnaker, a large, bulging sail designed for sailing "with the wind." Most races

are conducted between vessels of identical design (“one design” racing). In these races, with identical equipment the sailors best able to make use of the ambient conditions win. Dinghy designs vary from small, stable, and slow craft for novice sailors to lightweight, high-speed designs that are very difficult for even experienced crews to sail safely and effectively. Australia’s 18-foot skiff class are the fastest monohull dinghies, reaching speeds of up to 40 kilometres per hour (25 miles per hour) even in relatively light winds. Sailing has a reputation for being a boring spectator sport, but skiff racing can be very exciting, particularly in unpredictable conditions where crews struggle to keep their boats upright. Various multi-hull racing classes are even faster. Various one-design dinghy classes are raced at the Summer Olympic Games. Larger yachts are also raced on harbours, but the most prestigious yacht races are point-to-point long distance races on the open ocean. Bad weather makes even finishing such races a considerable test of equipment and willpower, and from time to time boats and sailors are lost at sea. The longest such events are “round-the-world” races which can take months to complete, but better-known are events such as the Fastnet race in the United Kingdom and the Sydney to Hobart Yacht Race along the east coast of Australia. Large races are usually organized with a first-past-the-post trophy (called “line honours”) and under a handicap system that adjusts finishing times for the relative speeds of the boats’ design, theoretically offering each entrant an equal chance.

remain on the steering wheel while driving, a position that leaves them exposed to the elements. The hands are also relatively inactive, and do not have a great deal of muscle mass, which also contributes to the possibility of chill. Lined gloves therefore contribute to insulating the hands while driving.

Full fingered. Gloves should fit snugly but not be tight. Pay particular attention to the length of the fingers as the fingertips can become very cold if the glove’s fingers are not long enough. Ideally the glove should be loose on the fingers and fit comfortably around the palm. A tight glove will tend to restrict blood flow and make the hand cold as it is at an extreme distance from the heart.

Fingerless. Fingerless gloves have the fingers cut off. The exposed fingers interfere less with the sensation of gripping.

THE ASPHALT CONCRETE

Asphalt concrete is a composite material commonly used in construction projects such as road surfaces and parking lots. It consists of asphalt (used as a binder) and mineral aggregate mixed together, then laid down in layers and compacted. It is also increasingly used as the core for embankment dams.

The terms “asphalt (or asphaltic) concrete”, “bituminous asphalt concrete” and the abbreviation “AC” are typically used only in engineering and construction documents and literature. Asphalt concrete pavements are often called just “asphalt” by laypersons who tend to associate the term concrete with Portland cement concrete only. The engineering definition of concrete is any composite material composed of mineral aggregate glued together with a binder, whether that binder is Portland cement, asphalt or even epoxy. Informally,

asphalt concrete is also referred to as “blacktop”, particularly in North America. Asphalt concrete has different performance characteristics in terms of surface durability, tire wear, braking efficiency and roadway noise. The appropriate asphalt performance characteristic is obtained by the traffic level amount in categories A,B,C,D,E, and friction coarse (FC-5). Asphalt concrete generates less roadway noise than Portland cement concrete surfacing, and is typically less noisy than chip seal surfaces. Tire noise effects are amplified at higher operating speeds. The sound energy is generated through rolling friction converting kinetic energy to sound waves. The idea that highway design could be influenced by acoustical engineering considerations including selection of surface paving types arose in the very early 1970s. Asphalt deterioration can include crocodile cracking, potholes, upheaval, raveling, rutting, shoving, stripping, and grade depressions. In cold climates, freezing of the groundwater underneath can crack asphalt even in one winter (by frost heaving). Filling the cracks with bitumen can temporarily fix the cracks, but only proper construction, i.e. allowing water to drain away from under the road, can slow this process.

Factors that cause asphalt concrete to deteriorate over time mostly fall into one of two categories: Environmental factors and traffic loads. Often, damage results from combinations of factors in both categories. Environmental factors include heat and cold, the presence of water in the subbase or subgrade soil underlying the pavement, and frost heaves. High temperatures soften the asphalt binder, allowing heavy tire loads to deform the pavement into ruts. Paradoxically, high heat and strong sunlight also causes the asphalt to oxidize, becoming stiffer, less resilient and cracking. Cold temperatures can cause cracks as the asphalt contracts. Cold asphalt is also less resilient and more vulnerable to cracking.

Water trapped under the pavement softens the subbase and subgrade, making the road more vulnerable to traffic loads. Water under the road freezes and expand in cold weather, causing and enlarging cracks to form. In spring thaw, the ground thaws from the top down, so water is trapped between the pavement above and the still-frozen soil underneath. This layer of saturated soil provides little support for the road above, leading to the formation of potholes. This is more of a problem for silty or clay soils than sandy or gravelly soils. Some jurisdictions pass frost laws to reduce the allowable weight of trucks during the spring thaw season and protect their roads.

Traffic damage mostly results from trucks and buses. The damage a vehicle causes is proportional to the axle load raised to the fourth power so doubling the weight an axle carries actually causes 16 times as much damage. Wheels cause the road to flex slightly, resulting in fatigue cracking, which often leads to crocodile cracking. Vehicle speed also plays a role. Slowly moving vehicles stress the road over a longer period of time, increasing ruts, cracking, and corrugations in the asphalt pavement.

Other causes of damage include heat damage from vehicle fires, or solvent action from chemical spills. The life of a road can be prolonged through good design, construction and maintenance practices. During design, engineers measure the traffic on a road, paying special attention to the number and types of trucks. They also evaluate the subsoil to see how much load it can withstand. The pavement and subbase thicknesses are designed to withstand the wheel loads. Sometimes, geogrids are used to reinforce the subbase and further strengthen the roads. Drainage, including ditches, storm drains and underdrains are used to remove water from the roadbed, preventing it from weakening the subbase and subsoil.

Good maintenance practices center on keeping water out of the

pavement, subbase and subsoil. Maintaining and cleaning ditches and storm drains will extend the life of the road at low cost. Sealing small cracks with bituminous crack sealer prevents water from enlarging cracks through frost weathering, or percolating down to the subbase and softening it. For somewhat more distressed roads, a chip seal or similar surface treatment may be applied. As the number, width and length of cracks increases, more intensive repairs are needed. In order of generally increasing expense, these include thin asphalt overlays, multicourse overlays, grinding off the top course and overlaying, in-place recycling, or full-depth reconstruction of the roadway.

It is far less expensive to keep a road in good condition than it is to repair it once it has deteriorated. This is why some agencies place the priority on preventive maintenance of roads in good condition, rather than reconstructing roads in poor condition. Poor roads are upgraded as resources and budget allow. In terms of lifetime cost and long term pavement conditions, this will result in better system performance. Agencies that concentrate on restoring their bad roads often find that by the time they've repaired them all, the roads that were in good condition have deteriorated. Some agencies use a pavement management system to help prioritize maintenance and repairs.

CAR SPEAKERS

Car speakers are largely functionally identical to any other loudspeaker design with key components specialized for use in mobile environments, and generally serve an identical purpose. One major key design difference is multi-axial mounting of different types of loudspeakers in the same footprint, such as a tweeter directly mounted over a woofer. Another key difference is non-circular cone shapes, such as square, oval, or even triangular. Both of these features reflect a significant reduction in

space and size that a speaker may occupy in a vehicle cabin. Material construction may also include more exotic and hearty components more suitable to mobile use. Marine speakers may have plating for corrosion resistance. Cones may be coated with a substance to resist expansion and contraction under high vehicle cabin temperatures, known to reach 140 °F (60 °C) in the sun. Subwoofers may also be found in mobile audio applications where a cabin speaker may lack the desired low frequency response on its own. Before stereo radio was introduced, the most common speaker location was in the middle of the dashboard pointing through perforations towards the front windshield. In most modern applications, speakers are mounted certain common locations including the front deck (or dash), the rear deck (or parcel shelf), the kick panel (located in the footwell below the A-pillar,) or the doors. In the case of subwoofers, mountings are usually under the seat or in the trunk. Each position has certain strengths and limitations from both a quality of sound, and a vehicle manufacturing perspective.

THE FIRST CAR ROAD TRIP

The road trip is any journey taken on roads, regardless of stops en route. Typically, road trips are long distances traveled by automobile. The first recorded road trip was attested in stele in the court of Ramses II. He was said to “come down on the Medeans in his chariot after driving all night from Memphis.” Road trips were important throughout antiquity. Alexander’s march into India was described by the historian Nearchus. During the Roman Republic, it was not uncommon for young patrician men to gather together to tour the Roman world. Young European men of means would often go on a grand tour during the 17th, 18th, and 19th centuries. People of many religions went

(and still go) on a pilgrimage.

Karl Jung identified the road trip as a “persistent element of human culture.” The world’s first recorded long distance road trip by automobile took place in Germany in August 1888 when Bertha Benz, the wife of Karl Benz, the inventor of the first patented motor car (the Benz Patent-Motorwagen), travelled from Mannheim to Pforzheim (a distance of 106 km in the third experimental Benz motor car (which had a maximum speed of 10 mph) and back, with her two teenage sons Richard and Eugen but without the consent and knowledge of her husband.

THE STOP SIGN

A Stop sign is a traffic sign to notify drivers that they must stop before proceeding. The Vienna Convention on Road Signs and Signals proposed standard stop sign diameters of 0.6, 0.9 or 1.2 metres. UK and New Zealand stop signs are 750, 900 or 1200 mm, according to sign location and traffic speeds. In the United States, stop signs have a size of 75 cm across opposite flats of the red octagon, with a 20mm white border. The white uppercase letters forming the stop legend are 25 cm tall. Larger signs of 90 cm (36 in) with 30 cm (12 in) legend and 25 mm (1 in) border are used on multilane expressways. Regulatory provisions exist for extra-large 120 cm (48 in) signs with 40 cm (16 in) legend and 30 mm (1¼ in) border for use where sign visibility or reaction distance are limited, and the smallest permissible stop sign size for general usage is 60 cm (24 in) with a 20 cm (8 in) legend and 15 mm (½ in) border. The metric units specified in the US regulatory manuals are rounded approximations of English units, not exact conversions. Field, legend, and border are all retroreflective. Stop signs are retroreflective. In this night photo, the person is barely

visible, while the sign is brightly lit by the camera’s flash.

The stop instruction is specified with either an English stop or local language legend in the United Nations Convention on Road Signs and Signals. Some countries use both. The sign’s distinctive design was developed and first used in the U.S., and later adopted by other countries and by the U.N. Despite this, the U.S. is not a signatory to the U.N. Traffic Signs and Signals Convention.

Stop signs are used globally. However, most countries see fewer of them than North America and South Africa, because all-way stops are never used and may even be legally prohibited. In a majority of European countries including France, Spain and Italy, junctions without traffic lights or roundabouts are controlled by stop signs on minor roads and by white, yellow and black priority diamond signs on the major road. In the UK, the Netherlands, Scandinavia, New Zealand and Australia, stop signs are restricted to situations wherein coming to a dead stop is actually necessary because of severely limited sight lines. At the vast majority of minor intersections in these countries, however, Give Way signs and/or equivalent road markings have now taken the place of stop signs. Finally, at the busier crossing streets, Give Way signs may be replaced by (mini) roundabouts, which also work on the give way (rather than stop) principle.

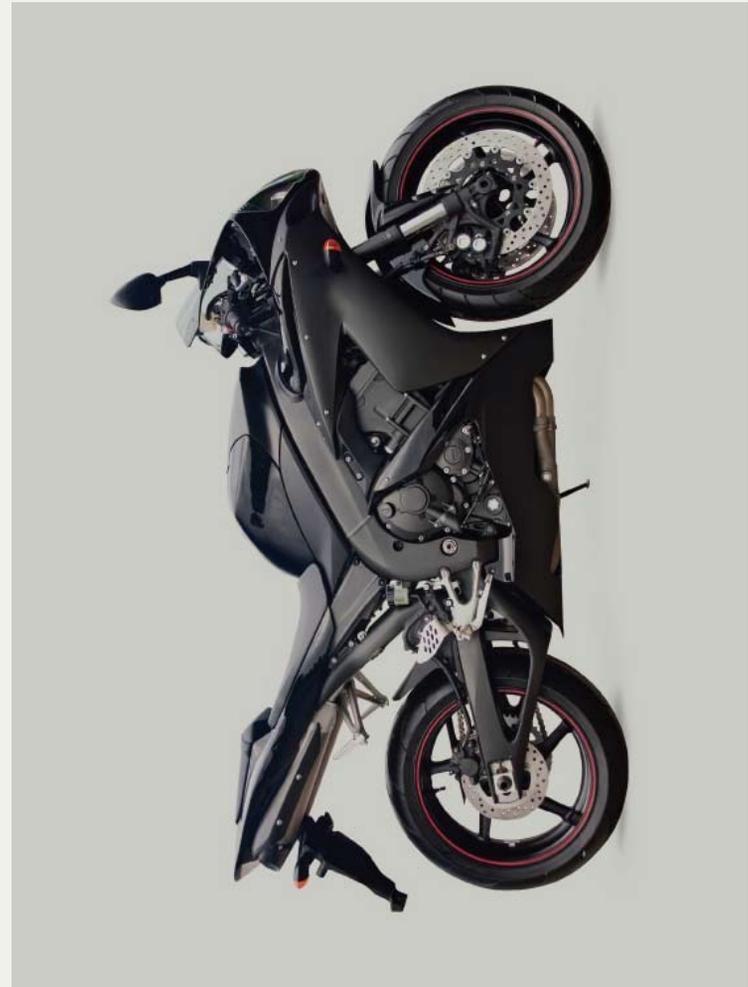
JOYRIDE

To joyride is to drive around in a stolen car with no particular goal, a ride taken solely for pleasure. By law, joyriding is not considered to be theft, because the intention to “permanently deprive” the owner of the vehicle cannot be proven. Instead, a separate offence of “taking without consent”, usually known by the acronym TWOC, applies to motor vehicles. Therefore

“twoccing” or “twocking” is another term for joyriding. In Ireland, joyriding is a common crime and many people have campaigned against it. During The Troubles, paramilitaries such as the Provisional IRA administered extralegal punishment to joyriders, usually consisting of breaking their fingers and/or kneecaps, thus rendering them unable to operate a vehicle again. In Wisconsin, joyriding is a misdemeanor that implies the car was returned undamaged within 24 hours. Joyriding in general is the theft of a vehicle, which is then driven leisurely until it runs out of fuel or is damaged beyond repair. The vehicle is often set on fire after it has been dumped. Joyriders are often below the legal driving limit or lack driving license; due to this, the vehicle is often driven in a reckless fashion causing damage to the vehicle resulting in an insurance write-off. Joyriders often choose cars that are older; with much less security, these cars are easy targets. Joyriders often gain access to a locked car with just a flathead screwdriver, although modern cars have systems to prevent a screwdriver opening locks. The vehicle is started by either hotwiring or breaking the ignition lock. Ignition systems were much less sophisticated before the mid-1990s and easier to bypass. The vehicle is often driven through rural areas to avoid police pursuit, and when the vehicle is exhausted of fuel or damaged, it is dumped. After the vehicle has been dumped it is often set on fire to remove any fingerprints or other evidence.

VEHICLE COLOUR & SAFETY

A Swedish study found that pink cars are involved in the fewest and black cars are involved in the most crashes. In Auckland New Zealand, a study found that there was a significantly lower rate of serious injury in silver cars; with higher rates in brown, black, and green cars.





by Nils Bohlin who had earlier also worked on ejection seats at Saab.

Until the 1980s, three-point belts were commonly available only in the front outboard seats of cars; the back seats were only often fitted with lap belts. Evidence of the potential of lap belts to cause separation of the lumbar vertebrae and the sometimes associated paralysis, or “seat belt syndrome”, led to progressive revision of passenger safety regulations in nearly all developed countries to require 3-point belts first in all outboard seating positions and eventually in all seating positions in passenger vehicles. Since September 1, 2007, all new cars sold in the U.S. require a lap and shoulder belt in the center rear seat.

Belt-in-Seat (BIS): The BIS is a three-point harness with the shoulder belt attached to the seat itself, rather than to the vehicle structure. The first car using this system in the United States was the 1990 Mercedes-Benz SL. Some cars like the Renault Vel Satis use this system for the front seats. A General Motors assessment concluded seat-mounted 3-point belts offer better protection especially to smaller vehicle occupants, though GM did not find a safety performance improvement in vehicles with seat-mounted belts versus body-mounted belts.

4-, 5-, and 6-point: A 6-point harness in a racing car. Five-point harnesses are typically found in child safety seats and in racing cars. The lap portion is connected to a belt between the legs and there are two shoulder belts, making a total of five points of attachment to the seat. A 4-point harness is similar, but without the strap between the legs, while a 6-point harness has two belts between the legs. Such harnesses can cause paralysis or other severe injury

in a collision and are used mainly in racing. In NASCAR, the 6-point harness became popular after the death of Dale Earnhardt, who was wearing a five-point harness when he suffered his fatal crash. As it was first thought that his belt had broken, some teams ordered a six-point harness in response.

PASSENGER

A passenger is a term broadly used to describe any person who travels in a vehicle, but bears little or no responsibility for the tasks required for that vehicle to arrive at its destination.

Passenger is one who is carried by a public carrier from one place to another, whether for consideration or without it.

Crew members (if any), as well as the driver or pilot of the vehicle, are usually not considered to be passengers. For example, a flight attendant on an airline would not be considered a “passenger” while on duty, but an employee riding in a company car being driven by another person would be considered a passenger, even if the car was being driven on company business. Front passengers are situated near the driver.

Rear passengers are behind the driver in the back seats.

RADAR SPEED GUN

A radar speed gun (also radar gun and speed gun) is a small doppler radar unit used to measure the speed of moving objects, including vehicles, pitched baseballs, runners and other moving objects. Radar speed guns may be hand-held, vehicle-mounted or static. A radar speed gun measures the speed of objects at which it is pointed by detecting a change in frequency of the returned radar signal due to the Doppler

effect. They are frequently used for speed limit enforcement although more modern LIDAR speed gun devices which use pulsed laser light instead of radar are more commonly used now. Some motorists install radar detectors which can detect signals from these devices to avoid being caught.

The radar speed gun was invented by Bryce K. Brown of Decatur Electronics in March 1954, and was first used in Chicago, Illinois in April 1954. Patrolman Leonard Baldy was the first officer to issue a speeding ticket using the new device. Radar speed guns, like other types of radar, consist of a radio transmitter and receiver. They send out a radio signal in a narrow beam, then receive the same signal back after it bounces off the target object. Due to a phenomenon called the Doppler effect, if the object is moving toward or away from the gun, the frequency of the reflected radio waves when they come back is different from the transmitted waves, and from that difference the radar speed gun can calculate the object's speed.

WRONG-WAY DRIVING

Wrong-way driving is the act of driving a motor vehicle against the direction of traffic. It can occur on either one- or two-way roads (in the latter case, arising from driving on the wrong side of the road), as well as in parking lots and parking garages, and may be due to driver inattention or impairment, or because of insufficient road markings or signage. It can also occur due to drivers from right-hand traffic countries being unaccustomed to driving in a left-hand traffic country, and vice versa. Often, people also drive in the wrong direction intentionally because they missed an exit, for thrill-seeking, as a suicide attempt or as a shortcut.

It is a serious problem when it occurs on divided highways because

of the high speeds usually involved. In the United States, about 350 people are killed each year in accidents caused by drivers headed in the wrong direction on the highway. Most drivers who enter a divided highway or ramp in the wrong direction correct themselves by turning around. One of the aims of highway engineering is to reduce wrong-way driving. Depending on the jurisdiction, wrong-way driving is a punishable offense. In New Zealand, wrong-way driving, even by accident, is counted as careless driving and can result in up to 5 years imprisonment and/or a fine up to NZ\$10,000.

U-TURN

A U-turn in driving refers to performing a 180 degree rotation to reverse the direction of travel. It is called a “U-turn” because the maneuver looks like the letter U. In some areas, the maneuver is illegal, while in others it is treated as a more ordinary turn, merely extended. In still other areas lanes are occasionally marked “U-Turn only”. Occasionally, on a divided highway, special U-turn ramps exist to allow traffic to make a U-turn, though often their use is restricted to emergency and police vehicles only.

In the United States, U-turn regulations vary by state: in Indiana U-turns are allowed as long as the driver follows all of the precautions normally ascribed to making a left turn (yielding right-of-way, etc.). Many places, including Texas and Georgia, have specially designed U-turn lanes (referred to as Texas U-turn lanes). In Michigan, U-turns are required for many left turns to and from divided highways, as part of the Michigan Left maneuver (also referred to as a Michigan Turn). It can also be used to mean a sudden reversal of policy in politics.