

SAVE YOUR DRIVING LICENCE



AVOIDING THE SPEEDING TICKET

What must the officer do, and what should you do

When you are being reported for speeding, the Police Officer **must** tell you:

"That you will be reported for consideration of the question of prosecuting you for exceeding the speed limit." It must either be given verbally or in writing at the time, or in writing within fourteen days or a summons be issued within fourteen days. Following this Notice of Intended Prosecution, he should then caution you by saying, "You do not have to say anything, but it may harm your defence if you do not mention when questioned, something you later rely on in Court. Anything you do say may be given in evidence."

Under Section 1 of the Road Traffic Offenders Act, 1988, section 1, it states, " A person **shall not be convicted of an offence** to which this section applies, (speeding, dangerous driving, careless driving, failing to conform to traffic lights, failing to conform to stop signs, continuous white lines in the middle of the road and other mandatory road signs) unless the Notice of Intended Prosecution was given.

When being booked for speeding or any other offence, if possible switch on a tape recorder or Dictaphone so that you have a record of what the officer says. Be careful, some Police Forces do have the N.I.P. printed on the HO/RT/1 producer form or on specially printed forms for speeding offences.

How to avoid being nicked when you are stopped

In a word. Act. However much you want to tell the police how crap his last manoeuvres were, you actually do this...Dependent on how bad the offence is, because remember, by the time he gets to your car he has pretty well made up his or her mind what they will be doing.

Try your utmost to make the officer truly believe that he has really got to your soul. He will always have a cautionary tale of something gruesome that just happens to have occurred right next to where you are. They make these lectures often. They want to feel that by telling you they can 'make a difference' Be craven, make sure you stop the very instant you know you are going to be stopped, be on the pavement looking seriously glum. If your licence has already has points on it, you are going to need talent.

Go with the super-miserable, "Oh god, I of all blokes should know better by now," if you can raise a Hollywood tear you are Oscar material. No matter how base, low and s**t it makes you feel, exult in the aftermath when you get a good ticking-off but no ticket

What to do if caught

Firstly, not enough people who are caught fight it in court, they simply accept it, get the points and pay the fine. If more than 10% fought the ticket I think the judicial system dealing with this would be overwhelmed and brought down on its knees. If in doubt, fight it. The worst thing that can happen is that you will be convicted of your original offence. You can get a heavier fine and more points in court, but unless you were doing silly speeds, it's unlikely.

Make the system's life HELL when fighting it. Remember it is going to cost the system a huge amount of money to prosecute you, in the officer's time, court's time, prosecutor's time etc. The best thing you can do is make it worse. Here are some steps you can take.

What to do at the scene

It is critical that you start contesting your ticket at the scene of the alleged offence. You must judge the officer's temperament and situation and decide for yourself. You are more likely to get let off by a normal officer (black hat, black uniform) than by a traffic officer (white hat, green overcoat). Remember, it's a traffic cop's job to catch you, the normal cop probably does not want the added paperwork (I know someone who was let off in town for doing 70mph because he said he thought he was still on the motorway). If the officer asks you how fast you think you were going you can take one of three approaches.

1. You can deny it outright and tell him you weren't speeding, that you checked the speedometer. DO NOT get into an argument, but do not admit guilt. This is unlikely to prevent him from giving you a ticket, but you can tell a judge at a trial that you were not speeding and you checked the speedometer, you can have the officer confirm that in your cross-examination of him. This will serve to make your case stronger.
2. You can say that you are not sure, your mind was elsewhere. If he insists you were speeding, then sidestep by saying something like, "I guess I must have been otherwise you would not have stopped me DO NOT admit guilt, this approach simply reiterates the officer's accusation. This is difficult to use as evidence in court on both sides.
3. Be honest and admit guilt. If you are stopped by a traffic officer, then you are going to get a ticket anyway so this is a stupid approach. If it is a normal officer, you may get off for being honest. This approach relies on luck. Forget fighting it in court if you admit guilt.

NEVER admit guilt, even if you do not intend fighting it, none of the I have a plane to catch, I'm late for work, my house is on fire.

All speed-pacing police cars have to have their Speedo's measured and certified. Only traffic police cars are done, and the Speedo will have increments of 1 mph's. If you are stopped by a non-traffic officer, and told that he/she followed you and you were speeding, simply ask as a matter of course when his Speedo was last calibrated. It is likely he will let you go since normal police (Beat) cars do not have certified Speedo's; theirs is the same as yours and mine.

NEVER surrender your licence at the roadside; you will get a chance to take it to a police station. Surrendering your licence at the roadside is an admission of guilt. Surrendering it at a police station later is just abiding by the law.

This is unlikely to prevent him from giving you a ticket, but you can tell the judge at a trial that you were not speeding and you checked the speedometer, you can have the officer confirm that in your cross examination of him. This will serve to make your case stronger.

If you are given a ticket, study it carefully before leaving the scene. The officer will ask if you have questions about the ticket, and you will:

DO NOT get cocky at the scene, you have nothing against the police officer, he/she is only doing his/her job. It is the system that you want to fight (legally I mean!).

If you were caught on a Radar gun

Ask to have a look at the radar gun and check that the gun displays the speed that you were stopped for. If possible, get the make, model and serial number of the radar gun. Ask the officer to demonstrate that the radar gun is calibrated (he will probably not do this, if not assume it is not calibrated and use it as evidence).

Do not regard self-diagnostics as accurate, Radar guns are calibrated with a pair of tuning forks, and only this external test may be considered accurate. If the officer refuses to demonstrate the calibration, ask him to prove that he has tuning forks in the car (he will probably not be too happy at this point, but he can not do anything, your requests are legitimate). If he doesn't, tell the judge because this means (at least in your eyes) that that the gun is not calibrated.

If you were caught on a LIDAR gun

Ask to have a look at the radar gun and check that the gun displays the speed that you were stopped for. If possible, get the make, model and serial number of the laser unit. Note the positioning of the unit in relation to the sun or any other bright red or white light. LIDAR uses infrared light. and does not work as well when aimed into infrared light sources like the sun or high beam headlights. Ask when the unit was last calibrated. Ask to see a demonstration of the calibration. The same notes apply for the RADAR gun. These however, are not tuned by forks (I do not know how they are done).

YOU MUST MAKE NOTES AT THE SCENE. The officer certainly will. In court you may be asked if the notes were made while the events were still fresh in your mind. If you want to use the notes, then the answer must be a yes. Note the following:

The answers to any questions you asked the officer.

Any items you noted above.

Positions of OTHER CARS. You may be able to claim that he metered someone else, but stopped you (particularly lorries, since radar is good at locking into a larger object)..

The weather conditions.

The time and date.

Your direction of travel and the source and destination.

The lane you were in and the name of the road, also the area.

The officer's direction of travel and lane, or note if he was parked

A brief physical description of the officer so you recognize him in court (PHOTO if possible)

Take the officer's number, and the unit number on his car.

If you were caught on a Camera

The police MUST send you a notice of intended prosecution within 14 days. If they do not, the case is a non-starter.

Preparing for trial

Examine the ticket a few times. Look for mistakes on the ticket such as a wrong name, time, date, or location. If there are any, you should tell them to the Magistrate.

Gather evidence, you should write to the police and ask for at least the following items:

Full copy of the Instruction manual for the RADAR/LIDAR device used.
Copy (both sides) of the calibration certificate.
Details of the training (copy of certificate if there is one) given to the officer in the use of the PARTICULAR device.

I also recommend that you return to the scene and take pictures of the area, including any signs, which indicate the law. Make sure that your pictures are clear. DO NOT use a digital camera, to the best of my knowledge it's not admissible.

If the Crown Requests an Adjournment

An Adjournment is a postponement of the original trial date. The prosecution may ask for an adjournment because the officer cannot appear on the trial date, which was set. If possible DO NOT agree to this, tell the judge that you had to take a day off work to appear or something (try not to lie.).

Make note of any irregularities in the procedure in your statement to the judge. Irregularities include things such as the wrong ticket number printed on the notice, a silly reason for requesting adjournment (such as a planned holiday, which the police should have known about before setting the date), or receipt of the adjournment notice too close to the trial date.

It is possible that if you protest the adjournment, it will be denied. In this case (no pun intended) the charges should be dropped since you can't have a case without the officer's presence.

In Court

Check in with the prosecutor and usher and make sure you are on the case list, and that he knows you have appeared for trial. This is just to make your presence known, and hope that may offer a plea bargain at this point, which you could consider. He may not look for the officer. If he doesn't appear, the charges should be dropped. This is where it is handy to reference the physical description you should have taken at the scene. If the officer does appear he may approach you and ask to talk to you before the trial. You don't have to, but it is polite to. Ask him to withdraw the charge. He won't likely do that.

DO NOT indicate your strategy to him, or show him any notes or pictures. Keep this stuff in a manila envelope or briefcase so that it is out of view prior to the actual trial.

Cross Examining the Officer

This is your chance to put your notes and pictures to work. Ask the officer questions about the day to establish whether he really remembers the incident and you. If he doesn't seem to, ask him directly whether he really remembers what happened that day. Destroying the officer's credibility is an excellent way to get acquitted.

Ask about the radar or lidar equipment. If the officer refused to demonstrate the calibration, ask why and demand to know if the unit was truly calibrated. Each situation is different, but you should be able to use your notes to develop a strategy, which insinuates that the equipment used to clock your speed was not accurate. If you achieve this you will be acquitted.

Ask the officer about the laws in the area. This includes turn controls, signalling devices, speed limits, and so on. If he doesn't get it right, use your pictures of the area to prove that he is wrong. Showing that the officer does not understand the laws in effect in the area is another good way to reduce his credibility as a witness against you.

You can try to go for the attack that the clocking may have been racially motivated. THIS IS VERY DANGEROUS and proceed with caution. If all goes well, you may make the officer lose his cool and throw a wobbly, this will drop his credibility. Or you may end up with a charge of contempt. Personally, I would leave this side of things unexplored.

Courtesy and Appearance

Do not underestimate the impression of a shower, clean shave, haircut, and nice suit and tie at the trial. You will look more innocent in this type of dress, and your chance of acquittal or fine reduction will be improved. You must also be courteous to the judge and officers of the court. If you make the judge mad, you will be convicted, so don't make him/her mad.

Summary of Detection Methods

What do policemen use to detect speeders on the road?

Their primary method of detection is to use a laser gun. Being one of the newest technologies and unlike radar guns, a laser beam doesn't spread out much at all, so the police can pinpoint one car and get a precise reading on it. So, why don't police just use laser? You need a VERY steady hand to use a laser gun, because the beam travels so fast there and back and the computer calculates the speed based on perhaps a quarter second burst. So, if the policeman moves his arm so much as a millimetre while shooting the gun, and the beam moves to a point on the car that is closer or further away than the initial contact point, the reading will be totally off. Think about it, if a policeman were pointing the gun at a front licence plate that is 150 feet away, a tiny movement of his arm would move the beam to the windshield of the car.

Because of these problems with laser, some courts in the USA have ruled that police cannot use laser for speed detection unless they can cross-reference their speed estimate by either a stopwatch or radar.

Radar guns use 3 different bands, these are X, K, and Ka super wide. There isn't a huge difference in performance of any of these bands, they just use different

frequencies. Even with all the new technologies out there, police still tend to rely on their radar guns, they are tried and true.

They do have a number of drawbacks, however. The beam emitted from a radar gun spreads rapidly, which means it performs poorly in heavy traffic conditions.

There are several other methods of detection the police may use. One of them is a speed trap such as Autovision, VASCAR, DS2 etc. Listed in the last pages, in which a portion of road has been measured or had devices fitted in the tarmac, and when you enter the speed trap, the police start a timer, video or similar.... and they can calculate your speed based on how long it takes you to get through the speed trap. These can work very well.

There's also photo radar, Gatso which may be built into traffic lights in medium to large size cities. The radar beam will calculate your speed, and snap a picture of your licence plate... and you'll get a ticket in the mail in 14 days.

Evasion Methods

Stay alert!!!! Speeding requires concentration if you don't want to get caught. Keep your eyes peeled for police cars, as well as unmarked vehicles, Look for Video units, twin rear view mirrors. Slow down in areas where you can't see what's on the hard shoulders.

Don't pass other drivers at high speeds. They could be an off-duty copper. Slow down when approaching other cars, and pass them at a steady pace. Watch in your rear-view mirror, cars you pass should be receding. If they began to pick up pace, slow down.

If there are other cars going by at higher speeds, take advantage of it! Get in behind them with plenty of distance between you and follow for a while at a slightly slower speed. Blend back into the traffic after a period and wait for another to come along.

Don't keep up a sustained high speed. This is self-explanatory. The longer you go at a very high speed, the more likely you are to be caught.

Drive a nondescript vehicle. Police are only human! They're more likely to go for that shiny yellow Porsche than a dirty grey Volvo. Avoid sporty cars with bright colours. This doesn't mean you have to drive a crappy car! Just keep it simple, after all everybody hates boy racers.

What is "Reasonable and Prudent?"

There are lots of idiots on the roads who floor the pedal and go shooting by everyone. Not everyone is like this, however. There are plenty of people who drive at a "reasonable and prudent" rate, regardless of the posted limit. It's impossible for a set speed limit to be able to apply to every time of the day and the situation. For example, you're going down a busy city street with the speed limit posted at

30. There are a lot of pedestrians and bicycles, and traffic is busy. It's a situation where going at the posted limit or less is the best option.
How about when you're on a country road with miles of straight stretches and no vehicles as far as eye can see, yet the speed limit is only 60?

You will find out that your driving performance and the number of tickets you get in your lifetime depends not on your following of the posted limits, but your ability to judge the situation and drive at a speed fitting for it. Police themselves regularly use common sense for what speed is suitable, which is why they frequently let people get away with highway speeds 10 mph over the limit, as long as the driving situation doesn't make that speed dangerous.

Here are a few tips on how to be reasonable and prudent yourself

Stay at or under posted limits in the cities. Even late at night with little traffic, stay close to those limits. There is a lot more things that can happen on one of those streets than a major highway.

Stay at the limit the first time you go over a country area road. Once you know the twists and turns and what to expect, then you will be more comfortable going faster, and still be safer then you were the first few times you took that road. Watch your highway speeds and be alert. Never exceed a speed where you do not feel in control of your car.

Evasion Devices

There are plenty of gadgets out there that claim to help you get away with speeding. Most of them don't work!!! But some do.

Radar Detectors - Don't rely on all of these, well not all of them. The better ones such as the Bel 990 and Valentine One can give you a good warning on Gatso's.

The way a detector works is it picks up a radar signal that might bounce off another car close to you. Automatic Doors, Traffic lights and Temporary Traffic lights also set off these units along with other innocent devices. If the police target you first, you're caught, because then you have no advance warning to slow down. If you're going to get one, make sure it has VG-2 detector detection. A VG-2 radar can sense if the targeted vehicle is using a radar detector, and police love to pick on people with one!

Learn to understand the unit; they can save you if you think about things, learning about the vocabulary of the burglar alarms, traffic light sensors and all that. If you pay attention even the lower cost units could save you.

An important note, Radar Detectors do not work through Heated Windscreens, nor do they pick up traps like VASCAR, DS2, Speed master and alike, they are only good for RADAR signals.

Gadget for the dashboard.... Yes....Ticket saver.....Yes.

Laser Detectors - These are absolutely worthless. There's almost no reflection of a laser beam, so the only way a laser detector will go off is if you're the target, it's too late then. They pretty much just tell you that you've been caught. Some manufactures claim 360-degree coverage, what about door pillars blocking the laser light etc.

Gadget for the dashboard.... Yes.... Ticket saver...No

Radar Jammers - These work, well sort of, if you are a distance away from the Speed trap you may have enough strength in your signal to jam the trap, but as you get closer it's another story. Read on.

There are two different kinds of Jammer, active and passive. Active Jammers are illegal in some countries, they beam back garbage to the radar receiver. A passive jammer is running constantly and basically scrambles the radar signal so the police get either an erroneous reading or no reading.

Be warned, radar guns and Gatso's can punch through most jamming at ranges of 150 feet or less.

I spoke recently to a salesman selling the Rocky Mountain Radar unit called, *Sprit* // he confirmed that he would not speed past a Gatso with one of these units in his car, he didn't trust it to do the job at a distance of less than 150ft. So would you spend £250 notes on it.... I think not.

Gadget for the dashboard.... Yes.... Ticket saver...Not a chance....

Laser Jammers - These use invisible IR. Beams that break up the laser beam by interfering with the frequencies that the beam uses. They reduce the likelihood of a laser locking onto you by a pretty large margin. Most of the systems sold at the moment give you a warning that the jammer is working while it blocks the signal, some models give only 5 seconds to slow, others like the Blinder jam for as long as a laser is fired at them, giving plenty of time to slow down.

Gadget for the dashboard.... Yes.... Ticket saver...Yes. If you fit it correctly and buy the right one.

You do however need to do other things to your vehicle to protect it from Laser.

GATSO Proof ' Number Plate Protectors. - Well some work well and some don't, There are several types on the market... the Flash buster Type which has a highly reflective backing and letters that have the same reflective properties as the back don't work well, if at all. I have heard that the police can still read the letters and numbers, this is not totally confirmed though, but at between £50 & £80 for the plates I would want a guarantee that they worked.

Another type is from 'ON TRACK', they seem to work in the following way, Photo

radar operates at known angles to the direction of traffic flow. Using a passive, state-of-the-art light-bending lens, the camera is unable to identify your vehicle because of the angle of the plate in relation to the Gatso. A 5-minute installation is all that is required and at less than £40 it could be a good buy. I have tried one and yes they do work.

Are they legal? Well, that's a bit of a grey area, the number plate is still completely readable from straight on, but you could get prosecuted for perverting the Course of Justice, so one officer told me. They also have the technology to process the picture to get the VRN information if needed, but we could not see how.

Gadget for defence.... Yes.... Ticket saver...Yes / Possibly

Final Word from a Traffic Officer

I would make a personal comment that it matters not if people contest the speed at the scene; it happens all of the time. If the equipment has been tested properly then there should be no problem.

More often if a speed is contested and the defence requests an expert witness then they will end up paying the bill if found guilty. This is what happened in the case of the individual who ended up with legal expenses totalling £15.000 contesting the accuracy of the LTI 20-20 in 1999. Remember your chances of being found not guilty at Court are very very slim.

If you genuinely believe that you are innocent, then please fight it, but if not be warned that it can cost you dear. I would add that I believe that police officers should use the equipment properly because **motorists are NOT criminals** they are in most cases decent people who have infringed Traffic Law.

If you state that you checked your speedometer and it did not say the same as the speed detection it matters not because the defence can only challenge the operation and accuracy of the device being used.

There is no obligation for the police officer to show the recorded speed, because in the case of a follow check that would not be possible and in any event the officers will not reveal when a device was last calibrated other than in Court. I accept that we do show the speed recorded as a matter of best practice and in cross-examination this can be confirmed with the defence, as this will strengthen the prosecution case as to being open and honest. Not all a one-way street when it comes to tactics?

As for trying to get the officer to let you off a speed, it will most likely fail, if you are stopped you will almost certainly receive a ticket or a summons and any admission that perhaps your attention wandered might leave you open to a more serious offence, perhaps Driving Without Due Care and Attention?

I guess we might be impressed with a really original excuse but you'll have to be good as we've heard just about every combination going and in most languages

including sign, repeatable and otherwise. I would say that when someone becomes abusive a professional officer would not react other than remain calm and deal with the individual, as he should.

At the end of the day just being really honest might just do the trick because then no one feels insulted or undermined, not the police officer because he knows and not the driver because he knows. A very remote possibility but its human nature and there are no hard and fast rules.

Whatever peoples views are, unless drivers and riders take a slightly different approach to speed then the chances of losing your licence will increase as the speed limits decrease, it is already happening.

Regards
Name supplied.

Human Rights

Thousands of people have recently been issued a Notice of Intended Prosecution (NIP) for an alleged minor speeding offence. Where the NIP states that the speed limit was allegedly exceeded, the following advice is given as a procedure to adopt.

Procedure

Company Owned Vehicle

Company receives a demand for information on the driver of a vehicle at a time, date and place as stated on the form.

At this stage the form asks for details of the driver of the vehicle. This form must be completed by the company, not the driver, and returned to the sender.

All Vehicles

Driver receives Notice of Intended Prosecution. The driver must complete all relevant sections on the form and return it to the sender.

The driver may later receive a fixed penalty ticket accompanied by a 'Conditional Offer' to pay a fixed penalty fine and/or attend a 'Speed Awareness Course' in place of penalty points.

The driver writes a letter to the authority requesting evidence concerning the alleged offence, e.g. copy photograph, certificate of compliance for the camera (if appropriate) and a copy of the Police Officer's statement - as required for lawful and necessary corroboration - if a mobile camera is involved. The driver may then receive a letter stating that the request is denied - stating words to the effect that photographic evidence can only be seen when a decision is made to prosecute

and summons the driver to appear before a Court. This letter should also detail a denial for the other items of evidence, but often fails to mention them.

It is only at this stage that the alleged driver should consider sending to the authority, the letter as shown below.

It is advisable that all correspondence be delivered via Recorded Delivery.

Dear Sirs,

I acknowledge receipt of your letter-dated.....in, which you allege that I have committed a speeding offence. That letter does not provide, or offer to provide, any evidence that I have indeed committed such an offence.

I regard your allegation with the utmost concern as I am being asked to make a very important decision, which could very seriously affect my future quality of life. I shall be grateful therefore if you will advise me where, in law, does it state or allow for evidence against a suspect to be deliberately withheld following, or during, the process of an official demand for the payment of money (in this case a £60.00 fixed penalty (or) £95.00 for a 'Speed Awareness Course'.

Further, whereby failure to pay that money on demand will expose the person suspected of that offence to a possible fine of up to £1000.00 (plus costs) at a Magistrates' Court, an amount that is in excess of 16 times (or 11 times) (respectively) the amount of money previously demanded.

This, in my view, could potentially be a criminal offence in itself, the offence of demanding money with menaces. It is also arguably a breach of my human rights in that I am being subjected to unreasonable and possibly unlawful pressure by being placed into a 'pay us now and save yourself harassment later' position. I am entitled, in law, to all and any evidence that I have committed the offence complained of before I pay any money to you - not just at Court, but as soon as you issue me with a fixed penalty (or offer me a speed awareness course).

I look forward to your response.

Yours faithfully

Further information: It is advised that all threats received after this letter is sent, be ignored - a letter will probably be received with words to the effect, "we are complying with the regulations so pay up within seven days or a court case will be prepared" etc...

To date, there have been no prosecutions of any alleged (minor speeding) offender who has compiled and sent a letter similar to the above.

This was another posting on the forum. This was an answer to someone posting about receiving a NIP in the post and taking it on the chin.

What proof do they have that:

1. The vehicle in the picture is yours and not a clone?
2. The speed trap device is accurate?
3. The proper guidelines have been followed?
4. You were actually driving the car at the time?

Reply to the NIP stating "I am unable to provide you with the information you require". Don't sign it. Enclose a covering letter stating that you wish to see a copy of the photographic evidence, and a copy of the calibration certificate for the speed detection equipment.

Also ask for a copy of the guidelines and manufacturers instructions for the use of that equipment, plus a copy of the relevant pages of the operator's (Policeman's) notebook, detailing the entire chain of events starting from when they parked the van to when they packed up and drove away. This will tell you whether the relevant instructions were followed.

You may not receive all of this straight away but be persistent. Regarding the photographs, make it clear to them that at present you are unable to provide them with the information they require and you need to see the photographic evidence in order that it might help you do this (notice the word "might").

Once you receive the photographs, you will (naturally) still not be able to identify the driver and will probably have doubts as to whether it is your car or not. Ask them to prove that it is indeed your car in the picture and not a similar make/model with false number plates. In the meantime, try and work out a way to place yourself and your car elsewhere at the time. (Be careful here, you don't want to lay yourself open to perjury!).

In addition to this, you could refuse to answer their questions on the grounds that it is your right to do so under the terms of the European convention of Human Rights. See www.righttosilence.org.uk for more information and also information on a current case before the ECHR specifically regarding this.

Depending upon how far you want to take things you could cite this case and ask for a stay of proceedings until you have the outcome of a similar action on your own behalf.

To summarise

1. Cause the buggers as much inconvenience as humanly possible.
2. Demand to see ALL the evidence against you.
3. Demand verification that all procedures have been followed and that the equipment is calibrated.
4. Ask what proof, rather than circumstantial evidence, they have that they have identified the vehicle correctly.
5. Ask what proof they have as to the identity of the driver (they will have none at all).
6. Play the human rights card. If everybody did this, the system would collapse.

Driving by the Rules

Motoring Laws

The following is only a selection of the important UK motoring laws in summary form.

Fixed penalties for motoring offences

Non-endorsable / endorsable

A police officer decides

A cheaper option

Multi-offence conviction

Accumulation of points

Speed limits.

Evidence in speeding cases

Penalty points system

Fixed penalties for motoring offences

There are two main groups of motoring offences for which a Fixed Penalty Notices (FPN) may be issued.

For minor offences involving no licence endorsements, the FPN will be £20.00 outside London and £40.00 for a Red Route offence. These offences range from improper parking to the non-wearing of a seat belt. In Scotland the scheme is much wider.

For some more serious offences involving the endorsements of penalty points on licences, the FPN will be £60.00. If payment is made within 28 days that will be the end of the matter.

More serious offences are outside the scope of the FPN schemes so penalty points may only be imposed by a court.

Non-endorsable / endorsable

In the case of non-endorsable offences involving stationary vehicles (e.g.. Parking), FPN may be fixed to a vehicle by a traffic warden or a police officer. In the case of other minor offences related to driving a vehicle, but not involving licence endorsements (e.g.. Not wearing a safety helmet or driving the wrong way in a one-way street), a FPN may be given to the driver but only by a uniformed police officer.

To challenge a Penalty Charge Notice (PCN) or have mitigating circumstances considered, write to the council whose address is on the back of the ticket. If they refuse to cancel the ticket you can take up an appeal with an independent tribunal.

In the case of endorsable offences coming within the scheme, only a uniformed police officer is able to give a FPN

Traffic wardens may, however, issue notices for parking in pedestrian crossing areas, subject to local policy. The police officer will want to examine the driver's licence in order to check any penalty points, because a FPN cannot be given for an offence, which would take the total points to 12 or more, as this generally requires disqualification to be ordered by a court.

A police officer decides

Whether the offence involves points or not, only a police officer can decide when to give a FPN. A driver cannot demand such an opportunity to avoid prosecution in a court.

In the case of an endorsable offences, the driver will be asked to surrender his/hers licence to the police officer on receiving the FPN.

If a driver has not got his/her licence with them, they will issue a "Provisional Fixed Penalty Notice" requiring him/her to take it to a police station of their choice, (other than one in Scotland), within 7 days and, provided endorsement does not bring the number of penalty points to 12 or more, the provisional fixed penalty will be converted to a substantive one. The licence will be returned after the penalty points have been endorsed and the penalty has either been paid or registered as a fine.

If a fixed penalty is not paid, or a court hearing not requested within 28 days by the registered owner of the vehicle, the penalty will be increased by 50% and registered as a fine after which the court will be able to use all its powers to enforce payment.

The motorist is under no obligation to pay a fixed penalty if he/she considers himself/herself innocent of any offence charged and the right to elect trial in court is clearly stated in the notice. He/she has 28 days to decide what to do - pay the penalty or take the matter to the court.

A cheaper option

Generally speaking, payment of the fixed penalty is likely to be a cheaper option than contesting the matter in court, where there is a risk of costs being awarded against the motorist. Whilst attendance at court is usually unnecessary if pleading guilty to a relatively minor offence, the motorist still suffers inconvenience and anxiety prior to the court hearing - he/she has to consider preparing a statement of mitigating circumstances, there is the inevitable wait before being informed of the fine imposed and the need to arrange prompt payment after notification. This can be avoided if the motorist accepts the fixed penalty. Seek advice in this case from a legal department.

Multi-offence conviction

On conviction of more than one offence on the same occasion, penalty points are only be imposed in respect of the offence receiving the highest number of points.

Accumulation of points

Disqualification for at least 6 months will follow the accumulation of 12 penalty points within the period of 3 years - for instance four 3 point speeding offences committed.

Once this has happened the points cease to count and after the expiry of the disqualification the driver starts again with a 'clean slate'. If the driver has 12 points or more has already had a disqualification within 3 years preceding the commission of the latest offence he/she will be disqualified for at least 12 months. If he/she has had two or more he/she will be disqualified for at least 2 years.

The courts have the power to order shorter disqualification or no disqualification if exceptional hardship is involved but their powers to do so are restricted.

Offenders will not be able to plead the same mitigating circumstances more than once in three years. Penalty points for each offence, which do not result in disqualification - in other words, those who do not add up to 12 within 3 years - will cease to count 3 years after the date of the offence. You can apply to the DVLA (Swansea) for the removal of the points after 4 years from the date of the offence.

The Road Traffic (New Drivers) Act 1995 This Act will affect you if you pass your first driving test on or after 1 June 1997. If you incur penalty points in the two-year period immediately following your first successful driving test, and your penalty points add up to 6 or more (including any that were incurred within 3 years of the latest conviction) your licence will be revoked by DVLA. You will then have to obtain a provisional licence, drive as a learner and pass the theory and practical test again in order to regain your full driving licence. Passing the re-test will not remove the penalty points from your licence, and if the total reaches 12, you are liable to be disqualified by a court.

Speed limits

The speed limit on a Motorway / Dual Carriageway 70mph and that on other roads 60mph. Only roads subject to a lower limit have to be marked by signs. A general speed limit of 30mph applies on roads having street lighting provided by means of lamps placed 200 yards or less apart unless there are de-restriction signs. On other roads where the speed limit is in excess of 30mph a motorist shall not be convicted for exceeding the speed limit unless 'repeater' signs are erected. I suggest if you have any doubt the get a copy of the 'Highway Code'

Evidence in speeding cases

The opinion of two people (not necessarily police officers) is enough to secure a conviction. Alternatively, the court will usually accept the evidence of one police officer who followed the accused and was watching a speedometer, or who noted the speed on equipment. If the limit was exceeded by only 5mph or less the motorist will usually be given a caution.

Speeding is an absolute offence and it is no defence to argue that the speeding did not cause any danger. If danger was caused then it is likely that the more serious of charges of careless or dangerous driving may also be brought. It is extremely difficult to defend a speeding charge successfully.

Usually it is alleged that the motorist was exceeding the limit by at least 10mph so it is difficult to argue that this was a mistake or that the police officer's speedometer was inaccurate. It is particularly difficult to defend a charge if the motorist was caught in an electronic trap (e.g.. Radar, laser & Gatso), since all such speed measuring devices are Home Office approved and few magistrates are prepared to accept the argument of mistaken identity.

Penalty points system

Offences attracting penalty points, together with details of the points, which will be imposed, are listed in the following chart. No disqualification may be ordered unless there is an order for endorsement. Some offences carry a compulsory order for disqualification and the court must impose this unless there are 'special reasons' for not doing so.

Disqualification remains obligatory for certain offences (e.g. dangerous driving, or drinking and driving as opposed to being drunk in charge), so, in general terms, penalty points will only be endorsed in cases where the licence endorsement is obligatory and disqualification is discretionary but not imposed. If a previous drink driving offence took place during the 10 years preceding the current offence, the court must disqualify for at least 3 years.

Penalty Points

2 points	Play Street offences
3 points	● Driving with uncorrected defective eyesight. ● Exceeding a speed limit (dealt with by a fixed penalty) i.e. £40.00 fine payable within 28 days. ● Failure to obey sign exhibited by school crossing patrol. ● Contravention of pedestrian crossing regulations. ● Contravention of traffic regulations on special roads (e.g. motorways). ● Contravention of certain construction and use regulations (e.g. dangerous condition, defective breaks, steering or tyres). ● Leaving a vehicle in a dangerous position and stopping within the confines of a Pelican/Zebra crossing. ● Failure to give information.
3 - 6 points	● Learner motorcyclist with a passenger. ● Driving otherwise than in accordance with a Licence (e.g. under age, unsupervised in car, no 'L' plates). ● Exceeding a speed limit (Summons).
3 - 9 points	● Careless or inconsiderate driving.
3 - 11 points	● Dangerous driving (Disqualify for 12 months minimum, unless special reason and order extended re-test Custodial sentence may apply).
4 points	● Refusing roadside breath test.
5 - 10 points	● Failing to stop after an accident (Discretionary Disqualification). ● Failing to report an accident to the police (Discretionary Disqualification).
6 points	● Driving while disqualified by order of court (Discretionary Disqualification).
6 - 8 points	● Using, or causing or permitting use of, motor vehicle uninsured and unsecured against third party risks (Discretionary Disqualification).
10 points	● Being in charge of a motor vehicle when unfit through drink or drugs (Discretionary Disqualification. Custodial sentence may apply) ● Being in charge of a motor vehicle with alcohol above the prescribed limit (Discretionary Disqualification. Community penalty or Custodial sentence may apply). ● Failing to provide specimen for analysis in 'in charge' cases (Discretionary Disqualification. Custodial sentence may apply).

Number Plates and the Law

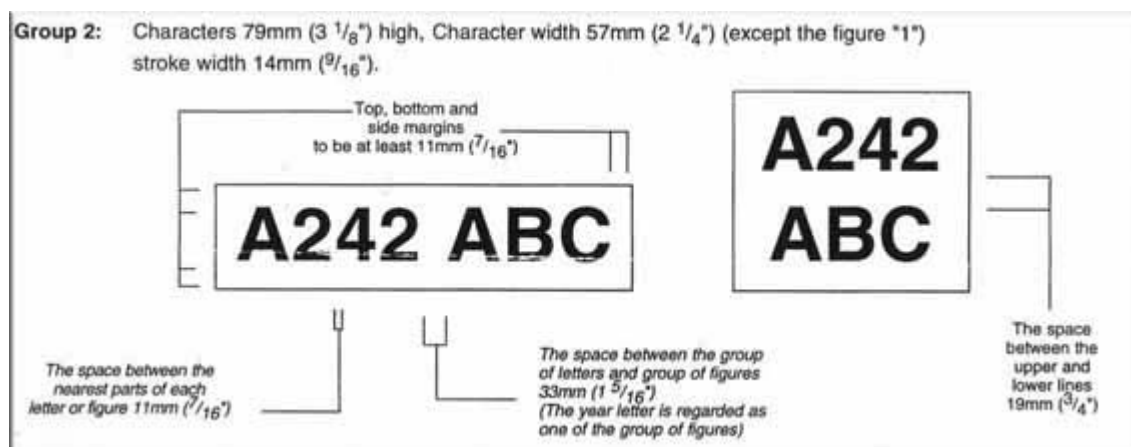
Display of Registration Marks for Motor Vehicles (Except Motorcycles)

VEHICLE REGISTRATION MARKS including marks offered for sale and purchase through the DVLA's Sales Schemes must be displayed in accordance with Regulations 17-22 inclusive and Schedule 2 of the Road Vehicles (Registration and Licensing) Regulations 1971 (as amended) (Obtainable from HMSO)

The Regulations specify that marks must conform to either one of two groups of provisions (provisions for embossed/pressed plates in section EMBOSSED PLATES below)

Group 1 : Characters 89mm (3 1/2") high, Character width 64mm (2 1/2") (except figure "1") stroke width 16mm (5/8")

Group 2 : Characters 79mm (3 1/8") high, Character width 57mm (2 1/4") (except figure "1") stroke width 14mm (9/16")



NOTE:

It is an **OFFENCE** to alter, rearrange or misrepresent letters or number in order to form names or word.

Characters must not be moved from one block to the other e.g. A242 ABC must not be displayed as A242A BC

OFFENDERS are liable to a **MAXIMUM FINE** of up to **£1000** and in some cases the mark may be **WITHDRAWN**. Vehicles with illegally displayed number plates may now **FAIL** the MoT test.

For vehicles first registered on or after 1.1.1973. The characters must be black; the background must be reflex-reflecting material, white at the front and yellow at the rear.

Each number plate shall be permanently and legibly marked in such a position as to be clearly visible when the number plate is fitted to the vehicle, with the following information:

- 1) The name, trademark or other means of identification of the maker
- 2) the number of the British Standard, i.e. BSAU 145a

Embossed or Pressed Number Plates

Where each letter or number is 79mm (3 1/8") high

For embossed or pressed the space between the group of letters and group of figures 33mm (1 5/16") may be exceeded by not more than 21mm (27/32").

The space between the nearest parts of two adjoining figures '1' shall not be less than 11mm (7/16") nor more than 54mm (2 1/8"), and the space between the nearest part of figure '1' and the nearest part of any other figure shall not be less than 11mm (7/16") and not more than 33mm (1 9/32").

Where each letter or number is 89mm (3 1/2") high

For embossed or pressed the space between the group of letters and group of figures 38mm may be exceeded by not more than 24mm (15/16").

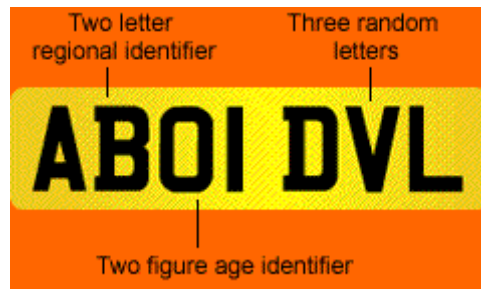
The space between the nearest parts of two adjoining figures '1' shall not be less than 13mm (1/2") nor more than 60mm (2 3/8"), and the space between the nearest part of figure '1' and the nearest part of any other figure shall not be less than 13mm (1/2") and not more than 37mm (1 7/16").

Further Information: Extracts from form V796. Motor Cycles have separate provisions and are contained within schedule 2 of the Road Vehicles (Registration and Licensing) Regulations 1971 as amended, Via the HMSO or your local Vehicle Licensing Office. Information correct as of January 1999

A New Format from September 2001

From 1 September 2001, number plates will take on a new format. The present age identifier prefix letters run out next year. Vehicles registered, as new from 1 September 2001 will have number plates that include.

A two letter regional identifier - A two figure age identifier - Three random letters



The new format will make number plates easier to read and make them more memorable.

A New Font Style

From 1 March 2001, a new number plate font style is to be introduced. This will make it illegal for any vehicle being used on the public highway to have a number plate which does not conform to the new style. Motorists whose vehicles bear number plates, which have been customised by means of stylised letters and figures such as italics or the placement of number plate fixing bolts, must replace them or risk prosecution.

The new mandatory font style is based on the 'Charles Wright' font as shown below:



The overall width of characters will be reduced from 57mm to 50mm.

GB Euro symbol

From 1 March 2001, motorists may if they wish, incorporate the GB Euro symbol onto their number plates. The display of national emblems on number plates will be prohibited. If desired they may be displayed, as now, on other parts of the vehicle.

The DVLA plans to work with the Association of Chief Police Officers (ACPO) to crackdown on drivers.

Many drivers alter the spacing and typefaces on number plates to spell names and messages. But some plates can make registration numbers unreadable by speed cameras. Drivers who tamper with car number plates are likely to face prosecution in a new clampdown.

It is already an offence to make letters look like numbers and vice versa, but the Driver Vehicle Licensing Agency (DVLA) in Swansea has said it intends to crack down.

Thousands of personalised registration numbers are allowed - the DVLA sells assignment rights to attractive numbers and many people are prepared to pay high sums for novelty numbers.

But the problem is when people change the letter spacing and make the plate hard to read. Cars with these plates fail MOT tests and there is a maximum £1,000 fine.

Police concerns

A simple change in letter spacing can make 13 look like B or 8. The letter O can look like D, 12 can look like 15 and the letter S can get confused with the number 5.

Police are concerned that vehicles involved in hit and run accidents can be difficult to trace.

The DVLA plans to work with the Association of Chief Police Officers (ACPO) to crackdown on drivers.

From 1 March people without correctly displayed plates may have their registration marks withdrawn permanently without compensation.

Speeding

The View of a Traffic Officer

The View of Speed Enforcement
by a serving
Traffic Patrol Officer
in the Thames Valley Police Force.

The following Comments are the views of one officer and do not represent the views of any other officer or Police Force in the UK

Ask your self-a question, "How good a driver am I?"

What makes you so good? Well very often drivers have a perceived perception of their skills based upon their own experiences and belief in their abilities. If you are travelling 103 ft per second at what speed are you driving? Need to look up the answer.

Do you know how to read the speed of a bend accurately?

Do you know how the police operate speed detection devices, or do you believe that your alertness and observation will keep you one step ahead of the game?

Answer to consider. "Each and every time you decide to speed or break the rules of the road you will need to be lucky....."

The police only need to be lucky once...

Speeding is often seen as a part of every day motoring and enforcement as an irritation to driving. Drivers do not regard speeding as unlawful if the limit is only broken by an acceptable margin. That margin is very often set by the individual's conscience rather than by any passed law or enforcement process.

"The vehicle is designed to travel safely at much higher speeds"

"I know what I am doing"

"It's the other road users that are the problem"

Sound familiar...

These same drivers often complain of the speed of vehicles in their own street but are happy to do it in other streets It's all-right but not in my back yard.

Speed enforcement is often regarded as the enemy and something to be beaten. If you cheat or defeat the system then all well and good, you are hailed a hero. The accident is never going to happen to you and if it does then it will be the fault of the other driver.... Won't it?

The fixed penalty system along with all of the speed enforcement devices now used is now seen as revenue collectors for the Government of the day. It has become a game of chance and risk and so often justified by the drivers who are caught. The idea is to avoid being detected and if caught to avoid successful prosecution by whatever means.

There are many devices now being employed to detect speeding motorists and equally as many devices designed to confuse and make them obsolete. Defences offered in court to undermine their credibility and of those administering them. Publications have been produced that detail how to avoid detection and prosecution.

Lets have a look at the most common devices and how they are operated:

VASCAR

The VASCAR device has been in use for many years in the UK and represents the most lenient form of enforcement to the motorist. It records the average speed of a vehicle and this will display a lower speed than the motorist was actually travelling.

The device measures time over distance and this produces an average speed. The police are trained over a prolonged period in order to determine their margin of error. The margin of error is in fact a variance of anticipation and not an error of reaction. This is often where people assume that an officer can have an area of weakness during its operation. It must be stressed that any error must be on the anticipation of the operator and not on their reaction time.

Try it your self. Set a stopwatch running and see how close to five seconds you can stop the timer running. After a few attempts you will find that you have anticipated the stop point very accurately and this how it works. When a vehicle is observed approaching the start of the check distance the operating officer can see both the start of the check and the target vehicle and can easily anticipate when the vehicle will strike the starting point. The same happens at the end of the check. The margin of error is very very small and often less than .03 mph.

It is the same anticipation as a group of people clapping in time with one another because they can anticipate when the next strike of the hands occurs. It is the same as someone recording the lap time of an athlete crossing the start and finish line: the timer anticipates the moment when the runner passes the start finish point and can record a very accurate time.

The VASCAR is a very accurate means of determining the speed of a vehicle and the motorist will have to prove that the operator did not operate it correctly, a very difficult thing to do. It is very unlikely that you will have a defence if caught with this device because you will have to show that the operator did not act in accordance with the guidelines. Most VASCAR check sites have been approved and are the only static sites used especially on Motorways where strict guidelines as to use are in force.

The following check using VASCAR is even more difficult for the driver seeking to avoid detection. The police drivers know exactly where to sit to be in a driver's blind spot and so often they can be very close to the target vehicle without the driver being aware. This also holds good for the following check using the calibrated speedometer.

VASCAR units in police vehicles have to be calibrated on a regular basis and from my experience they are, in fact most officers check the device at the start and end of each working day and that is well above the recommendations. If a case is contested the prosecution is often dropped if the device has not been calibrated correctly and in fairness officers generally do not use the device if the calibration has not been carried out.

PRO-LASER and PRO-LASER 2

This has become the preferred means of enforcement for most police officers, it is portable and very accurate and very easy to operate.

It projects a pencil thin beam of laser light onto the target vehicle in the area of the front registration plate. Providing it makes a clean strike it will record the vehicle speed. By the time the average motorists has seen the police vehicle the check

has almost certainly been completed and very often the officers are moving away before you pass them.

Speed detection devices in my experience do not work because by the time the driver has reacted to the speed trap it is too late. And in the case of VASCAR it does not work at all. If a driver travels many many miles on the Motorways of this country he cannot sustain the level of concentration that enables him to react in sufficient time. It is human nature. He must also trust his luck that any detection device will actually work and that he will be able to react in time.

He will then, if caught, rely on something in the procedure being wrong to enable him to get away with the offence. If this is considered then there are too many odds stacked against the speeding motorist.

The bottom line is that if you decide to speed then the chances are that at some point in time you will be caught. As a Motorway patrol officer I often sit in full view of oncoming traffic and side on to the direction of travel. The average motorist still travels past in excess of 100 mph claiming not to have seen you. It makes you wonder how these people would see and react to a real emergency?

THE UNMARKED POLICE VEHICLE

This is the tool in the police armoury that attracts most comment. "It's unfair, or un-sporting of the police. It's sneaky or underhanded?"

The police use the unmarked vehicle as a pure enforcement vehicle, often armed with all of the speed detection equipment and Auto vision as well. Its aim is to detect the more serious breaches of Road traffic Law, the very high speeds or anti social behaviour demonstrated by the minority of motorists. It removes the half-mile safety bubble around the marked police vehicle. This is the area in view of the police officers where everyone becomes the model driver. The officers manning this vehicle see drivers in their true light and target the worst offenders. To these officers who witness and deal with the aftermath of many fatal accidents, the carnage and long lasting images it is not a game, but a deadly serious business.

With every road death there is a grieving family and lost loved ones that leave a legacy that lasts another lifetime.

In the late summer of 1998 I had stopped a driver of a Subaru Impreza for driving very fast along a country road in Oxfordshire, a "decent chap" who suffered my words of wisdom. I was aware however that he was not really listening to me. He had a racing background and knew how to handle the car?

As I spoke to him two cars travelling in opposing directions had a head on collision directly in front of where we were standing. A closing impact speed of 100-120 mph.

One of the drivers lost an arm and another his sight permanently. He technically died three times on route to hospital and will carry the legacy of the high speed with him for the rest of his life.

The driver of the Subaru? Well needless to say he opened his eyes and really saw what happens when things go wrong. It is sad that the only way to reach some people is for them to experience the reality of a high-speed impact? I do not recommend it to anyone.

The next time you leave home to get into your car take a long look back at what you have and how precious it is to you.

Speed, or the love that daughters smile carries?
Speed, or the love of a son so deeply cherished?

The Legacy

"I broke the silence with the faint opening of the ward door, the mother sat tearful and empty at her daughters bedside. The broken shell of her daughter lay distorted and twisted upon the covers. "She's only twenty three and so full of life", but no longer.

Her companion for the evening took a bend too fast and lost control and struck a tree. He died instantly. The girl survived... for what future. The police officers, myself included, cried tears of hopelessness at having witnessed the aftermath of yet another needless accident."

Drivers will speed past the accident scene within a few hours and perhaps they might notice the wilting flowers lain so carefully. A few miles away the families of those involved live their own nightmare... but who cares because it is never going to happen to you.

Safe motoring to each and every one of you, but remember if you break the rules you must accept the consequences of YOUR actions and the effects that it has upon other people. If you do not heed the advice do not complain when the results of another's actions affect you?

A Serving Traffic Patrol Officer

(Name and address supplied)

If you have any comments and would like them passed on please send them to me, I will forward them to the officer

Question concerning speed from the same officer.

Two vehicles are travelling along the Motorway, one in lane two and one in lane three.

The vehicle in lane two is travelling at 70 mph

The vehicle in lane three is travelling at 100mph

At a given point the vehicles are alongside one another.

At this point they both have stop because of an obstruction ahead.
The vehicle in lane 2 skids from 70mph to a stop. At what speed is the vehicle in lane three still travelling when the vehicle in lane 2 is stationary?

The answer

The vehicle in lane three will still be travelling at 71mph???

100mph = 147ft per sec. On impact it all ends in less than half a second?

Will you have time to work it out?

Police Helicopters

This police helicopter (On The left) is a Eurocopter BO 105 DBS Super 5. The helicopter has a rotor diameter of 9.84m, a fuselage length of 8.81m giving a 'rotors running' length of 11.86m. The power plant is two Allison 420 shaft horsepower 250-C20B turbo shaft engines, giving a maximum take off weight of 2,600Kg. It will fly on one engine, and this performance allows the CAA to give permission for it to fly lower than other civil helicopters.

They often use the latest Agema thermal image camera and three chip broadcast quality video camera are mounted in a fully stabilised pod to provide greatly enhanced picture quality on the starboard (right!) side of the helicopter to detect human body heat on the ground. Inside there are eight tactical radios, giving the crew access to police UHF and VHF radio frequencies, the fire service, ambulance service, coastguard and mountain/cave rescue channels.

Along with most of the equipment having the ability to be voice controlled, another innovation is the provision of a "Microwave Downlink" to beam video and thermal image pictures direct to incident commanders on the ground who can view them on a portable screen contained in an easy- to-carry case. They have VASCAR and Tracker systems fitted on board as well.

Air Units are also being equipped with digital photography, enabling high quality, detailed photographs to be available to officers on the ground within 10 minutes of the aircraft landing.

The helicopter will cruise at 120 mph and has a 'dash' speed of 140 mph and usually carries a crew of three. Up to six people, including the crew can be carried. A stretcher is part of the standard to remove seriously injured road accident victims to hospital trauma units.

"It takes 450 officers to carry out a ground search of one square mile at a cost of £9,000 while the three man helicopter crew takes just 12 minutes to conduct the same search at a cost of just £160!"

Other UK Police Equipment

Special Police Cars Ford Escort Cosworth

The Ford Escort RS Cosworth. was currently in use in Humberside, is a development vehicle based upon the standard model available to the public. Members of the Vehicle Crime Unit teamed up with Ford Motor Sport and Ford Special Vehicle Engineering, to develop one of the most sophisticated Police cars ever to be constructed.

The end product of the research and development is a 250 brake horsepower, 16 valve, turbo charged 'Super Car', which is fitted with permanent four-wheel drive. The acceleration rate of this vehicle is shatteringly quick 0 to 60 miles per hour (mph) in 5 seconds, with a top speed of 150+ mph.

This level of performance, coupled with the safety of four-wheel drive and brakes, which are almost as incredible as the engine, make the Cosworth one of the safest vehicles available for this type of application. Other special components fitted to the vehicle include competition suspension, competition wheels, under-body protection and specially developed tyres.

The vehicles' main purpose is to act as an evidence-gathering car, to present a higher standard of evidence to the courts. To this end, it is fitted with the most advanced speed detection and video recording equipment available. Additionally, it is equipped with no less than three separate communications systems. The Cosworth's operations are complemented by specially converted Vauxhall Senators, which carry Police Dogs. The skills of the dogs and handlers are employed to assist with searches and the arrest of offenders.

Subaru Impreza

Humberside now use the Subaru Impreza, modified by Prodrive in Banbury, Oxon, 244 bhp is what they get with equipment fitted inside similar to the Cosworth, and modifications such as uprated engine, exhaust, seats, brakes and sump guard, for 70mph rides over speed humps. Two cars are in use one fully marked up the other unmarked.

Automatic Tax Disk Readers

Currently in use on the M5 at Avonmouth Bridge, this unit will read the Tax disk along with the VRN of the vehicle passing by and a computer can then work out if you have a current Tax Disk or not, if you haven't and you pass this, expect a letter in the post.

By using a Video Camera and an Infra Red Light for continuous use day and night, this equipment has helped Avon Police Trap loads of Tax Dodgers.

Other UK Police Equipment

Tracker

Not used to catch a speeding motorist, but to catch a car thief. This is a car locator; police are able to electronically recover a stolen vehicle. Specially trained Tracker technicians install a small radio transceiver about the size of a chalkboard eraser in a hidden, recessed area of a vehicle. A unique code for a given unit is paired with the Vehicle Identification Number (VIN) of the vehicle in the Police Criminal Information Computer. A routine police entry of the VIN of a stolen vehicle activates the Police Broadcast System, which turns on the transceiver unit in the stolen vehicle. Then, police cars, equipped with tracking computers, can receive the broadcast from the unit in the stolen vehicle.

The code, comprised of letters and numbers, allows police to identify the target using sophisticated directional technology. A powerful "silent signal," emitted by the stolen vehicle's transceiver, can then lead the police to its location. Many years were spent developing and testing this unique patented technology before this car locator system was offered to law enforcement.

The vehicle locator system has an impressive record of recoveries that account for approximately 95% of the vehicles equipped with the technology being recovered. The car locator system has been a proven technology in operation for more than nine years. Types of vehicles recovered include automobiles, vans, pickups, heavy equipment, and eighteen wheel tractor-trailers.

To tell if a Police Car has Tracker fitted, look for the 4 aerials on the roof, all the same size about 18" long spaced out in a square shape.

Automatic Number Plate Recogniser (ANPR)

An Automatic Number Plate Recogniser (ANPR) This is a self contained portable device, requiring only camera, a notebook computer with software and a direct link to the Central Police computer and power supply (12v or mains). Plate detection is performed directly on the video input thus requiring no external trigger. Operation is possible day and night, under all weather conditions. The camera which records registration numbers of vehicles passing by, allows officers to gain information instantly from a minicomputer and tell whether a vehicle is stolen or if the occupants are known criminals, could also be used for checking for any outstanding offences.

During a clampdown, West Mercia Police Officers used a high-tech vehicle number plate recognition system for the first time to help trap-travelling criminals during roadside checks. During the clampdown officers were supported by a new state-of-the-art Eurocopter which went into operation earlier this month.

This system is known to be in use in Staffordshire, West Mercia and will be in use in a wider scale by the beginning of 1999.

The City of London Police are using Number Plate Recognition Systems on their check points, at the entry points to the city, one just off London Bridge, another near Liverpool Street railway station. These form a part of their anti-terrorist precautions as part of the so-called 'Ring Of Steel' At times of tension, the check points are sometimes manned. As you enter one point of the city you can see one such system mounted on a phone box, providing a live link via ISDN to the HQ. Some major routes have had systems fitted, and can be seen on overhead gantries

The white van... you may have seen the press, mainly in the Sun Newspaper. They reported a white van in use in Birmingham that was used to nick speeders using two cameras pointing out the back windows... as usual the Sun jumped the gun and got it wrong. The van is used to read number plates and then see if the car is nicked or not known and so on. If the vehicle is flagged up then further down the road they will pull you over. Its not a speed trap... yet.

ANPR... extra notes,

Her Majesty's Inspector is concerned over the inherent risks associated with automatic number plate recognition systems (ANPR), which then feed off the PNC vehicle database. This adds police information to a copy of the DVLA database, which is maintained primarily for vehicle registration and tracking excise duty (road tax).

The DVLA are reliant upon keepers and police for the accuracy of data and their estimates are that up to one million records might contain errors. Additionally, records are up to six weeks out of date due to the time taken for owners to notify DVLA of changes. Similarly, the police information on the PNC database is not always updated when it should be and thus contains errors.

To use an historic and inaccurate database for increasing numbers of real-time functions runs the risk of unnecessary stops by police and, inevitably, wrongful arrest. Her Majesty's Inspector strongly urges those managing ANPR systems to ensure all staff using the data are fully aware of its limitations; as detailed in the recent ACPO Policy and Guidelines for ANPR systems.

Other UK Police Equipment

The Unmarked Police Car

If you are on the ball an unmarked police car will stand out like a sore thumb, if you are not then here are some things to look out for, (however an e-mail from a Traffic officer pointed out to me that most drivers can't even see a fully liveried up Police Car if it jumped out in front of them, so if you are one of those drivers you got no chance!)

- **No hubcaps.** To reduce the risk of third-party damage during high-speed pursuits. Mainly CID cars, most of the pursuit cars now have alloy wheels.
- **Odd lumps.** The video camera if used is usually suspended under the inside rear-view mirror, and sometime also in the rear of the car by the side pillar.
- **Two people.** Most unmarked cars seem to be staffed by pairs of policemen and women. In today's environment of single-occupant cars, this can be quite noticeable. They also have to be in uniform, and quite often wear fluorescent clothing.
- **Extra lights.** On the tailgate, behind the radiator or on the parcel shelf.
- **Two rear-view mirrors.** They often have a second inside rear-view mirror for the second officer.
- **A large illuminated sign in the rear window, sometimes with lights at each end.** This is the not quite the width of the parcel shelf and its about 200mm tall (i.e. a long, flat box). This is used to pass on messages to drivers like "POLICE STOP", "SLOW DOWN", "DO NOT PASS" etc.
- **Other things that stand out.** Very clean and well kept, quite often seen sitting at 60mph in the inside lane looking for it's next target, No dealer stickers, in fact a total lack of stickers in most cases. Single whip Aerial on the roof or rear wing.
- **Tricks they try.** Some have been known to use hanging objects to hide the video camera, using the "Boy Racer style of car". Placing stickers on the cars to try to blend in.
- **Typical vehicles they use.** Ford Mondeo 24v, Volvo estates T5, Vectra V6, Citroen AX (Laser Car, Kent police), Ford Galaxy, Saab 95, Vauxhall Omega V6, Motorbikes are also being used and these are very hard to spot, but one give-away is that they stand out as being better bikers on new clean machines with add ons such as heavy side panniers to protect the video and radio equipment.

UK Gatso Cameras

Digital ANPR and Video Systems

SPECS the Hype
SPECS The system
SPECS Press Launch



Above: Nottingham Specs System, Close up of the camera and IR. Lights. This is what you are looking for.

So you keep hearing the hype about those new Digital Automatic Technology Speed Cameras with no film, you hear from someone its all a hoax, you read about systems that can get over 4000 offenders in a day on one stretch of road.

What is the new Hi-tec system that without doubt will change the way we drive?

We will all be affected by this system; Digital Automatic Technology Speed Cameras are going to be fitted in the thousands around the country, in the next few years.

We all break the speed limit at some time, it seems so petty, but every year 2500 people die as a result of cars going too fast and of those cases a 3rd are avoidable, in other words 800 lives a year could be saved if everyone went within the speed limit.

With Drink driving we all except its unacceptable, but speeding does not have that antisocial tag. Yet. 7 out of 10 driver's speed. And we all continue to speed at one time or another, despite the Government campaigns and the millions being spent on speeding gadgets, and even with the growing number of Gatso cameras, 3000 of them at the last count.

But now the police are being offered a new system...

The all seeing all knowing Speed Violation Detection Deterrent, SPECS System, it's thousands of times more efficient than the existing systems.

Speed Violation Detection Deterrent, SVDD is the digital brain, which the SPECS system is based upon, is a state of the art video system with number plate recognition built in. Consisting of two Video cameras each fitted with Infra Red Illuminators. They are fitted at the roadside a set distance apart, on a SPECS column, on a bridge or any fixing point for that.

Linked together via computer they take an image of every vehicle that passes by, speeding or not. They then by number plate recognition pair up the images on the video of matching number plates and because each image has a date and time stamp, again readable by the computer. The computer can then work out your average speed between the cameras, and then will make a decision if the preset speed threshold is triggered.

If you have exceeded the set speed limit, this might not be the posted speed, but a speed higher than that. I.e. Posted is 70 mph, prosecution speed is 80 mph, then your vehicle will be flagged up by the computer that then gets the owner/driver details from the DVLA computer, and then automatically prints out a Notice of Intended Prosecution, NIP. (This can be automated)

This can either be done in an instant, i.e. the computer is linked from the roadside via optic fibre phone line to a central office or the information will be stored on disk for collection and processing at a later date.

So why is it different from a Gatso

Gatso's use film, the film runs out, and at the moment you have a 1 in 10 chance being caught by a Gatso. An officer has to go a collect the film, adjust the unit for speed; all adding up to extra cost they don't want.

SPECS has no film to run out, operators have to make less journeys to the site and it takes a picture of the front of the vehicle, allowing them to identify the driver if needed. It has no flash, and is much harder to spot, Radar detectors don't detect it. A company called Speed check will be operating the systems, freeing Police officers to catch real criminals, the only good idea about this whole system. Gatso cameras promote 'Surfing' the art of slowing down in the trap zone and speeding up outside the trap zone. A dangerous pastime, which should be left to the dudes on the beaches of Cornwall.

SPECS on the other hand overcomes this problem, by averaging your speed between the two cameras. For example. Go past the first camera at 70 mph, speed up to 90 mph, slow down to 70 mph for the second camera and 'hey presto' you have just averaged 80 mph, but in a real world it won't happen like that. You may not see the camera at all and just blast past at 90 mph or you might only see the second one. Most drivers can't even see a fully liveried Police car until they are about to get in the boot of it, so how are they going to see a small camera on a gantry.

Either way if you speed you stand a high chance of getting a NIP or a warning in the post when this system gets installed around the UK.

The cost

You may have heard a report that a trial of the system was done in two locations in the UK, M1 and M20, the M1 units were near Leicester Forest East Services during the roadwork's, in one day it was reported to have recorded the details of 4300 offenders, if you take that over a year it has the potential of netting £60 million pounds in fines for the UK Government, yes and that's from one system! The combined efforts of all the working Gatso's in the UK generate less than a third of that.

And the Department of Transport said, "Speed cameras are an important tool in trying to reduce casualties with a history of speed related accidents.

So what are the concerns about this system?

Even the former roads minister, Mr. Steven Norris has expressed concerns about the use of camera systems and he was the one that introduced Gatso's to the UK. He expressed concerns that a motorist could lose their licence after just one trip.

"Speed Camera technology is not about racking up convictions and making allot of ordinary law abiding motorists very angry, if you pinch people for doing 40 mph in a 30 mph limit in the wrong circumstances all you do is have a very resentful person on your hands. You don't change that motorists habits at all. Do it in the right way, you can save that motorist from themselves"

Even Traffic Officers have reservations about the system as well; a concern is that this is just a quick and easy way for the Government to raise a few million pounds, a few million pounds, which won't be ploughed back into road safety.

They don't want to see cameras put willy-nilly around our roads just to raise cash, but would like to see them to be used around accident black spots and high risk areas only.

The systems will be managed by a company called Speed check, based in the London area, the police will dictate what speed threshold will be set, not Speed check who offer the service to the Police, City and County Councils. They make the management decisions Speed check provide the tool for them to make informed decisions.

So what can you do to avoid this system?

Well so far there is not a system that you can buy that will stop the camera getting a picture of your car. If you have fonts on you number plate that the computer can't work with and decode, the picture is flagged up and processed by human, who will be able to read the VRN.

The system is going to be a very hard system to defeat. But there is one mode of transport that you can travel past a camera on and that's a motorbike, the system takes a picture of the front of the vehicle, and we all know motorbikes don't have front number plates.

So what could be next from a system like this?

Well, we know it can read a number plate, so the system with a little extra programming, if it hasn't been done all ready, could be used to track vehicles or even terrorists and criminals. A similar system is in use in the City of London, the Ring of Steel, Not a bad idea, in fact this is what its best use could be for. It could also be used to cross reference Tax, and if they get their act together with the insurance companies, it could check if a car is insured. The processing of this information can be done in seconds.

You ask how, well it is very easy to watch a vehicle travel along a Motorway, you must have seen all those pole mounted video cameras, well they are not for show, an operator has access to those cameras and can follow a vehicle very easily. Modern communications allow the operator to contact a police patrol car and within minutes the offending vehicle could be pulled over.

I am in favour of equipment being used for this, uninsured vehicles cost us all money, but for the purpose of just getting speeding motorists on a nice stretch of Motorway I am not so sure. Speed Check says they will not target nice stretches of motorways, but high-risk areas such as roadwork's with 40-50mph limits thus protecting the workforce.

So is there a down side?

The down side of this equipment could be a rise in banned drivers on the road, and we all know a banned driver can't get insurance. So what you say, wait till they crash into your car... you will be counting the cost.

Banned drivers quite often don't care how they drive and what they drive, stolen and un-roadworthy cars.

Quite a few hard working people could become criminals, unemployed, unable to look after loved ones that are unable to drive or even walk for that, just for doing what could have been a safe speed at the time.

So should they give us something in return if the government insist on using all this state of the art equipment?

Well I am in favour of a new speed limit on the Motorways, 80-90mph at least, but they should not then allow the 10% rule, and should enforce the speed limit with the new systems such as SPECS. In bad weather, like rain then the limit should be lowered, as they do in France.

The M25 has a great example of control of a speed limit, they spent millions fitting the gantries and variable speed limit signs, and good use of this in the correct conditions could allow drivers to travel at 80-90mph.

We all know when we are on that stretch of the Motorway speeding is not a wise choice, with all the Gatso's looking at you.

Okay you say, some will still speed, but you will always get the die hard, that don't play by the rules, lets face it they won't last long though with the new systems. With the money they will make in fines from cameras, why can't they invest it back into variable speed limits, safer roads and training? A recent report says they might.

A speed limit increase is justifiable; most police officers won't stop you for 80mph on a Motorway, in safe conditions. Modern cars are safer, so with the addition of better training and a better driving test, which includes the Motorway, why not. I am not a perfect driver I have had convictions for speeding, all I must say on motorways, I don't speed on built up roads.

I was a victim of being hit by a car at 40mph; he just clipped me as I was walking home one night. I spent three weeks in hospital being put back together and 6 months in plaster after that, it did affect me, and reduced my speed, but not on a Motorway, where there are not so many hazards, I do speed. Okay maybe I should not. Protecting the workforce on a Motorway with cameras is a good idea. Truckers send me many an e-mail saying that being restricted to 56mph on a Motorway is bad news, all say that the journey gets very boring and often after time they don't even concentrate on there driving. I even heard a figure that after speed limiters were fitted accidents went up 24%.

Could that happen to car drivers when we are all to scared to drive over 70mph I tried driving to Glasgow from the midlands one day at 65-70mph, it got so boring that I could not even remember some parts of the trip. The same trip home, I went over the limit, my concentration and awareness was much higher.

Optional Equipment If the vehicle is found to be breaking the speed limit, its registration number, the speed at which it is travelling and a warning to slow down is flashed up on a large display positioned shortly after the second camera enabling the driver to reduce his or her speed accordingly.

Trials of SPECS evaluated by Kent Police Force at Junction 8 of the M20 and the Leicester Constabulary on the M1 at Leicester Forest East led to a reduction in the number of speeding vehicles of approximately 30%. Although no vehicles were prosecuted during testing. On April 1st 1999 Home Office Type Approval was granted for the SVDD technology SPECS uses, which means that drivers who break the speed limit in future can now be liable to prosecution. This is enforceable in court with evidence from the discs in the roadside cabinets. This could be one of the most dangerous systems out there to constant speeders. Being quite small and hard to spot in its smallest form. Undetectable by radar detectors. It will soon prove it's self. However they could also be mounted on high visibility poles creating speed controlled zones.



Above. Another way of mounting and using SPECS.
This system is on the M6 in roadworks

How does it work? Using a pair of Video cameras. The first is positioned at a fixed point on the road a second camera is positioned 200m minimum further along the carriageway. They are able to setup a network of these video cameras as well. As vehicles pass between the cameras they are digitally recorded. The time which it takes the vehicle to travel between both points is used to calculate the average speed of the vehicle.

If the vehicle is speeding, the cameras record the registration plate and capture a colour image of the front of the car, time, location and average speed travelling between both locations, they use the front of the car not so they can identify the driver the face is not recognisable, this is because the front plate stays cleaner. This information is instantly recorded on discs in roadside cabinets near the of the road functioning 24 hours a day which can be collected by the police or Speed Check staff. As an option it also can also be relayed to a control office via an optic fibre cable. Linked to the DVLA or PNC computers, which can provide driver details that are used to track down offenders.

All this can be done in less than 4 seconds inside the box on the side of the Motorway are ANPR processing units for each camera and an optional connection to send the evidence to a central processing and data storage unit.

An interesting point is... Automatic ticket processing could be carried out by specially trained staff. This means that police forces will not have to handle the paperwork freeing up more police time. The digital operation of SPECS also enables connection to other monitoring and control systems to provide comprehensive management data creating a very powerful speed management tool.

Flaws in the system are slowly becoming apparent, the main one being that the video image does not show the driver clearly enough, Article Six of the European Convention on Human Rights comes to mind.

Square number plates are reported to be unreadable due to the software requiring the text all on one line this however is unconfirmed. It also appears that if a plate is unreadable it is not flagged up again unconfirmed. The front plate is read because it is the one that tends to stay cleaner, sounds like dirty plates give it a problem.

Defensive Equipment Tests Anti-Gatso Plates

This Page covers equipment that I have been sent and with the help of a few friends (inc. Police) we put under test, and we will give you our views on the products, not the salesman's views. Not all manufactures of equipment want us to test their equipment, wonder why...? So all not all the equipment on the market may be tested. If you have any equipment you have bought and you want to send us your views on how well it works or doesn't for that, let us know.

Protector
"Protector" made by 'ONTRACK'

Cost £39.95,

In the Kit you get 1 x Protector, 1 x Instructions.

According to the sales sheet this is how it works...

Photo radar operates at known angles to the direction of traffic flow. Using a passive, state-of-the-art light-bending lens, the camera is unable to identify your vehicle. A 5-minute installation is all that is required. The number plate is still completely readable from straight on.

So did it work...?

Well after taping it to our test car, and finding a quiet road with a Gatso on it, we set up the test by using a camera placed next to the lens area of the Gatso and drove past. We did the drive past at 10 - 20 - 30 mph, and at no time could the plate be read. **(We even played with the pictures with PhotoShop and could not get any part of the plate to show).**

So it looks like it worked. **However our results were not the same for a Saab**, the plate was just readable, but it was only just. We came to the conclusion the higher the plate from the tarmac the better the Protector works.

But better positioning may cure the problem

The Protector can be seen over the plate from behind, it tends to give a double vision type of effect, this could be almost eliminated by having a plate with the numbers on the top of the Perspex, and then you could not really tell the protector was covering the plate.

Again however because of the way it worked, anyone to the side of the car can not read it either, it produces a mirror effect as seen in the pictures, that includes that Police car that may over take you.

However a local Policeman said "It works well, in fact it is the best I have seen, but if I see it on a car I am going to stop them.

We decided with the use of a Halfords number plate surround, you could easily fit it and remove it, without the use of tape or screws

Can we recommend it, Well... YES, I suppose we can.

However we recommend you test the position first before you go relying on it.

Update: This unit is not sold in the UK anymore and we have no known contact.

Sure Signs "Camera Shy" Number plate
Field Test done with South Yorkshire Police.

*Taken with a Digital Camera and flash,
Alert status is standard when it came to this plate, no overexposure.*

The test was for the Sure Signs "Camera Shy" number plate. The plate looked like any other but is designed to reflect back too much glare for the Gatso camera causing over exposure on the film. The plate costs £20 and Sure Signs claim they have tested it with their own cameras in daylight and at night, it works they say. They however have never tested it on a Gatso.

We tested it with my digital camera, the result was not good. The plate was clearly readable so it was down to the Gatso.

The Gatso was set at 20mph, you should have seen the worried faces of motorists driving past as they were flashed in the trap zone and one even stopped, walked back up and asked if he had been nicked.

We mounted the Camera Shy plate on the police stop sign on the back of the police bike, the officer drove past the Gatso at 30mph and set off the camera. All we had to do then was wait for the central process unit to develop the photograph. A few days later the picture arrived, and guess what it never worked. Okay so it was a little harder to read, but the processing unit said they did not have to do anything to the picture to read the plate.

Can we recommend it, NO, we can't, and this is a real rip off.

Digitec Number plate

The plate I was sent was a sample saying GATSO, it's designed to reflect back the light from the camera flash and cause an over exposure on the film in the area of the number plate.

We tested it with my digital camera, the result was good. The plate was unreadable with the digital camera so it was down to the Gatso to prove it could do the job of seeing the number plate.

The sample plate was mounted over my existing number plate with double-sided tape; we then drove the vehicle past the Gatso triggering the camera. The resulting negatives were then played with to see if changing the contrast or brightness, or any other way of changing the image for that, could reveal the digits on the plate.

Viewing as a negative and flicking the contrast and brightness around we could reveal the number plate in all its glory. The police have instant settings for changing the views and they also revealed the digits. It took them seconds to read the plate.

One other comment, the sergeant said he could spot the plate a mile off because the numbers were reflecting too well in his headlights. He would pull me for that and most likely give me a ticket for a non-approved plate or may even try to get me on perverting the course of justice.

Can we recommend it, No?

I would not trust the Digitec to save me from a ticket.

Digitec supplied by <http://www.argtec.com/>

Review 7th March 2003

Priva-Plate

Number plate protectors have just gone electronic. Priva-Plate is the first to use LCD technology and it's the only number plate protector to really work. In the pack is one Priva-Plate, a power transformer box with fitted power and control cables. On one of the cables is an on/off switch with LED warning lamp and a cigarette lighter adapter the other cable has a connector to connect to the Priva-Plate?

The Priva-Plate that was sent to me was a pre-production model so it had a few rough edges, the makers tell me they have addressed most of the problems regarding the finish and are looking into new methods of mounting the Priva-Plate so it is suitable for more types of cars.

The mounting system works well but looks a little rough. However, those of you out there that like to trick fit equipment on your car are going to find it very simple to design your own way of mounting the Priva-Plate and with a little playing around you should be able to make it almost disappear in the number plate surround

In use it is very simple. This Priva-Plate works by a flick of a switch and it then completely obscures your number plate from all cameras and prying eyes. The Priva-Plate to work it must be connected to a 12v power supply to go clear, no power will make it stay obscured.

It works a treat and no matter how hard I looked I could not read the number plate, they also do one for motorbikes. At £149.99 it's not cheap,

Can I recommend it, yes?

It works well. On some cars however this device sticks out like a sore thumb so think about how it will look before you buy or ask Priva-plate about mounting ideas" A trick fit may solve the problem.

For more information contact info@priva-plate.com

Review done February 2002

Flip-Tip Number plate

The Flip-Tip is a recommended Product for Bikes

The Flip-Tip Number plate is something that could come straight off the James Bond Film Set. Designed for those track days you flip your number plate so it cannot be seen by some nosy insurance rep looking to invalidate your insurance. It is illegal to flip the plate on the public highway. The device is designed for use on a circuit and as such should only be flipped on race circuits.

It feels well made and looks good, the hinge in the middle can be seen, but one officer I showed said that does not matter as long as the plate can be read from a distance as the law requires, He then said where could he get one.

The plate comes with all you need, the main unit pre-wired with the power cable and the very small waterproof switch, registration letters and numbers and reflective backing plates.

Putting on the reflective backing plates was easy, the numbers and letters however were a pig to line up, I screwed up on the first letter so I decided to get some advice from a mate who does shop signs. Get a cup of water, a very small amount of washing up liquid and mix it.

Wet the reflective backing plates with tissue (front face) and then put the letters on, the water/washing up liquid mix will allow to slip the letters and numbers over the surface so you can line them up much easier. When they are lined up remove the excess water, carefully rubbing over the letters will remove some of the water from under them and leave for 24 hours for the water under the letters and numbers to dry.

Then the fitting bit, as I don't own a bike any more I was not able to do the fitting bit, but it's going to be very easy to do. Double sided waterproof tape or screws are the options. Either way the instructions included and cover this part well. The power lead is long enough for a bike and you just connect the Brown wire to Live (+12v) and the Blue wire to Negative (-0V), do this to the switched live side of the ignition circuit.

The control switch is fitted with a thick waterproof sticky pad and a status LED, and it is thick enough to absorb a small amount of curve so it's ideal for fitting on existing switch gear on your handle bars. Avoid any electrical coils and HF Circuits when you run the switch wire, as the interference can trigger the Flip-Tip and cause the plate to close or open and you don't want any unwanted bizarre effects do you.

In use it's easy. Press the button and the plate folds in half obscuring the registration numbers, the LED comes on to let you know its in flip mode, it takes less than a second to do this. Press it again and your plate goes back to normal.

It also has a clever feature of self-testing every minute. This works is by resetting the position of the plate, i.e.. If its in flip mode, it will reactivate the motor to make sure the plate is still in flip mode every minute to make sure the wind has not partly lifted the flap, the same will be done if its in normal mode, saves any embarrassing questions as you ride home and a police officer sees your plate half closed.

There is no unit for cars at the moment.

Can I recommend it, yes, for the novelty factor alone its great? It works, looks great and is built with bikes in mind, James Bond eat your heart out.

For more information contact
URL: www.Bike2Track.co.uk
Email: Flip-Tip@Bike2Track.com

Review done February 2002

Defensive Equipment Tests. Radar and Laser Detector Test

Radar Detectors put in to disrepute. It seems that there is a problem with some radar detectors causing interference with both commercial and military communication systems.

Some of the lower cost radar detectors out there are causing problems to Sky TV satellite systems. Complaints have been logged with DTI and the Radio Technology and Compatibility Group have done some tests to see if this is correct.

The Project called "Project 706 - Vehicle Mounted Radar Detectors" reports on the problems with interference from Radar Detectors. After completing some tests, such as driving round a car park with a Radar Detector fitted in a car and a Sky satellite system a building established that interference was being caused by the Radar Detector. Further tests were then done to see just how much emissions are being given out.

They say in their report that the detectors they tested gave off so much interference that they not only interfere with Sky TV they have the possibility to interfere with police radar systems.

This all adds up to bad news as far as I am concerned. The DTI have been considering banning Radar Detectors and this could be the ammo they have been looking for.

The company in question, name withheld, could have well shot the industry in the foot by "not making any attempt to limit the interference in their radar detectors", as the Radio Technology and Compatibility Group have put it.

The company in question say its a batch problem, I have units from them a few years old and they also cause a problem so it must have been a big batch. I have been out and tested a few of the detectors I have using my portable power pack and my own Sky satellite system and also found that I could interfere with Sky TV as well, I used a few deferent brands of Radar Detectors and some were of the same make but deferent models and it became very apparent that the lower priced units caused a problem.

For legal reasons at this time I am not naming the brands in question. Regarding the law at the moment, and we are only talking about Radar Detectors, not GPS Devices which are I am told okay. If you knowingly use a device that causes interference and continue to use it you could be liable to prosecution. This is more likely if you have been told by a third party that you are causing them problems.

If you are concerned then you can do several things...

1, If you have Sky TV, take your radar detector and point the face, detection end, at the dish and get someone to flick through the channels, Sky One, UK Gold seem to get problems, if they freeze then you have a problem.

2, Another tip is to ask the dealer, if they cannot give you an answer I suggest you hold back from buying a unit.

3, Ask the manufacturer advice, try to get it in writing, this will help you should you have a problem at a later date.

What will a Radar detector do for you

Why buy one?

Well you all know where those Gatso's are on your trip to and from work, but how many of you forget sometimes in the morning or how about that road you have not been down for a while and they have put one behind a sign, well a good detector will warn you in advance of that hidden revenue earner.

Gatso's are springing up everywhere, so be one step ahead.

Are they Legal?

A judgement of the Queens Bench Divisional Court dated 27th January 1998 makes it clear that the use of Radar Detectors is not unlawful as has hitherto been claimed by some. In the past a few prosecutions have been brought by claiming the use of radar detectors was contrary to section 5(b)(1) of the Wireless Telegraphy Act 1949 as amended by section 3 of the Post Office Act 1969. However the Acts refer to the interception of wireless communications for the purpose of obtaining information as to the content, sender or addressee of any message. The Court concluded that the radar transmission was not communicating a 'message' and therefore equipment designed to detect the presence of the transmission could not decode any such message.

It was further stated that section 1(1) of the Act, which requires a licence for the reception of radio signals, has been superseded by the Wireless Telegraphy Apparatus (Receivers)(Exemption) Regulations (SI 1989 No123) which exempts radar detectors and similar equipment from the need for such licences.

This judgement has not been tested in Scotland. Although the likelihood is that a positive outcome would be the result of any future test case.

Radar detectors are also legal to use in Germany, Netherlands and Italy. Denmark legalised the sale and use of radar/laser only to reverse its decision 12 months later.

Countries such as France, Belgium and Switzerland continue to take a very dim view of anyone found in possession of a radar detector. Confiscation of equipment and an instant fine is normal. In the Republic of Ireland it is legal to own a radar detector but illegal to be found using one.

Most police officers don't know they are legal so watch out!

I had an e-mail regarding Radar Detectors. It seems that there are still quite a few police officers that still think they are illegal.

The letter went as follows....

" I have just been relieved of my day old five hundred and fifty-pound radar detector by my local constabulary. It is mine for which I have proof of purchase and it is not involved in any other crime. Are the police allowed to do this? I have printed of the part of the wireless and telegraphy act that relates to radar detectors, given it to the constable who's got it yet it all seems to fall on deaf years. What can I do?"

My answer....

It is NOT against the law to own a unit.... you can go back an claim it back...
"Quote the following...

Some has hitherto claimed a judgement of the Queens Bench Divisional Court dated 29th January 1998 makes it clear that the use of Radar Detectors is not unlawful as. In the past a few prosecutions have been brought by claiming the use of radar detectors was contrary to section 5(b)(1) of the Wireless Telegraphy Act 1949 as amended by section 3 of the Post Office Act 1969. However the Acts refer to the interception of wireless communications for the purpose of obtaining information as to the content, sender or addressee of any message. The Court concluded that the radar transmission was not communicating a 'message' and therefore equipment designed to detect the presence of the transmission could not decode any such message. It was further stated that section 1(1) of the Act, which requires a licence for the reception of radio signals, has been superseded by the Wireless Telegraphy Apparatus (Receivers)(Exemption) Regulations (SI 1989 No123) which exempts radar detectors and similar equipment from the need for such licences.

Good Luck and let me know how you got on... but stand your ground...."

The moral of the story is if you own one keep a copy of the judgement in your car....

What do they detect?

Worldwide there ten sets of frequencies used for speed monitoring. In the UK only to radar frequencies used, K band and Ku band (in a very limited way). Coverage of other frequencies other than these bands will cause the detector to false alarm; devices such as traffic lights supermarket doors, mobile phones and transmitters often operate on the X band.

All will detect radar, to different levels, some give detection ranges of as little at 0 metres for a Gatso Camera right up to 350 metres, depending on which make and model you buy.

Some will detect Laser from 1 mile to 3 miles. Some will and some won't detect Mini-Gatso. All can detect Muniquip from 1 mile to 3 miles. Most false warnings will be on the 'X' band.

Gatso's on the K band ... give more of a problem, the radar used is quite weak, since Gatso Cameras also face away from you the radar beam is going away from you as well, so your detector is relying on a reflected signal making Gatso's are harder to detect. However a good detector will give you a warning.

The Ku band is little used at the moment in the UK, but they do use it in Northern Ireland, and some parts of Europe

Where do they go in your car?

Nearly all are attached to the windscreen by suckers on a mounting bracket and run either off the cigarette lighter or on their own power supply. **It's important to note that Heated windscreens and heat reflective windscreens** will effect the range of some units. This can be overcome by fitting remote detectors; these have remote radar sensing head and IR. Unit, that fit in the grill of the vehicle. A control unit sits inside the car.

Standard units should be mounted on the windscreen in a position that gives them a clear view ahead. But in a position that is not easily seen from the outside, even though they are now not illegal, by having one you can easily provoke some coppers.

Some offer a 360-degree Laser cover. Now this is not possible in reality, since there are all sorts of objects in the way like pillars, headrests etc. The laser side of the detection is not always going to give you a warning since laser scatter is very low and if you get a warning, you most likely have been nicked.

What is SWS?

SWS or Safety Warning System is starting to feature on more radar/laser detectors. Manufacturers of the detectors designed the system as a way of combating the bad image of radar detectors. SWS are currently being installed in police cars all over the US. When a police car is attending a roadside accident the SWS transmitter is switched on. Owners of radar detectors received a warning in advance of a dangerous situation. The new generation of smart SWS detectors use text messages and sometimes voice messages as well.

Radar detectors such as the Bel 990 offer nearly 70 text and voice messages ranging from, accident ahead, school crossing ahead, ice on road, moose crossing and so on. Currently SWS is only used in some parts of America and Canada. Germany has recently been granted a licence for its use, plans are now in the advanced stages and SWS can be expected to be in use by 2001.

A British company is also currently in discussions with the manufacturer to bring SWS to the UK.

SWS are without doubt one of the best safety features for a driver to have fitted in his car, and the sooner it's use becomes worldwide the better.

What is VG-2?

The "Interceptor VG-2" is a microwave Receiver used by some police forces to detect signals radiated by the local oscillator of a radar detector, in simple terms it's a "Radar Detector" VG-2 is only used in a small number of countries such as the USA, Canada, France and Switzerland.

Most new radar detectors have anti VG-2 features. Bel-tronics call theirs **Shadow Technology**

Banned!

Well not quite, but it looks as though they are going to try to ban the use of Radar Detectors with a harsh penalty if you still use one and all other devices that inform in any way are to be banned.

Death in less than a second!

Death of a car driver in 7/10ths of a second.

"John Collins", 38, of 210 Hill Place, was instantly killed last night when his car struck a tree on the main road, two miles east... "

Daily newspapers carry thousands of new items similar to this every year. It is a tragically common form of death, but one, which very little has been known.

Distinguished medical experts have written detailed post-mortem reports on crash victims. The primary reason for the report was to reduce fatalities by making cars safer, more crash proof. Out of it have come recommendations for safety belts, different types of steering wheel etc. But out of the report has also come something else; the terrifying picture of what happens to steel and glass, to flesh and blood in those last split seconds when a human being is hurled into eternity.

This is a slow motion, split second reconstruction of what happens when a car travelling at 55 mph, crashes into a solid, immovable tree;

1/10th OF A SECOND: The front bumper and chromium radiator grille collapse. Slivers of steel penetrate the tree to depths of one and a half inches and more.

2/10th: The bonnet crumples as it rises, smashing into the windscreen. Spinning rear wheels leave the ground. The radiator disintegrates. The wings come into contact with the tree, forcing the rear pads to splay out over the front door.

In the same second tenth of a second: The heavy structural members of the car begin to act as a brake on the terrific forward momentum of the body, but the driver's body continues to move forward at the vehicles original speed. This means of force of 10 times gravity his body weight 3200. His legs, ramrod-straight, snap at the knee joint.

3/10th: The driver's body is now off the seat, torso upright, broken knees pressing against the dashboard. The plastic and steel frame of the steering wheel begins to bend under his terrible death grip. His head is now near the sun visor, his chest above the steering column.

4/10th: The car's front 24 inches have been completely demolished, but the rear end is still travelling at an estimated speed of 35 miles per hour. The driver's body is still travelling at 55 MPH. The engine block crushes into the tree. The rear of the car, like a bucking horse, rises high enough to scrape bark of low branches.

5/10th: The driver's fear frozen hands bend the steering column into an almost vertical position. The force of gravity impales him on the steering column. Jagged steel punctures lung and intercostal arteries. Blood spurts into the lung.

6/10th: So great is the force of impact that the driver's feet are ripped from his tightly laced shoes. The brake pedal sheers at the floorboards. The chassis bends in the middle. The driver's head smashes into the windscreen. The rear of the car begins its downward fall, with spinning wheels digging into the ground.

7/10th: The entire, writhing body of the car is forced out of shape. Hinges tear. Doors spring open. In one last convulsion the seat rams forward, pinning the driver against the cruel steel of the steering column. Blood leaps from his mouth. Shock has frozen his heart. He is now dead.

TIME ELAPSED - SEVEN TENTHS OF ONE SECOND

Death of a Motorcycle Rider driver in 1.42 seconds

We all know that a small vehicle generally has a significant disadvantage during most accident situations. Lack of mass and compact physical dimensions often account for serious injuries under conditions where had they been in a larger vehicle the injuries would not have been so significant.

What about the poor motorcyclist?

He operates in a stream of traffic with hazards far more extreme than those confronting the occupants of a small vehicle. He has minimal structural vehicle protection and often comes into direct physical contact with the opposing vehicle. Unlike the motorist, who is enveloped in the protective shield of his passenger compartment, it is the motorcyclist's body that serves as the energy absorbing structure. His fate so often depends on the nature of the impacted structure and the chance orientation of his body as it strikes the vehicle/object.

Consider then the effects of a 40mph impact into the side of an emerging car.

As the motorcycle contacts the front door of the car the inertia of the front wheel is such that it penetrates 6 inches into the door

15ms (milliseconds), the wheel contacts its engine. The rider starts to slide forwards on the seat.

At 25ms the motorcycle frame experiences a deceleration of 39g. The front wheel continues to crush further into the door of the car and it collapses as the engine starts to penetrate the side plane of the car.

63ms the maximum penetration reaches 34 inches. The motorcyclist's knees are buried into the side of the car whilst he is still in a seat posture after sliding forward onto the fuel tank.

55ms his legs sustained a deceleration of 71g. The pivotal action of the knee contact rotates the rider to a standing position bringing his chest forcibly against the 'A' pillar.

80ms, he experiences a deceleration of 109g. The sudden deceleration of the chest flails the head forwards over the top of the car; the helmet strap stretches.

105ms allows the face to strike the roof at 105g. Following this the helmet latch disengages depriving the rider of head protection during any subsequent collision with the car or road surface.

The motorcycle and rider fall motionless to the road.
TIME ELAPSED - 1.42 seconds

Just got home after a 2x10 shift.

We had a serious fatal accident in my town this afternoon. Can't go into too much detail because the driver will almost certainly be appearing in court but....
Ford Escort containing 5 youths driving into town. Witnesses make certain remarks about the speed of the vehicle (read into that what you will).

For some reason the car mounts the pavement and collides into a mother with two children (one in a buggy) the elder child (3 yr old girl) is crushed against a wall and killed outright.

She is so badly mangled about the head that we cannot allow father to even see her at the mortuary.

Driver breath tested at the hospital resulting in requirement to provide blood sample (no evidential breath test machines at hospital of course).

Officers at the hospital report the youths from the car as 'laughing and joking' as relatives of the deceased child and badly injured mother arrive.

Back at the station I get a telephone call from an irate gentleman who is extremely unhappy at being made to wait in a traffic jam because the road where the accident occurred is closed for accident investigation purposes. (He knew that a child had been killed).

He demanded to know why I hadn't used more of my officers on traffic control. (I'd only got three patrols on duty in the whole area!)

Who'd be a copper?

Kev (Senior Traffic Officer)

New pilot scheme puts cash from motoring fines backing to maintenance of cameras.

The rate at which forces the issue Speeding tickets is set to quadruple, under new plans to raise money from fines incurred by motorists at speed and red light cameras.

Eight Nationwide pilot schemes will allow cash from fines to go directly to the maintenance of speed cameras and to fund collection of fines by magistrates. Under the present system all fine revenue goes to the Treasury, instead of local authorities, which maintain the cameras and police to enforce penalties.

The plan is set to end the 'cameras with no film' scenario, where police are forced to leave the device empty because of insufficient civilian staff to process the large volume of fines.

Cleveland Constabulary expects to issue 30,000 extra tickets in the first year of the scheme, which starts on 1st April 2000.

The recent announcement from the government that the fixed penalty is to increase from £40 to £60, Cleveland is expecting to rake in £1.8 million in revenue from the cameras in the first year.

The remaining seven forces in the pilot scheme are, Essex, Northamptonshire, Thames Valley, Nottinghamshire, South Wales, Lincolnshire and Strathclyde, could each generate much more cash as some are larger forces with many more cameras than Cleveland, which has five speed and six a red light cameras. A conservative estimate could see the pilot forces combined making more than £14 million in a first year.

From April this year, we will see more cameras and more pictures being taken in these areas. They are looking at a targeted approach. The police are not seeking to impose blanket enforcement nor harass the motoring public, and this does not mean zero tolerance for speeding.

The money for the scheme will be ring-fenced, and extract cash generated will be ploughed into road safety initiatives, such as education and publicity. It may also be used by local authorities to improve roads at accident spots.

Motoring organisations such as the RAC, fear the move may lead to a public outcry, potential backdoor privatisation of the camera fine collection, and the erosion of the police's role in traffic enforcement.

If the forces employ a zero tolerance policy and reduce the threshold at which fines are imposed, the public will not accept the scheme.

Currently, ACPO lays down guidelines for camera trigger speeds. The average trigger speed is in the region of the limit plus 10 per cent, plus two miles per hour - although there are local variations.

One of conditions of the new scheme will entail forces issuing more than the usual amount of tickets in order to be able to keep up the extra revenue.

If a reduction of thresholds occurs at which police enforce the fines, and this coincides with the new system of raising revenue, and this becomes widely known, then the public acceptability of the system will collapse.

If part of the deal it is a reduction in these thresholds, then police discretion in issuing fines and placing cameras is no longer seem to be relevant... It could lead to a reduction of public confidence to such an extent that some would be more than happy to see the police taken out of this area of traffic.

Under the plan, the Treasury would still get the revenue from the first 10,000 tickets issued and that the partnership would benefit hundred per cent from the revenue generated by the 30,000 extra fines.

The understanding is there will still be police discretion. It will involve targeting, an appropriate response and transparency. It is not a money-spinner for the police, and they will not be employing a jackbooted approach.

This move could generate a real debate. If people revolt as they did against the poll tax, the whole thing could be a disaster. At the moment, 91 per cent of people pay their fines. If they start refusing to pay, the court system could jam up in weeks.

UK Police Website Links - Speed trap info and sites.

Who and What	URL
England	
Avon & Somerset	www.safecam.org.uk
Bedfordshire Police - No Trap Info	http://www.bedfordshire.police.uk
Cheshire Constabulary website - Fixed Traps	http://www.cheshire.police.uk
City of London Police - No Trap Info	http://www.cityoflondon.police.uk
Derbyshire Police - Fixed and Mobile Trap Info. Other Good Info	http://www.derbyshire.police.uk

Devon & Cornwall Police - Some Trap Info and sites	http://www.devon-cornwall.police.uk
Essex Police - Trap info	http://www.essex.police.uk http://www.essexsafetycameras.co.uk/
Gloucestershire Police - No Trap info	http://www.gloucestershire.police.uk
Greater Manchester Police - No Trap Info	http://www.gmp.police.uk
Hampshire Police - Trap Info on Specialist Teams, Traffic	http://www.hampshire.police.uk
Hertfordshire Police - No Trap Info	http://www.herts.police.uk
Humberside Police - No Trap Info	http://www.humberside.police.uk
Lancashire Police - Trap Info	http://www.lancashire.police.uk www.safe2travel.co.uk
Leicestershire - Full trap Info.	http://www.speedorsafety.com/camera_sites.html
Lincolnshire Police - Trap Info	http://www.lincs.police.uk http://www.lincs.police.uk/depts/traffic/stayingalive/camerasites.shtml
Merseyside Police - No Trap Info	http://www.merseyside.police.uk
Metropolitan Police - No Trap Info	http://www.met.police.uk
Northamptonshire Police - Fixed and Mobile Trap Info. Other Good Info	http://www.northants.police.uk
Norfolk Police - Go to Traffic Policing	http://www.norfolk.police.uk/
Northumbria Police - No Trap Info	http://www.northumbria.police.uk
South Yorkshire Police - Fixed and Mobile Trap Info. Other Good Info	http://www.southyorks.police.uk
Suffolk Police - No Trap Info	http://www.suffolk.police.uk
Staffordshire Police - Trap Info	http://www.staffordshire.police.uk http://www.staffordshire.police.uk/cameras.htm
Surrey Police - Trap Info	http://www.surrey.police.uk http://www.surrey.police.uk/npage.asp?artid=2347
Sussex Police	http://www.sussex.police.uk http://www.sussexsafetycameras.gov.uk
Thames Valley Police - No Trap Info but good site @	http://www.thamesvalley.police.uk http://www.thamesvalley.police.uk/safer-roads/index.htm
Warwickshire Police - Direct site Trap & Camera Info	http://www.smilecamera.co.uk
West Mercia Police - No Trap Info	http://www.westmercia.police.uk
West Midlands Police - No Trap Info	http://www.west-midlands.police.uk

West Yorkshire Police - Trap Info	http://www.westyorkshire.police.uk http://www.safetycameraswestyorkshire.co.uk/
Wiltshire Police - Trap Info	http://www.wiltshire.police.uk http://www.safetycameras-wiltshire-swindon.co.uk/
Wales	
Dyfed-Powys Police Authority Website	http://www.dyfed-powys.police.uk www.checkyourspeed.org.uk
North Wales Police - No Trap Info Trap Info on http://www.arrivealive.org.uk/home/	http://www.north-wales.police.uk http://www.arrivealive.org.uk/home/
South Wales Police - Trap info	http://www.south-wales.police.uk www.checkyourspeed.org.uk
Scotland	
Scottish Police Forces Web Site - Scottish Links	http://www.scottish.police.uk
Central Scotland Police Force Website - No Trap Info	http://www.centalscotland.police.uk/
Dumfries and Galloway - Trap Info @	http://www.dumfriesandgalloway.police.uk/ http://www.dumfriesandgalloway.police.uk/msg/spcam.htm
Fife Constabulary Website - Trap Info	http://www.fife.police.uk/
Grampian Police - No Trap Info	http://www.grampian.police.uk/
Lothian and Borders Police - Trap Info	http://www.lbp.police.uk/
Northern Constabulary - No Trap Info	http://www.northern.police.uk/
Strathclyde Police	http://www.strathclyde.police.uk/ http://www.camerascutcrashes.com/locations.htm http://www.strathclyde.police.uk/camerascutcrashes/index.htm
Tayside Police - No Trap Info	http://www.tayside.police.uk/

SPEED-CAMERA LOOPHOLE - Birmingham Post - 14th July 2000

THOUSANDS of motorists caught in speed traps are set to escape punishment after a Birmingham judge yesterday ruled police evidence infringed their human rights.

Under a landmark ruling, the paperwork sent to motorists caught on speed cameras and police surveillance cameras was deemed to contravene European legislation because defendants effectively incriminated themselves.

Last night, legal experts warned the ruling, the first in an English court, could also open the floodgates for thousands of appeals from motorists who have already been convicted of driving offences.

They also warned thousands of motorists waiting to be dealt with for offences caught on camera would now be able to use the ruling as a valid defence. Judge Peter Crawford, sitting at Birmingham Crown Court, dismissed the case of two Birmingham men who had been charged with dangerous driving.

Amesh Chauhan, aged 22, of Swanshurst Lane, Moseley, and Dean Hollingsworth, aged 23, of Gracemere Crescent, Hall Green, were accused of being part of a gang filmed by police racing cars around the Barford Street area of the city centre. West Midlands Police sent standard letters to the registered keepers of the cars caught on film, asking for the name and address of the person who was driving the vehicle.

The letters also gave notice to the owner that the police were considering a prosecution for dangerous driving.

But Article Six of the European Convention on Human Rights enshrines the right of anybody suspected of a crime to remain silent so as not to incriminate themselves.

Judge Crawford decided that to ask for information about the driver of the car while at the same time informing the recipient of the letter they faced prosecution was a clear breach of Article Six.

The judge said: "The accused has been told by police he is a suspect and there is no reason why he should not take them on their word for that. "In my judgement, the notice to prosecute which accompanied the application for the name and address of the driver is directed against the recipient of the notice as the driver and tells him that.

"In which case that entitles him to the protection of Article Six of the Convention as the letter is more than just an administrative procedure as has been suggested."

After the case, Gulam Sohail, a partner at solicitors Challinors Lyon Clark in Birmingham, said the potential repercussions of the judge's ruling were huge. He said: "There has been a similar case like this in Scotland but this is the first time that a judge in England has made a ruling of this kind.

"There are several implications, the main one being that the police may now have to rethink the whole way in which they prosecute road traffic offences.

"If the current procedure used by the police to determine who was driving a car is now deemed inappropriate then it is going to be very difficult in the future to prove who was driving a car."

Supt David Shaw, of West Midlands Police, said: "What we need to do is look in fine detail at what the judge has said and then we will sit down with the CPS and see if we have to change our procedures.

"However, we will continue to carry out operations aimed at curbing behaviour that puts members of the public in danger."

A Home Office spokesman, said: "We are not aware of this particular judgement and we would obviously need to look at it carefully. "But generally speaking legislation as it stands does provide for the admissibility of such evidence.

"To be specific, Section 11 of the Road Traffic Offenders Act 1988."

The Judge Crawford ruling was in a crown court if it is in a magistrate's court; Magistrates in are not bound by this decision. Bear this in mind if you are considering trying this approach to get out of a ticket.

Stopping Distances for Cars and Lorries

Stopping distances.

The average reaction time from seeing an emergency situation to actually placing your foot on the brake pedal is 0.7 seconds At 30mph, 44 feet per second, you will have travelled 30 feet before you even take action, and a further 45 feet before the brakes bring the car to a halt.

On motorways, marker posts are set up at 100 metre intervals - about the stopping distance when driving at 70 mph. So if the car in front is passing a post, you should not have passed the previous one.

Speed	Distance to Stop	Feet per Second	Car lengths
20 mph	12m 40ft	29.4 ft/sec	4
30 mph	23m 75ft	44.1 ft/sec	6
40 mph	36m 120ft	58.8 ft/sec	10
50 mph	53m 175ft	73.5 ft/sec	14
60 mph	73m 240ft	88.2 ft/sec	20
70 mph	96m 315ft	102.9 ft/sec	26

Stopping distances for Cars and Lorries in detail

In traffic, you should always choose the lane that allows the maximum possible stopping distance.

It is possible to calculate stopping distance mathematically using a graph if you know approximately how much time it takes to stop at a certain speed. Lets say you're going 60 mph. How long does it take for your car or truck to stop at 60 mph? The obvious way to test it is to look at your watch and slam your brakes on, then count how many seconds it takes to stop.

Lets pretend you are driving an eighteen-wheeler and it takes six seconds to stop at 60 mph. That works out to 10 mph of slowing down for each second you apply the brakes. At 10 mph. per second, every second you put the truck's brakes on will slow you down by 10 mph. By knowing how much time it takes to stop at a certain speed, you can calculate very precisely what the stopping distance is going to be at any speed.

First let us calculate what the stopping distance is at 10 mph. 10 mph is equal to about 14 feet per second. There are 5,280 feet in a mile and 3,600 seconds in an hour, so to convert miles per hour to feet per second you just multiply your mph by 5,280 and divide by 3,600. You will go fourteen feet in one second at ten miles per hour. Since you're slowing down from ten mph and ending up at zero, you will only average 5 mph or 7 ft. per second while you have your brakes on.

How many feet do you travel in one second at 7 feet per second? Obviously, you travel seven feet, so your stopping distance is seven feet.

To calculate what your stopping distance is going to be from 20 mph you first have to calculate the distance you are going to travel as you slow from 20 down to ten. Your average speed is going to be 15 or 22 feet per second so the total stopping distance is 22 feet plus the seven feet when you slow from 10 down to zero or 29 feet.

With air brakes, that's not all there is to it. You also have to take into account the air brake lag. It takes about a half-second for air brakes to activate because pressure must build in the lines before the actuators will start to move. At 10 mph or 14 feet per second, you will travel seven feet in a half second so the stopping distance from the time you step on the brake pedal will be $7+7$ or 14 ft. That is seven feet of air brake lag and seven feet of stopping distance added together. At 20 mph the total distance will be $22+7+15$ or 44 feet including 15 ft. of air brake lag.

What you can immediately see from this is that if you double your speed, you increase your stopping distance considerably. 14 feet to 44 feet is more than three times. So if you are going 10 mph and you increase your speed to 20, your stopping distance is going to be three times what it was at 10 mph.

You can continue calculating and find out what your stopping distance will be at 30 mph. At 30 mph you will add 38 feet, so your stopping distance will be $7+22+38$, which works out to 88 feet when you include 22 feet of air brake lag. If you increase your speed from 20 to 30, you double your stopping distance. Looking at these calculations it's easy to see why we have speed limits. If you increase your speed from 10 mph to 20 mph, you triple your stopping distance. If you increase your speed from 20 mph to 30 mph, your stopping distance is six times greater.

TRUCK STOPPING DISTANCE @ 10 MPH. PER SECOND

SPEED	STOPPING DIST	SAFE FOLLOWING DIST	SECONDS
10 mph	14 ft	44 ft	3.0 sec
20 mph	44 ft	100 ft	3.5 sec
30 mph	88 ft	175 ft	4.0 sec
40 mph	146 ft	263 ft	4.5 sec
50 mph	220 ft	365 ft	5.0 sec
60 mph	306 ft	482 ft	5.5 sec
70 mph	409 ft	614 ft	6.0 sec

CAR STOPPING DISTANCE @ 20 MPH. PER SECOND

SPEED	STOPPING DIST	SAFE FOLLOWING DIST	SECONDS
20 mph	14 ft	72 ft	2.5 sec
40 mph	58 ft	174 ft	3.0 sec
60 mph	130 ft	305 ft	3.5 sec
80 mph	230 ft	464 ft	4.0 sec

This table shows stopping distances. It also shows the minimum safe following distance.

A vehicle following another needs more room to get stopped because it takes about two seconds longer for the person following to get his foot off of the accelerator and onto the brake, even if the two vehicles have identical stopping distances.

The safe following distance is equal to the regular stopping distance plus the distance the vehicle travels in the two seconds it takes for the driver to react and move his foot at each given speed. Following another vehicle at a distance less than this would not be safe because if an object were to fall off the vehicle in front, you would not be able to stop in time to avoid colliding with it.

The "seconds" column is the number of seconds it takes to cover the distance in the safe following distance column at each given speed. This makes it easy to measure following distance while you are driving.

For instance, it takes three seconds to go 44 feet at 10 mph and it takes 5.5 seconds to go 482 feet at 60 mph. Measuring safe following distance in seconds is convenient because you can easily count how much time elapses between the time the vehicle in front passes a landmark such as a road sign until you pass the same landmark yourself. Notice that the number of seconds needed to be safe increases with speed from three seconds for cars at 40 mph to four seconds at 80 mph.

Note that the table does not make a distinction between single and multi-lane highways. The safe following distance is 305 feet at sixty miles an hour regardless how many lanes a highway may have or what lane the other traffic may be using. This is because if an object falls off a long flatbed eighteen-wheeler, it is more likely to fall to the side than to the rear. .

UK Speed Trap Equipment. Radar & Laser Operated Equipment

Laser Guns, LTI 20-20, Prolaser II, RIEGL Laser Guns

The Laser Gun fires a harmless, narrow laser beam and computes distance using the simple change of position over time formula, rather than a radio frequency shift. While radar projects a broad, cone-shaped beam 200 to 400 feet wide, with an effective range of only a few hundred yards, the Laser Gun beam widens to just 3 feet at a range of 1000 feet in most cases.

Individual vehicles can be isolated during heavy traffic due to laser's pinpoint accuracy.

Well, it seems that although LIDAR is good at measuring speed and distance, the guns are a bit of a pain to use. Fog, rain, dust, vehicle halogen headlights, movement, (just to mention a few) make the guns more difficult to use than radar.

They can't be used inside a nice warm police car either unless the window is down most won't work through glass without error.

When used for distances over 400 yards they usually have to be tripod mounted or steadied to stop beam shake and instability.

With handheld laser, a 1-degree movement of the operator's hand moves the beam 6-7ft for every 100 yards the beam travels from the gun.

Laser speed detection renders radar detectors useless due to laser's tight beam-width (two feet at 800 feet) a radar/laser detector mounted outside the beam's strike-zone will give little or no warning, and thus isolates the most flagrant speeders, however a Laser or Radar Jammer will help if mounted well on your vehicle, some of the systems sold will give you enough time to slow before the next reading is taken, for more info see my links page for more information. Most Laser Guns measure speed in 1/3 second, not nearly enough time for a driver to react to a laser detector warning.

But to acquire a reading, the laser beam must bounce directly back to the laser gun from a flat reflective surface. Consequently, laser guns are specifically aimed at a vehicle's licence plate or front headlights, and the gun's computer looks for the strongest return signal.

Calibration: Laser devices are self-calibrating. The device itself performs verification at power on, but the police must also check the device at the start and end of each tour of duty of the device. They often check the device against a patrol car with a calibrated speedometer, referred to as calibration verification. A record of the check must be made - usually in the officer's pocket book.

If a calibration defect is found, the unit is returned to the manufacturer. Once a year the calibration is performed by the manufacturer or a certified agent, and a certificate of calibration is issued to the police. A visible sticker showing the date of calibration must be fixed to the device along with lead seals similar to what you would have on your electric meter.

They are being used more and more, either Hand Held, resting on a wing mirror of an unmarked car, or on a tripod with a video camera linked to it for the Video evidence quite often printing out a picture of an offending vehicle. These are usually accompanied by an unmarked car or van. The most common place to site the is on a motorway bridge, usually the small farm crossing bridges. They also have a tendency to site them on bridges in roadworks, to blend in.

Use of laser guns on a bridge has its own rules; they are to be as close as possible to the centreline of the lane being targeted to reduce cosine effect. They must also carry out a height check from the height of the bridge to the road below and multiply this figure by 10. This then becomes the minimum distance the ACPO allow for speed measurement. For example, if he's on bridge 9 metres above the motorway, the minimum distance to target a vehicle is 90 metres. Kent, Manchester and Wales Police do this the most.

Common support vehicles are unmarked vans, but Kent also like Citroen AX cars. On a motorway they set the limit at about 85mph or above.

This is far becoming one of the most common mobile ways to nick you.

On my travels I managed to seek out a Laser Speed Trap and spoke to the policeman operating it, he enthusiastically showed me how it worked... He demonstrated on a motorway bridge over the M25 near Sevenoaks, first looking through the camera viewfinder and lining up the tiny red laser dot on the outside lane. A 8mm video recorder in the back of his car is linked to a printer programmed to produce pictures only when he zaps cars doing 90mph and above.

One approached the red dot in his viewfinder and he squeezed the camera trigger. The machine emitted an electronic "bleep" and the printer churned out a picture of a Cavalier doing 91mph. "If people knew the effectiveness of this system, they wouldn't get out of bed," he said enthusiastically. "Earlier this morning I caught 16 motorists in twenty minutes in an East Kent village. They were all doing over 44mph in a 30mph zone."

"Bleep" and he trapped another. "Bleep" and another; each hit costs the driver a £40 fine and three penalty points on his licence. "If I was to target drivers doing 80 and above I would do virtually everybody on the motorway, but that would just clog up the system. People are speeding all the time but you have to be sensible. I am after the really dangerous drivers, people doing 90mph and above. They'll get an automatic fixed penalty. Anyone doing over 100mph will be prosecuted and in most cases disqualified."

"Catching speeding motorists could be as easy as taking candy from a baby, if we had more of these units," he said with a big grin.

He reacted angrily to the suggestion that police time might be better-spent catching robbers and rapists than speeding motorists. "Tell that to someone whose child has been killed by a speeding motorist," he said. "If we were to ignore speeding, more lives would be lost. We have a responsibility to make sure that doesn't happen."

Things they don't tell you about Laser Guns

Similar to radar, laser cannot be used in the rain, snow, or high dust environments. Laser takes precise aiming, radar does not. Like radar, laser is susceptible to cosine error.

Cosine Error is the angle from the 0 degree perpendicular to the target vehicle.

The greater the cosine angle the greater the error. However, cosine error is always in favour of the motorist, i.e. speed-readings will be proportionally less than actual speed of the target vehicle

Sweep Error is manifested when the laser is aimed at one part of the vehicle, say the licence plate, and due to the motion of the operator, the laser also targets a side mirror during the same trigger pull. Sweep Error adds to the real speed of the target vehicle.

Reflection Error is next. On very hot days with low humidity a visible mirage/reflection of the target vehicle is created. In many cases, when the laser is aimed at the target vehicle the infrared beam also receives readings from both the target vehicle and the mirage causing a Sweep error.

Overexposure Error is last. When a laser gun receives an extremely powerful reflective signal, such as a sun flare off a vehicle, the computer's timer cannot see the return of the 904-nanometer signal it sent. It cannot compute a speed-reading. In general, the laser gun is looking for the strongest return reflection of its own emitted beam for speed computation.

A recent court case in the USA has thrown a doubt on the accuracy of the LTI 20-20. At a recess in the proceedings the defendant's lawyer picked up the LTI 20-20 from the courtroom bench and proceeded to aim it at the back wall of the courtroom. To his complete astonishment, the gun registered a speed of 5.4mph. Bear in mind that he was aiming at a wall inside a building. He also noted how difficult it was to maintain his target accuracy by simply hand holding the device, with the registered speed fluctuating between -2.2mph and +5.4mph. A net error of nearly 8mph on a stationary object 20m away!

The defendant managed to successfully prove that not only was the gun too heavy to use to reliably pick out a vehicle at 150metres without a tripod, but that it's technology was fundamentally flawed.

Several US states have now banned the LTI 20-20 due to it being inaccurate in certain conditions.

Laser Gun Information

LTI 20-20 Marksman

Specifications

Marksman Specifications LTI 20-20

Dimensions: 3.5 in x 5 in x 8 in

Weight: 4.5 lbs

Speed Measurement Distance: 30 ft to 3500 ft

300mts With Video Camera

Speed Maximum: +200 mph to -200 mph (accurate zero reading) Accuracy: +/- 1 mph

Acquisition Time: 0.3 seconds

Range Measurement Distance: 30 ft to 3500 ft Accuracy: +/- 6 inches

Acquisition Time: 0.3 seconds

Targeting

Pin-point beam (3 milliradian divergence, 3 ft wide at 1000 ft)

Adjustable illuminated red dot sight

AutoCapture triggering

ProKustom's ProLaser II

Standard Features and Capabilities:

Stationary operation.

Laser beam just 3.5 feet wide at 1000 feet

Continuous speed-readings are seen inside the HUD for as long as the trigger is squeezed; releasing the trigger locks the speed.

The settable Range Control allows an officer to determine the distance at which Prolaser II will pick up a target, especially useful in school zones.

In Stopwatch Mode, operate at angles to the target.

Can be operated through a windshield.

Selectable direction: An oncoming target speed is confirmed by a plus (+) in front of the speed; a receding target speed is confirmed by a minus (-).

Audibly verifying target acquisition is a series of beeps that become a steady tone when Prolaser II is making a direct hit.

Standard Features and Capabilities with Camera

Video and image capture unit utilises a miniature colour video camera aimed through the speed measuring unit's HUD in order to capture vehicle speed, distance, and identification.

System camera provides 450 lines of horizontal resolution with a 200 mm lens.

This configuration allows licence plate identification up to 250 ft.

System incorporates a 3-inch colour LCD monitor mounted on the side of the camera to be used as a viewfinder for vehicle tracking and verifying proper operation of the system.

Pertinent data (vehicle speed, range, time/date, speed limit, threshold speed, operator and location) appears in the form of an overlay mask recorded on the high resolution S-videotape or stored in a digital format.

Records can be printed in second's standard colour video printer.

RIEGL LR90-235/P & FG21-P

Maximum Approved Distance: > 600 m

Minimum Approved Distance: 30 m

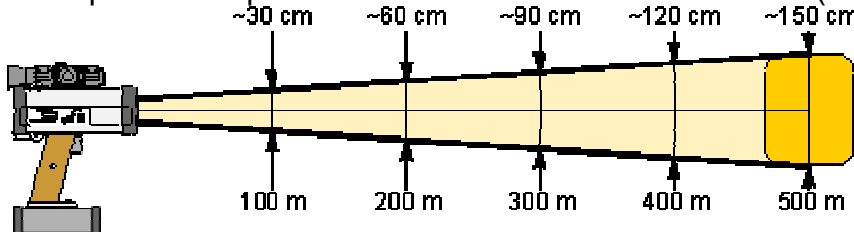
Accuracy: 1 km/h

Measuring time: 0.3 second

Maximum speed: 300 km/h

Weight: approx. 2,0 kg

Example of the spread of the Laser Beam over distance. (RIEGL LR90)



RIEGL FG21-P Details

Maximum Approved Distance: > 1000 m

Minimum Approved Distance: 30 m

Accuracy: +/-3 km/h (to 100 km/h) +/-3% of the measured value (over 100 km/h)

Target-acquisition area: approx. 25 cm @ 100m distance, 250 cm @ 1000 m
Measuring time: 0.5 second (between 0.4s and max. 1 second)
Distance measuring accuracy: +/-10 cm
Maximum speed: 250 km/h
Integrated Head UP display
Efficient jammer recognition
The device can be used comfortably and reliably by hand
Weight: approx. 1,85 kg

Hand Held Radar

Hand held radar is typically used by the roadside by one officer; he will take the reading and then pull you over. Incidentally it is common practice for the operator to hide from view of the opposite direction traffic so that they don't flash the ones he wants to measure as they come towards him.

I was told that over 300 units have been sold to the police in the last 2 years. In many instances radar is both easier to use and more effective. To say nothing of about 1/3 the price.

The range of these units, 500M is typical more on trucks less on streamlined sports cars. All Radar systems are virtually instantaneous in reading, some only take a reading every second but that is instant. There are Three radars approved for police use in UK; They are Speedar, Kustom Falcon.

Motorcycles are not detectable so far away as cars because they are smaller targets.

AUTOPATROL PR-100

AUTOPATROL PR-100 is the most advanced speed camera system available, coupling sophisticated radar technology with the latest in high-speed photo imaging. The unit is a compact, portable, mobile camera radar device, which is easily mounted in a vehicle or on a tripod

Using a proprietary lensed radar antenna to emit an ultra narrow low power beam precisely focused to eliminate stray readings and reflected signals. Using the higher frequency Ka band (34.6 GHZ) it provides more measurements for exact speed calculation and precise vehicle positioning PR-100 is equipped with the exclusive TC-1000 TrafficCam for superior image resolution. The unit's digital camera control system and narrow radar beam enable the use of a telephoto lens to guarantee clear images and vehicle isolation, even across multiple lanes. Cameras are designed to allow for the positive identification of the driver of the vehicle.

The unit mounts quickly and easily in a vehicle or on a tripod. It also may be customised for unattended operation on a pole system, bridge, or overpass.

In short, here's how it works: The PR-100 utilises an ultra narrow, fan-shaped Ka-Band radar beam projected across the road to monitor vehicles. The radar can be set to capture images of vehicles in 1-mph increments. If there is more than 1 vehicle in the radar beam, no image is captured. Speeds are rounded down to the nearest mile per hour. The benefit always goes to the driver.

Gatso Facts

A Gatso camera is a large ugly grey box that the police and council see fit to place anywhere they want along the roadside. Consisting of a radar unit, camera, and flashgun in most cases, although some Gatso cameras have inductive loops in the road rather than radar. They read the speed of the passing vehicle by use of a speed measuring device (Inductive loop or Radar) and if the speed is above the set limit then it takes two pictures half a second apart of the offending vehicle.

Operators back at base can also manually calculate the distance travelled by the use of the white lines painted on the road allowing them to then work out your speed, should you disagree.

Known as the FIP (Fixed Installation Post) and currently manufactured by Gatsometer, in the Netherlands. The Radar operated unit's work on the K-band. Recent changes in the Law mean that the Police Force issuing the NIP can now also claim costs for the paperwork, Hiking up the cost of your bill.

Plymouth Council and the Police may be setting a precedent when it comes to Gatso cameras and the colour they are painted.

One Gatso camera has been covered in rather bold reflective red and yellow stripes and can be seen almost a mile away.

Now we all know they often like to hide Gatso cameras from the view of drivers because it helps their revenue, after all some of the best earners are the hidden ones. But we must ask ourselves if they are hidden are they really a deterrent, do they help us identify accident black spots or high-risk areas, no. Unlike some countries in the UK they are painted grey or black and in some cases more often than not they hide them as best as they can. In Holland they often paint them bright colours and show the speed on them as well.

Plymouth CC decided that one of their Gatso's was not doing its job to well; it was taking too many pictures of offenders 3000 in all. A Gatso that does its job well is one that never takes a picture. Plymouth CC decided to give one Gatso near a school a make over.

I am told the trial ends in December, if however it has made a difference what will happen next, will Plymouth CC then cover all the Gatso cameras the same way? They say, yes they will. Will they want the loss in revenue and if they do cover them all will other councils do the same?

Either way it's a very good move in the right direction and Plymouth deserve a pat on the back for the brave move.

It's about time they stopped abusing the use of Gatso cameras just to add extra revenue into the Government purse.

Well done Plymouth Council and police for making the first move...

The Association of Chief Police Officers, say they will advise every force in the country to go Day-Glo if figures show high-visibility cameras lead to lower speeds than anonymous grey boxes.

The Plymouth trial has been running for just 10 weeks on the A3064 near Wolseley - the average speed of motorists has already dropped from 34mph to 30mph - the speed limit on the stretch.

Traffic chiefs at Plymouth City Council, who came up with the idea, are so pleased with the results they plan to paint the authority's 26 other cameras after the six-month trial in December.

Their findings - which could also show a fall in the number of accidents - will appear in a consultation paper, which will be sent to every council in Britain. Painting the camera cost just £250, according to IAM chief examiner Trevor Poxon. He said: "It's a cheap and effective way of reducing speeds and increasing safety. Taxpayers can't grumble about the cost."

An ACPO spokesman said: "We will encourage the scheme nationally if the trial does show a reduction in speed." The DETR also said it was interested.

Extract from MCM

THE 400,000 drivers caught by automatic cameras last year will testify that "Gatso's" aren't turkeys.

But the police have so far failed to use their speed cameras in the way they really want.

The Gatso speed trap was invented by Dutch rally driver Maurice Gatsonides, who died last December. Doppler radar senses vehicle speed and triggers a flashgun and camera. The flash fires twice to photograph the vehicle as it passes marks on the road. The number of marks passed in the fixed time between the two flashes shows the car's speed.

The radar and flash units are cheap. The camera is very expensive and replacing the film in roadside cameras is dangerous and labour-intensive. So only one in six Gatso's works.

Two years ago, police photographers came up with the idea of replacing film with digital video cameras that connect by optic fibre cable to the Vehicle Registration Computer in Swansea.

So, as roadside cameras flashed round the country, the images would be sent to Wales for hard-disc storage. Optical character recognition circuitry would tie the car number to the registered owner and print out a penalty notice for automatic posting.

Digital video cameras are now cheap and, with no need for the police to replace film, every flash could generate big return on low investment. Police lawyers canned the project, by warning that a defence lawyer would only need to ask only one simple question in court. "Is it possible that the digital image could have been altered while stored in the computer?" The police are still looking for a digital watermark system that would permit the honest answer: "No."

THE number of drivers prosecuted after being caught on cameras speeding or running red lights has risen by 25% to nearly 400,000 in the last year - and more roadside cameras are expected to be installed.

This year, the number is set to be even higher as the police, councils and courts will be allowed to keep the money from camera fines. The Government has announced it intends to make £15.6million of fine income available to fund new camera schemes each year.

This has been agreed following lobbying from the Association of Chief Police Officers which said that, without extra cash, it was not possible to buy and service cameras: they cost £20,000 to buy and the same amount to maintain a year. Thousands of cameras now overlook all types of roads in the UK but it has been suggested that a lack of resources means only 130 at any one time are active. Home Office figures show that 390,008 offences were captured on camera in 1997 - 86% of for speeding.

POLICE are removing film from roadside speed cameras, or raising the limit at which they take pictures, to cut the cost of prosecuting motorists.

The Association of Chief Police Officers conceded that the practice was "not a good road safety message". The admission that police are cutting down on camera use came from Geoffrey Markham, assistant chief constable of Essex and association spokesman on speed enforcement.

It follows findings in the 1997 Lex report on motoring that two-and-a-half million drivers recalled being flashed by cameras as they speed but only one in eight - around 300,000 - were prosecuted.

Many forces are having difficulties in meeting the extra administrative costs involved".

No extra funding had been made available to police and, although accident prevention might be a priority for some forces, it did not feature in the Government's national policing objectives.

Forces "are dealing with this particular resource problem in a variety of ways, which can include not placing film in cameras and adjusting prosecution thresholds" - a reference to raising the speed at which cameras take a picture. For example, a camera might be reset at 50mph rather than 45mph in some areas. Leaving cameras empty would still be a deterrent because motorists slowed on seeing cameras. The association was unable to say how much the system was costing police or which forces were particularly affected by the costs.

The AA also supports the setting of speed trigger limits at a "realistic level," balanced against resources available and chances of prosecuting offenders. The Home Office said the Government was considering the general funding of the speed camera system.

In some 30mph zones in Kent the fixed penalty only comes in above 45mph and only if someone drives over 57mph will they be taken to court

UK Gatso Cameras Fixed Installation Systems

These cameras monitor the traffic signals. They are positioned between twelve and twenty metres before the stop line. The state of the signals is monitored and the device is 'armed' when the red light is illuminated. When a vehicle crosses the stop line against the red light it passes over loops situated under the road surface just past the stop line. This triggers the camera, which takes two photographs. One is taken immediately and one a second later to show the passage of the vehicle through the signals.

The date and time of the offence, together with the time, which elapses after the red light is illuminated, are recorded on to the film. The camera also records data regarding the amber light so that the correct sequence of the lights can be proved. In addition the camera monitors the speed of vehicles as they cross the stop line.

Redeye 77

The RED EYE 77 Red Light Camera system sends real-time offence data to a central processing centre using high-speed telephone lines or other communication technologies. Cumbersome 35mm filmstrips that are expensive to collect and time-consuming to process have been replaced by compact Digital Audio Tapes and WORM-CD drives that are capable of storing and transmitting thousands of offence records at the click of a button.

The RED EYE 77 is capable of monitoring up to three lanes of traffic. Using high-speed KODAK digital traffic cameras, the system generates high-resolution photographs of all offenders travelling through red lights. The system works 24 hours per day, in all lighting conditions. Two digital photographs of each offender are produced and encryption technologies are used to preserve the integrity of the data generated. High-speed ISDN telephone lines or other data communications systems instantaneously relay the offence data to a central Data Processing Unit where NIP's are automatically printed and mailed. An infrared-based version of the system is also offered, whose nighttime flash is invisible to the human eye. Not currently working in the UK, but DSS is looking to move into Britain. So keep your eyes open

Fixed Installation Post Traffiphot S Piezo Sensor

This system from Peek Traffic, works on Piezo Sensors in the road. The strips are a known distance apart, and the time between compression's is measured to give the resulting speed of the vehicle. The system takes two readings on a two-axle vehicle and uses the average time for compression's to calculate the resulting speed. Radar Detectors are useless with this type of camera. The picture above shows the strips in the road and in this case covers both lanes on the dual carriageway.

Developments in Gatso LiveLink

Digital Gatso Cameras with ISDN links are soon to be flooding the roads in a new push to stop speeding.

Known as **LiveLink** the main difference is that they will not run out of film - because it won't have any... A quote from a London Policeman "One of our busiest cameras regularly records 400 offences in less than six hours." Then we have to reload and that may not be the same day, so we miss offenders. Images of speeding bikers and drivers are sent down the phone line to a central police computer and the NIP can be sent out straight away. So there are no costs for film, or developing it. You don't need to employ anyone to load or unload the films.

The Highway Agency, which is responsible for the UK motorways and trunk road network, is firmly in favour of cameras. The Agency's own figures reveal that cameras in London cut fatal accidents by 70 percent and saved £20 million a year in accident costs after their introduction in 1992.

It is also possible that these systems will not have either the Radar or the Flash fitted, but will employ the use of inductive loops in the road and a Digital Camera capable of working in low light. This would render Radar detectors useless, and given the fact it is no longer an offence to own and use a Radar Detector the authorities may go this way as a matter of spite.

TruVelo Forward Facing Fixed Installation Post

How they Work The Piezo Road Strips are a known distance apart, and the time between compression's is measured to give the resulting speed of the vehicle. The system takes four readings on a two-axle vehicle and uses the average time for compression's to calculate the resulting speed.

Forward facing Gatso are designed prevent offenders saying it was not them driving... and bribing friends to take the blame.

That way they may avoid notching up more than 12 penalty points which, if amassed within three years, make a driver liable to be banned for at least six

months. Exceeding the speed limit carries between three and six penalty points, although most speed camera offences are dealt with by post and carry three.

As vehicles are currently photographed by the cameras only from behind, it is difficult to be sure of a driver's identity. Offenders nearing the 12-point limit are paying friends with better driving records to say they were at the wheel.

Persuading or bribing someone else to take the blame is the latest ruse in what police describe as the "dodgers' charter" for speed cameras. Thousands have already escaped prosecution for speeding or jumping red lights in this way. Forward-facing FIPs are legal and in use in some parts of the UK

The Association of Chief Police Officers have asked road camera suppliers to develop a machine that can safely and reliably photograph vehicles from the front. They now have that camera, and it will become more common.

Gatso on The M25

Yet another development - Gantry Gatso. This is basically a complete Gatso camera but mounted on a gantry. It has the same box on top of the pole as a normal Gatso, and hence works the same (radar, 800-frame roll of film. There are ruler markings on the road as well; the only difference is that the speed settings change with the variable speed limit.

The first picture is of what you will see looking forward, second is the view behind, they have mounted one Gatso per lane, but not all are working, and they do move them around. When the speed limit changes so will the set speed that the Gatso will trap you at.

The system was developed to regulate the speed and flow of the Traffic during peak times, as you see in the picture it works well! NOT, it also is said that it has caused more accidents.

How the system works

The CMIIS is/was a pilot scheme for a variable speed limit GATSO camera system put up for tender by the Highways Agency and won by SERCo in conjunction with GATSO. SERCo is a group multinational company, and various different companies within the SERCo group were involved in the production of the unit, which encompassed mechanical engineering, hardware and software. Development started in August of 1994 and finished mid-1995.

The idea of the CMIIS was to increase traffic flow by slowing traffic coming into a gridlock or traffic jam to below the speed of the vehicles leaving the jam, hence dispersing the bottleneck and keeping the traffic moving. Being a pilot scheme, the idea was to see if this actually worked, and reports from the field indicate that in many ways it doesn't - the average speed of vehicles travelling along the section of the M25 covered by these cameras is lower than that of other sections.

However, many drivers report that they feel less stressed and traffic flow is smoother with less abrupt near-emergency braking, so it is perhaps a partial success.

The system was never intended to be a "speed trap" to simply prosecute drivers travelling over the national speed limit, however an amendment to the specification called for it to have this ability, and it subsequently became clear that the Police were more interested in this ability than its original purpose of smoothing traffic flow. However, it is unclear in what capacity the system is now being used.

The system is essentially an unmodified radar GATSO system (the type you're used to seeing already) with additional hardware and software for the variable speeds. It is housed in a bigger than standard box to accommodate the extra hardware, and is mounted on a gantry over one lane of a motorway, looking down the motorway lane (i.e. at the backs of the cars).

On the other side of the gantry (the side the motorists see as they drive towards it) is a matrix board that displays the speed limit.

The box in which the system is housed (the enclosure) is made of double-skinned stainless steel and is locked with two high-quality Chubb locks. It also has an anti-tamper intrusion system. The glass over the camera, flash and radar apertures is bullet-proof (although presumably not paint-ball proof).

The system can enforce a number of speed limits. That is to say, it has a fixed number of speed limits rather than being constantly variable. The speed limits are 0 (a.k.a. red X or "lane closed"), 20, 30, 40, 50, 60 and NS (the national speed limit, currently 70mph). Each speed limit also has a user-settable threshold, so that the actual speed at which an offence occurs is the sum of the speed limit and this amount (eg. a 40mph limit with a 10mph threshold means it will enforce at 50+mph.). Generally the threshold is no less than 10%+2 of the speed limit, but this is merely a guideline and it can be anything from 0-99mph, and is entirely at the discretion of the operator.

The speed limit set is read directly from the same electrical input that sets the speed limit displayed to the motorist on the matrix board. There is also a fibre-optic sensor on each bulb in the matrix board that is turned into an electrical signal so that the system can verify that the matrix board is actually displaying what it has been told to display.

When a new speed limit is posted, the CMIIS software does the following:

- 1, Starts a timer for a user-set "grace period", to allow the motorist time to react to the new limit. This is generally set at 5mins.
- 2, Checks that the posted limit is valid (ie. is one of RX, 20, 30, 40, 50, 60 or NS)
- 3, Checks that the optical output from the matrix board is exactly the same as the electrical input. In other words, if even one bulb that makes up the display of the

speed has blown on the matrix board, it is invalid and the system will never activate.

4, Performs a whole raft of crosschecks, internal checks, etc., any of which can invalidate the system and cause it not to enforce. This includes an anti-tamper check on the enclosure.

Assuming that no fault conditions occur, and the speed limit doesn't change in the meantime, once the timer expires the camera system is instructed to start enforcing the enforcement speed (ie. the limit + threshold). Until such time as the speed limit is changed, or a fault occurs, or the camera runs out of film, it will take 2 photographs of any offending motorist in the same way as the ordinary GATSO cameras do. This is all handled by the GATSO system - the CMIIS simply tells the camera to enforce, and the existing radar GATSO system does the rest.

If the camera runs out of film it will enter "dummy mode" whereby it flashes twice to simulate taking 2 photographs (and make the motorist think they have been caught).

The system is incredibly fault-intolerant. Any number of minor discrepancies (like that blown bulb) can cause it not to enforce. In fact the software and hardware are constantly at war with each other - the hardware is always trying to shut the system down and the software trying to convince it not to. It's a wonder it takes any photos at all to be honest. It therefore follows that if it does take a photo its pretty certain it's valid!

When a photo is taken, a load of data is written to a log file on a PCMCIA flash RAM card. When the film is collected from the gantry, this card is also collected and replaced, and is an additional crosscheck to the information recorded on the film. If you've never seen a GATSO picture, the date, time, current speed limit, vehicle speed and camera location are all optically superimposed on the bottom of the picture, and this data is recorded in the log file too. The date and time are accurately maintained from the Rugby atomic clock (GPS was too new then). The source of the set speed limit is of no concern to the CMIIS. The Highways Agency was at the time evaluating a system called MIDAS which would use inductance loops in the road to measure traffic flow and automatically reduce the speed limit as traffic density increased, but this was entirely independent of the CMIIS. The CMIIS only cares about what the matrix boards are displaying, and the mechanism used to set the matrix boards is of no concern. Anyone who tells you that the CMIIS measures traffic flow and sets its own speed limits is misled.

The GATSO camera system used by the CMIIS follows the same rules as the ordinary radar camera system:

1, It is only calibrated up to about 130mph. However, exceeding this as an attempt to avoid prosecution is probably a bad idea.

2, It can distinguish vehicles travelling as close as ½ metre apart at about 90mph. This was determined by Police drivers driving closer and closer together at Millbrook Proving grounds. Very scary.

3, Two photographs of a receding vehicle are needed for it to be legally admissible. The camera system is capable of taking single photographs of approaching vehicles, but these serve only to worry, upset (and night-blind) motorists. Unless the law has changed since 1995, these photos are not legally admissible, and hence you cannot be prosecuted as a result of them.

4, The length of time it can enforce for is limited by an 800-shot bulk loader cartridge of 35mm film. This means the system can record an absolute maximum of 400 offences (2 photos per offence), not counting test shots taken during startup.

Tri-Eye 1000 Fixed Installation Post (FIP)

This is a brand new camera using no film just digital cameras. It uses not one, nor two, but three High Resolution Digital Cameras linked to a strongbox on the side of the road.

Used for the monitoring of red light jumpers on the red light phase of traffic lights and also for speed-readings during the green light phase.

How it works

Red Light Phase... working by multiple inductive loops under the road they monitor the vehicles movement over the target area, one target area for each lane and one camera for each lane. If the vehicle crosses the stop line then two digital photographs are taken. Recorded on the photograph is the time, date and phase time of the lights and distance comparison between the times. This data is stored in the roadside strongbox for collection.

Piezo Strip (lane 2) in road.

Green Light Phase... working again by strips in the road but this time they are Piezo strips set apart from each other. The vehicle speed is calculated from the time taken to cross both strips, and then the third camera takes a picture of the offending vehicle. They can also verify the speed using the standard white markings on the road, in this case white round dots. This part of the system only covered lane 2 (the outside lane). Recorded on the photograph is the time, date and phase time of the lights along with the speed. This data is stored in the roadside strongbox for collection.

Mobile Gatso Cameras, Mobile Installation Post (MIP)

This is a complete FIP camera but mounted on a trailer. It costs around £9000 it is towed to position, typically in road works like the A1 and M40 deployed in around 15 minutes. It has the same box on top of the pole as a normal FIP, and hence works the same (radar, 800 frame roll of film etc.).

The ruler markings on the road are the only difference; the police don't paint these markings on the road each time, so they are superimposed on the pictures. However they do paint the road in some areas, like long-term roadworks.

The Wheelie Bin Gatso

Yes your not seeing things, but some bright spark has come up with a Gatso in a bin, something I have always said "they belong in bins" but this one works in the bin.

Some cutting of holes in the bin, adding a power pack and away you go stealth Gatso. Now before you get worried that the next bin you drive past is in fact stealth Gatso at the moment they are only used outside of the UK and as yet have not been considered for use in the UK.

But I thought you would like to see just how mad it's getting out there. It also does not look like a one off either as the pictures below show two deference bins.

MiniGatso

About the size of a small aluminium briefcase, supported on a small tripod about a metre off the ground. Hidden next to unmarked cars, Motorway bridges and in the bushes. They are very accurate and means that the police can set up a speed trap in a matter of moments. Then by sitting just out of sight with the readout in their view they can wait for the unsuspecting motorist (picture on right) Alternatively, they can set up a complete automated photo-taking MiniGatso (complete with camera and flash) in a similar way.

This not a very common system to see being used, the police now have a preference to the LTI 20-20 Laser system, having the advantage of a greater and more accurate range.

Bus Lane Enforcement Cameras, Peek Guardian Freelane roadside bus lane enforcement camera.

Not quite a Gatso, but in some cities Bus Lane Systems are being used to monitor bus lanes, using Gatso style systems with inductive loops or Inboard Bus Video Systems. (The Video fitted on the bus can usually be seen fitted on the front in the middle area of the bus, a 9" square black window gives it away.) These cameras watch out for offending vehicles using the bus lane to drive down or park in. Offending vehicles get a NIP in the post.

In use around London they are proving very effective in convicting drivers that use bus lanes.

Buying and Fitting your Laser Jammer Hints and Tips

Before you buy checklist:

1, Decide on the cover you need. Are you looking for just front protection or do you want to cover the back as well, it is known for the police to target the back.

2, Have a good look at the car, pay attention to the places where you could fit a jammer. Look for places to clamp the jammer to, they MUST be solid and MUST not move when the car is moving even vibration could affect the jammer. Look for positions in the bumper and grill area where the jammer can face forward but still be quite well concealed. Most modern cars have quite smooth front ends and fitting a jammer is often very hard on new cars.

3, Have a look at the jammers on the market. Some have two jamming heads, Snooper, Bel and Blinder, these are often much harder to fit and no two heads is not always better than one. Some units just have one head such as the LRC 100; this type of unit is much easier to fit on a modern car.

4, Now you know where the possible places to fit a jammer are and the type of heads about, try to get an idea about the size of the heads; the dealer may be able to help you on this. Then have a play with something similar in size and see how it fits. Even better, is to find a dealer that will show you the units or unit and allow you to see where they will fit. This is the biggest stumbling block for most people that have bought a jammer, they have not looked in to where it will go and end up with the jammers being fitted in poor positions.

5, Shop around. Some good deals can be had if you shop around; the links on my site often take you to dealers that will offer you a very good price on jammers. Buy with care, is the dealer any good, what's their back up like, can they fit the unit for you or suggest someone that can.

Once you have bought the Jammer.

1, Before fitting the head you need to do one thing, get the car on a level surface

2, Before fitting the jammer head(s) take all the parts out of the box, lay them out and check in the instructions that all the parts are there. **Read the instructions they will give you advice on the fitting, a badly fitted jammer will be a waste of money and more often than not, will not jam.**

3, Take the head of the jammer and the support brackets and put them together in a suitable orientation for the position on the car. Check what you have to do to fit the head, look at the position, will the head get hot, can it be seen, will you be able to get the head level, how easy is it going to be to clean the head, is there a good fixing and firm surface to bolt the head to.

4, Then check where you will route the wires, put them in a safe position, avoid areas where they may rub and short out, keep them away from hot areas, the wires will have to go from the very front of the car into the inside of the car in the dashboard area. There are often grommets in the firewall that have enough space to let the wires through without you having to drill holes.

5, Check inside the car, where will you be fitting the on/off switch, warning buzzer and LED or if the jammer has it the warning head, will you be able to see the warning system, can you reach it to turn it off.

6, Once you have planned it all out and are really sure it will all fit where you want it, then and only then do you follow the instructions word for word and start fitting it for real.

7, Take your time, if you are not sure phone the dealer or ask a more qualified person to help you.

Testing the jammer

There are a few ways to test a jammer but the only true way is to use a laser gun, yes I know they don't grow on trees. Some dealers may have access to a laser gun and may test it for you. I often do tests for people that have fitted jammers with my laser gun. The tests are quite thorough and by the end of the tests you will be fully informed to how well it works.

It's surprising just how many jammers have been fitted wrong. Not being horizontal and vertical are the main problem, we even had one unit that gave an alert of a laser but the jamming side of the head was faulty, the tests listed below would never have found that problem.

Its important to know the tests listed below will only tell you the jammer is detecting and working, they will not tell you if the jammer would jam a laser gun, as I said before the only way to know if the jammer jams is by using a laser gun.

Test one. Items needed, TV remote control. Not all work so take what you have out with you. Point the remote at the jamming head start close and press a button, the head should alert you to an IR. Signal if not try a different button or another remote control.

Test two. Strobe light or flashgun. Firing a flash at the jammer will often make it alert.

In addition to the two tests above you can often use a Video Camera or Digital Camera to see the laser jammer working. Place the camera level with the jammer about 10ft away on record; perform one or both of the tests above and playback the camera recording, if the camera is sensitive to IR light, quite a few are, you will see the jammer firing back.

If in doubt get it tested properly using a laser gun.

I get asked all the time, what is the best jammer to have and do I need them front and back.

My answer every time is. I use on one car an LE850 (no longer made, which is a shame as I think it was the best jammer made so far) and the LRC 100 on the other car. Both units have saved me from getting tickets and were the easy to fit. **The LE850 has done over 300k miles** on a mixture of cars and as yet never failed me, the LRC 100 is still to new to know how well it will last, but it performs every time.

I have fitted the **Blinder M10 (AKA Snooper SLD 920)** on one car, it was a pig to fit because of the jammer size and the style of the car, it was also noticed **after 50k miles that one unit had leaked water** and because of this it failed. They also require careful fitting and are less forgiving if fitted slightly wrong.

I don't use a jammer on the back of any of my cars, not only is it a much harder job to fit, I don't feel the need to have one on the back, however some cars I have tested have had them on the back as well.

Both units are fitted under the number plate and are quite hard to spot. Just some of the cars tested, what was fitted and where.

BMW 5, LRC 100, Under number plate, Pass
BMW M3. LRC 100, Under number plate, Pass
Merc S500, LE850, Under number plate, Pass
Peugeot 406, LE850, Under number plate, Pass
SEAT Ibiza, LE850, Under number plate, Pass
Merc AMG 4x4, Blinder, in Grill, Fail (bad fitting)
Jeep, Blinder, Under number plate, Pass
F355, LE850, Under number plate, Pass
Rolls Royce, LRC100, Under number plate, Pass, Less than 300ft it failed.
SEAT Alhambra, LE850, Under number plate, Pass
Golf, LRC 100, Under number plate, Pass
Golf, LE850, Under number plate, Pass
Toyota Celica, Front and Back, Holes in Number plates with jammer behind, LE850, Both Pass
SEAT Alhambra, LRC 100, Under number plate, Pass
Iveco Truck, 2 x LE850, Grill, Pass
Yamaha R1, LE850, In fairing, Pass

Tests have proved that the LE850, LRC 100 are easy to self fit and work first time, almost every time. Snooper SLD920 and Blinder M10 are not as easy to self-fit and often need adjusting to work properly.

If you want some advice, please feel free to contact me or better still speak to the dealer, if they are any good they will be able to give you some good pointers.
Things you need to know after you have fitted a jammer.

A jammer will false alarm in certain conditions and you need to know about this. First of all you will see from one of the tests above that a strobe light and camera flash will set off most jammers, this is the same for any emergency strobe light (Blue lights) or orange strobe lights they will give an alert on your jammer. Lightning will also set off you jammer. Some jammers will be triggered by a powerful source of IR light, Traffic Master, ANPR and so on.

In a way these false alarms are good as it a simple test that the jammer is working, the way to react to them is to slow down while you look around for the source of the alert, the beauty about a jammer is that while you slow down you are jamming so if its a real speed trap they have not got you, if its a source of false alarm you will get used to the alerts. I now know if I see a police car with its blues on or a motorway service vehicle that I will get an alert. Remember that some jammers take 60 seconds to rearm so don't go belting off after an alert just in case there is a real trap round the corner.

Its very important to keep the lens clean, before every trip check the lens, wipe it clean if it is dirty, check it often in the winter when there is salt about, you know how bad cars get even after a few miles if there is allot or salt about.

Test it every few weeks if you can.

Don't leave you jammer on when you are ways from the car, it can zap the battery.

Final Thought.

Don't buy a jammer if all you intend to do is use it as a license to speed, they are not for that. You could still get nicked for speeding with other equipment the police have or if you stand out as driving fast even with the jammer stopping them from getting a reading they may still pull you over and question you. Use you jammer to give you the edge, use it wisely and be safe. Don't push your luck. There is no law as yet banning jammers in the UK.

Laser Jammers and the Law

There is no law as yet regarding the purchase of a Laser Jammer or the fitting of one on a motor vehicle. However the first arrest was made in February 2003 regarding the use of a Laser Jammer. The person was arrested for "Perverting the course of Justice"

This offence is very serious and carries 7 years in Jail. It is normally used to deal with people that are caught out telling lies to get away with something or gain something without actually going to court and perjuring themselves in the witness box.

Usually, the offence used to deal with interfering with speed trap readings or the speed traps themselves, such as large notices before the trap advertising its position and it is in operation, would be 'Obstruction of Police in execution of duty'.

I would imagine that because this chap was deemed to be actively employing a system to purposefully demonstrate his ability to avoid prosecution, that the officer stopping him used the offence of Perverting Justice to justify his arrest. Obstruction of Police has no power of arrest unless it is used in conjunction with the General Power under Sect 25 PACE 1984

Perverting Justice is an indictable offence (Crown Court only and very expensive).

Obstruction of Police is a visit to the Magistrates Court only and is much cheaper.

Monday, 10 February, 2003, 14:17 GMT
Arrest over speed trap 'jammer'

The device stopped the camera taking speed-readings

A south Wales motorist has become the first person in Britain to be arrested for using an electronic jammer to confuse speed traps.

The driver was found with a laser diffuser device in the vehicle by police in south Wales under a drive called the Safety Camera Partnership.

The gadget, which is also known as a jammer, works by alerting the driver to laser speed detectors and temporarily stopping it from taking a speed-reading. The car had been recorded speeding on six different occasions around Cardiff and the south Wales valleys. However, a reading of how fast it was travelling could not be obtained because the jammer device interfered with the detectors.

"The motorist in question has since been arrested for perverting the course of justice and has admitted the offence," said Sergeant Gary Smart from South Wales Police. "The partnership will not tolerate the use of such diffuser devices. "Clearly people using devices of this sort have the inclination to drive without due regard for speed limits, and are obstructing officers in the course of their duty," he added.

In the South Wales Police force area there are 33 static speed camera sites and 41 traffic signal sites. An additional 103 mobile sites with 11 mobile units are also used to catch speeding motorists. Sophisticated devices to stop the cameras from taking speed-readings can be bought from specialist websites. They work by flashing a strong laser signal to the speed detector, which causes a temporary error in the equipment and prevents a speed-reading being taken.

John Rowling, Safety Camera Partnership "While the legislation has been passed making it illegal to use radar diffusers, there is currently no legislation in place regarding the laser devices," said John Rowling from the Safety Camera Partnership. "Although the government are looking at this important issue. "The use of such devices is extremely dangerous as it gives the motorist licence to drive at inappropriate speeds, putting the safety of other road users at risk. "I hope this arrest acts as a clear warning to those using such devices to enable them to drive in excess of the legal speed limit," he added.

Defensive Equipment Tests.
GPS Location Systems Test.

Comparison Chart For GPS Based Warning Systems.

Not every feature is covered but it's a good starting block of the main features. Some information in the list may have changed so check manufactures site for latest information.

Trooper 2000 Digital Alcohol Breath Tester

First things first, I disagree with drink driving in a big way and was not keen on reviewing such a product but this product was sent to me so I checked it out.

Many of us have been to a party and stayed over. Have you ever wondered if you are still over the limit in the morning, but feel fine to drive? The Trooper will allow you to check if you are and maybe make you decide not to take the risk of driving. Alcohol effects everyone in different ways and even if the Trooper says you are under the limit you may still not be safe to drive. **Use it as a reference, not and a tool to say "I am under the limit so therefore I WILL drive" after all if you are drinking then don't drive.**

The unit came in a small box, two mouth pieces and a very simple set of instructions, but no guide to the limits in the UK, a bit of digging around and help from some readers I managed to get the BAC (Blood Alcohol Concentration) figure I needed.

You turn on the unit and its takes a few minutes to warm up, when its ready you blow into a clean mouthpiece, it must be clean, for a few seconds till it beeps at you. It then takes a few seconds to work out your BAC in %, and then displays it on the screen. With no alcohol in our test subject it gave 0.000% in the first test and 0.014% in the second test, this was okay. Each time we cleaned the mouthpiece with soapy water.

With a few drinks in our subject we got readings over 0.054% and this set off the alarm, at 0.080% or above you are over the limit. They say the unit has an accuracy of +/-7% at 0.10% BAC.

In use the unit is simple to use, easy to read and well made, the light for the LCD display is cheap and nasty but it works. **It gave constant results** and would be a great guide for the morning after. It went down very well at our local, more of a party piece.

A comparison to a police breath tester showed it was quite good, but remember they have theirs calibrated on a regular basis and unless you buy calibration kits you will not know if your reading is out.

Use it to indicate your blood alcohol level after drinking

The morning after a big night to ensure you're not still over the limit

Test blood alcohol level after a dinner or night with friends

To test how much alcohol your body can handle before going over the limit

After a night at the pub or nightclub

I would recommend one for the morning after or as a party piece, but if you intend to use it to get close to the limit and then drive home knowing you are safe from the law your a fool.



Specifications:

Sensors: semiconductor sensors (Made in Japan)

Warm-up time: less than 3 minutes

Recycle time: less than 2 minutes

Power supply : one 9V alkaline battery or DC adapter 12V

Display: LCD digital (4-digit)

Accuracy: $\pm 7\%$ at 0.10% BAC

Testing range from 0.000 % to 0.200 % BAC

Housing: ABS plastic

Mouth piece: individually wrapped and disposable with moisture trap

Temperature range: 0 to 45 Celsius

Smoking caution: waits for 5 minutes

Drinking caution: waits for 15 minutes (alcohol consumption)

Size: 66 (W) x 105 (H) x 35 (D) mm

Notes on BAC and the Law

What is BAC?

BAC is Blood Alcohol Concentration, or the amount of alcohol present in one's blood system. BAC begins when an individual consumes even a minimal amount of alcohol, and increases exponentially with each drink consumed. BAC does not distinguish between "hard" liquor, wine or beer; any alcohol consumed will increase the BAC level within an individual.

How much is too much?

While individuals rarely possess the tools to determine their own BAC, law enforcement officials do, and will not hesitate to use them if they believe a driver to be impaired. BAC can vary within an individual, due to a number of physical and environmental factors, including, but not limited to, height, weight, previous experience with alcohol and amount of food consumed prior to drinking. Because of the wide variance that exists between individuals, it is wise to make alternate

travel plans or designate a driver, when even a minimal amount of alcohol is involved in any given situation.

At what BAC level does impairment begin?

Studies show that impairment begins at any BAC level over .00, and can affect an individual's judgement and ability to react, factors that are critical to safe driving. While it is true that accepted BAC levels vary from country to country, to ensure the well being of all those on the road, the only truly safe driving is sober driving. Real change will not take place until the public recognises that driving under the influence, at any BAC level, endangers the life of the driver, his/her passengers, and all those travelling on the road. The physical, emotional and economic burdens impaired drivers inflict upon the community each year are unparalleled. No matter how one looks at it,

You Drink & Drive. You Lose.

The legal levels with regards "Drink Driving" in the UK is as follows:

80 milligrams of alcohol in 100 millilitres of blood (0.080%BAC)
35 micrograms of alcohol in 100 millilitres of breath
107 milligrams of alcohol in 100 millilitres of urine

The UK penalties:

Causing death by dangerous driving whilst under the influence of drink or drugs contrary to s3A Road Traffic Act 1988	10 years imprisonment and at least 2 years disqualification, obligatory 3 - 11 penalty points
Driving or attempting to drive whilst above the legal limit or whilst unfit through drink or drugs contrary to s5 Road Traffic Act 1988	6 months imprisonment plus a fine of £5,000 and at least 1 years disqualification, obligatory 3 - 11 penalty points
Refusing/Failing to provide a specimen contrary to s7 Road Traffic Act 1988	6 months imprisonment plus a fine of £5000 and at least 1 years disqualification, obligatory 10 penalty points
In charge of a vehicle whilst	3 month imprisonment plus a

above the legal limit or whilst unfit through drink or drugs contrary to s5(1)(B) Road Traffic Act 1988	fine of £2,500 and a disqualification, obligatory 10 penalty points

Penalty points imposed for drink/drugs related offences stay on the licence for 11 years. The requirement to provide a specimen of breath is done under s6 Road Traffic Act 1988.

Other Countries: (Guide Information)

	Limit mg%	Disqualification (maximum)	Prison Sentence (maximum)
Austria	50	1 month	Up to 3 months/ 3 years (if fatal)
Belgium	50	8 days - 5 years	15 days - 3 months
Denmark	50	24 - 30 months	Nil
Germany	50	6 months - 5 years	5 years (if fatal)
Greece	50	3 - 6 months	1 - 12 months
Finland	80	3 months - 2 years	up to 3 months
France	50	1 month - 1 year	2 months - 2 years
Ireland	80	1 year	6 months
Italy	80	15 days - 1 year	1 - 6 months
Luxembourg	80	3 months - 15 years	1 day - 3 years
Netherlands	50	6 months - 10 years	3 months - 3 years
Portugal	50	15 days - 1 year	Nil
Spain	50	3 months - 5 years	1 - 6 months
Sweden	20	3 months - 3 years	1 month - 2 years

Trafficmaster

Nothing to do with protecting yourself from getting a speeding ticket, but since I get so many e-mail's about those ***"blue posts by the side of the road"*** I thought I would cover it in a review of Trafficmaster and cover what the posts are about. I have been using the YQ a screen-based unit for about 4 years now, and love it. It does has its flaws such as a not so easy screen to read even more so now they

have updated the trunk roads, and it rattles a bit on the buttons, but that's nothing the radio does not drown out.

The unit costs around £150 and for that you get two types of dash board mounts, power lead, 1 month subscription to the service, instructions and a tape to listen to. It's dead easy to set up, and work.

You have to subscribe to the service, £100 for a year, £60 for half a year, you do this by popping along to places such as Halfords and buying a key, this then slides into the back of the YQ and your off. One thing to watch out is once the key is in it starts to count down, and even if you take it out for a few weeks and then put it back in it will knock off those days as well.

It all works quite well, but I do think Traffic master may have the odd problem in detecting tailbacks, one very good example of that was a trip I did down the A1M, a lorry carrying a crane had caught fire on the northbound carriageway, I got plenty of notice fro the YQ and went round the problem, I joined back onto the A1M just below the lorry fire, continuing southbound. The southbound carriageway was blocked, and it turns out also had built up a queue that was 18 miles long. The YQ unit showed nothing on the northbound side at all, only the southbound. A call to Traffic master confirmed my suspicion, they knew nothing about it. Now if I was northbound I would not have been happy. I have had this a few times over the last year, and it only since the new system is being used.

Overall though the system is great, one of the most noticeable things was how much it helped to remove the stress when you come up behind a queue, because you know if its not on your screen there is a good chance its not a long one and before you know it your moving again, and if its on your screen and its a long one you'll get the satisfaction knowing that you are going round it and that middle or outside lane hog that would not move is stuck in it...

Now that brings me on to all these blue posts you keep seeing on the side of the road.

Short Description. Cobalt Blue, two poles, one is short and stumpy, and the other is tall and thin. The tall one has the camera or cameras on it; some cameras are suspended on an arm out towards the road others are just on the pole. Above them are two smaller poles, these are aerial's.

I must get at least 10 e-mail's a week asking me what they are. They get mistaken for SPECS the most. As you may know SPECS has used a very similar colour, wonder why, this poses a problem to Trafficmaster who have tried to make it obvious what their cameras are so as to avoid acts of vandalism All the units from Trafficmaster have "Trafficmaster" embossed somewhere on the units.

So what do they do? Trafficmaster's PTFM technology uses special cameras to track traffic flow through points on the trunk road network, which often include roundabouts and traffic lights. These cameras read an electronic pattern enabling recognition of the central four digits of target vehicle number plates and the generation of an electronic 'tag'.

Batches of vehicle tagging data are transmitted by radio link every 4 minutes to a computer at Trafficmaster's Milton Keynes control centre, which matches up the 'sightings' of a sample quantity of vehicles. The company is then able to monitor accurately the average speed or journey time for every four mile 'link' across the country. This monitoring process is taking place 24 hours a day, 7 days a week. All data is encrypted.

PTFM can instantaneously detect accidents or incidents on the network as any unexpected change to traffic flow can be picked up within seconds. The system's software actively allows for time at traffic lights and roundabouts. It does not require sighting of every vehicle and tests have demonstrated that a small percentage of vehicles provide accurate measurement of general traffic flow. The system has been developed to recognise the digitised imaging of number plates at high speed and in all weather conditions.

In addition, the system is being developed to use neuro networks - a form of computer intelligence, which allows the software to predict the movement of traffic flows, and recognise when traffic congestion is building, or starting to disperse. Combined with navigation capabilities, the ability to record and monitor journey times centrally, means that the system would not only recognise the busiest time of travel in certain areas, but recommend only the fastest alternative routes for that particular time of day.