

Newsletter

June 2017



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President's message:

Dear Friends, Members, Associates and colleagues,

May I start by giving my apologies for my absence recently, to the point my wife had also been in contact with the Salvation Army in an attempt to find me!

I took on the role of President at the same time that I was made redundant at age 62. I had to go into the big wild world and either find a job or start my own business. Start my own business I did, and although successful, it has taken over everything else in my life. I've missed my wife, boat, children, grandchildren and contact with GAM.

I had a very pleasant coffee with Graham Ranshaw last weekend and we discussed that in a future role I will make a bigger effort to attend Sunday Runs and Committee Meetings and will stay in contact with GAM electronically when I am away on business.

Like you I'm still heavily involved in trying to educate drivers, improve their on-road skills and increase road safety through my business – a specialist driver training company. Most of my work is with the National Health Service, working in England, Ireland, Scotland and Wales. What I will say is that I do believe with these emergency response courses, it is a way that driving skills can be cascaded down through friends and family and give people a pride in the way they drive. I tell all the drivers I put through the Future Qual Btec Level 3 course that they are automatically able to receive an IAM 'First' which is a wonderful accolade to the work you are all delivering to improve safety on our roads.

Lots has changed with the IAM and I must get up to speed with it all and the only way I can do this is to make some time for myself, family and the IAM which I do want to do. Everyday is a learning day I keep saying and we as trainers, educators to people we meet through either the IAM or through professional courses run by the Emergency Services must never close our eyes to. But, I must tell you something funny that happened last week, I thought I knew it all until I was told by an 18 year old medical student that I was teaching that the marker posts on a motorway depicting distances on the A or B carriageways are in kilometres not miles!!! Why then are the motorway distances to next destination signs in miles? Countdown markers in yards? Phones are a kilometre apart and there are fifteen smaller markers between not ten? No wonder we've confusion on our roads and now that included me! I have to admit that since 1972 when I first went onto the Police Traffic department I've been telling everyone the wrong thing.

I do hope to be at future Sunday Runs, and I thank all the supporters of the Guildford Group for their continued support and efforts you all put in.

Best Regards,

Alan Bone, April 2017

President, Guildford Advanced Motorists.

IMPORTANT GAM DIARY DATES

Observed Sunday Runs for 2017:

2017 dates: June 11th; July 16th; August 20th; September 17th; October 15th; November 19th; December 10th.

Committee Meetings 2016/17 (Wednesdays)

Held in Ripley Small Hall GU23 6AF 8pm - 10pm.

2017 dates: 5th July; 6th September; 1st November.

AGM 2017 23rd September 2017; 09:00 to 13:00 hrs in Ripley Village Hall. Phil Gardener "history of Brooklands".

Member Event

Look out for events in 2017 – See the the [GAM Facebook page](#).

'A view from the cab' with local firm Cranleigh Freight Services Ltd



6.30 pm until 8.30 pm on Thursday 29th June at Dunsfold business park.

Learn about important rules and regs, driver training, the latest vehicle technology, and what it's like in the cab.

We hope to have some demo runs around the Dunsfold perimeter in an artic tractor unit.

To express interest and for more information, contact Gordon Farquharson marketing@guildford-iam.org.uk

Observer meetings 2017 These meetings will provide an important opportunity to get information and guidance, and importantly share experience and best practice with GAM peers.

Look out for venue and timing details! 2017 dates: June 24th (Ripley Village Hall, with Stuart Haythorn); August 16th; October 18th; December 13th. Apologies to Phil Headen please.

GAM Newsletters for 2017: August; November.

Deadline to submit articles for each Newsletter is the first week of the publication month.

Editorial matters

Welcome to the latest edition of our GAM Newsletter. I want to let you know about some immediate and future changes.

Bar some final tweeks, the house style (GAM, Guildford Advanced Motorists) , and the vital link to IAM's RoadSmart brand is now finalized. Some of our more mature members will see we have resurrected the drawing of the Guildford Town clock. The IAM red roundel is still the official badge for those who have passed the Advanced Driving Test, and hence we use it in this context.

Your committee have been looking closely at where we spend our money. By far and away the greatest expenditure is on printing and posting the GAM Newsletter 4 times a year. We have decided that it would use our resources better to have two e-Newsletter and two hard copy Newsletters each year. February/March will be a hard copy with membership renewal information; May/June an e-Newsletter; August/September will be a hard copy with the AGM notice; and December an e-Newsletter. The e-Newsletters will be .pdf files so you can read on screen or print in A5/A4 format. Members who aren't able to take the e-Newsletters can request 4 hard copy mailings.

Finally, we very much want to hear from our members, so please send me your views, experience and suggestions. Your comments and suggestions are valued. Letters, comments and articles should be sent to marketing@guildford-iam.org.uk .

Gordon Farquharson (Editor).

Editor's small print

Please note that the views and comments herein are published without prejudice, being those of the writers and not necessarily those of the Guildford and District Group of Advanced Motorists or the IAM.

Data Protection Act. Members and Associates are reminded that names, addresses, telephone numbers and membership details are stored on computer files to assist with the management of the group and the distribution of Guildford Group correspondence.

We do not pass your details on to anyone else.

Overseas and Continental Driving

Paul Wallace-Stock writes - With summer upon us many will be travelling overseas either with their vehicle or hiring one when in country. It is important that you know the rules and regulations in each country so that you do not fall foul of local laws. In some instances the rules do not apply to tourists; however my advice would be to abide by the local laws as far as possible as it saves an argument with the local constabulary which you are unlikely to win. If you want to check the rules on a specific country visit the AA or RAC web sites.

Documents you should take with you

A valid full driving licence (not provisional), with paper counterpart if you have a photocard license. It might also be worth getting a Driving Licence Code.

An international Driving Permit when necessary

The original vehicle registration document (Leave a photocopy at home)

Your motor insurance certificate (Notify your insurer before travelling)

Your passport with a visa if applicable

Borrowed, hired or leased Vehicles

When taking a vehicle abroad that is company owned, hired or borrowed the best course of action is to try to obtain the original V5 registration document together with a letter of authorisation from the owner.

If you can't get hold of the V5 then it is recommended that you obtain a document called a **Vehicle on Hire Certificate** also known as the **VE103b**. This document is available from the AA or RAC and is the only legal alternative to the vehicle registration document. The Vehicle on Hire certificate must be carried in addition to a letter of authorisation from the registered keeper.

You will also need a **Driving Licence Code** so that the hire company can check details such as penalty points. Visit: <https://www.gov.uk/view-driving-licence> for details.

Other things to carry:

Fire extinguisher; First aid kit; Drinking water; Money for Toll Roads; Maps.

GB sticker

Showing a GB Sticker is compulsory, and failure to comply could result in an on-the-spot fine.

Number plates that include the GB euro-symbol - have been legal since March 2001 and make display of a conventional sticker unnecessary within the EU.

In some countries outside the EU a conventional sticker is required even if you have euro-plates, so it is always safer to display one.



Reflective Jackets



It is now compulsory in many European countries for visiting motorists to carry/wear reflective jackets. In addition, as they are compulsory for residents in Norway and Portugal it is recommended that visitors also carry them.

It is recommended that each vehicle carries at least two jackets/waistcoats in the passenger compartment - one for the driver and one for a passenger. The

Jacket/waistcoat must conform to EU Standard BS EN 471: 1994 Class 1 or 2. (A jacket draped over the driver's seat will lessen the risk of being stopped)

If you intend hiring a car in one of the countries that require reflective jackets it's important to be aware that not all suppliers provide reflective jackets as standard with their cars. Check with the hire company concerned before you travel.

Headlights If you're driving to the Continent then you must adjust the headlamp beam pattern to suit driving on the right so that the dipped beam doesn't dazzle oncoming drivers. The legal requirement is to 'not cause dazzle to oncoming drivers' rather than specifically to adjust/convert headlamp beam pattern. Even if only a short trip and your plans do not entail driving at night, delays can not be predicted or the weather can change suddenly always adapt your headlights or at the very least take the means with you to do so. Headlamp beam converter kits are widely available but may not all be suitable for all types of headlight – check application lists carefully. Dipped headlights are required during the day in poor visibility. It is not sufficient to rely on Daylight running lights as they do not, in most vehicles illuminate the rear lights.



Spare Light Bulbs Many countries require you to have a selection of spare light bulbs in case of breakages. It is not always easy to find the correct bulbs when you need them.



Warning Triangle It is compulsory in most European countries to carry a warning triangle. Spain requires the carriage of 2 triangles for Spanish vehicles and local law enforcement officials may impose a fine if visitors only have one.



Speed-trap detection devices The use or possession of devices to detect police radar is illegal in most European countries. Penalties can include a fine, driving ban and even imprisonment. Some countries now also prohibit the use of GPS based navigation systems which have maps indicating the location of fixed speed cameras meaning that you must deactivate the 'fixed speed camera PoI (Points of Interest)' function. Be aware that overseas authorities can request the details of a vehicle owner from DVLA – so speeding is no longer risk free!



Restricted Traffic Zones Traffic is restricted in many historical centres/major towns in Italy known as 'Zone a Traffico Limitato' or ZTL's. Circulation in these areas is either fully prohibited, only permitted for residents or there are time restrictions that apply. Entering such areas whether using your own car or a hire car will almost certainly result in you receiving a fine by post, sometimes many months later. Germany has similar rules, 'Anlieger Frie', where only residents or those visiting residents are permitted on some roads



First Aid Kit Compulsory in Austria and Croatia, recommended in a number of other countries. Makes sense to carry one.



Clean Air Stickers. In France all vehicles are required to have a Clean Air Sticker when entering certain cities. For France you can apply on line at (<https://www.certificat-air.gouv.fr/en>). The cost is about £3.20 (beware of fake websites as the cost can be many times this) but the 'on the spot' fine for failure to display is up to £117. Be warned it can take up to 6 weeks to get the sticker, so apply early.



In Germany there are Emission Zones (Umweltzone) and are enforced in certain cities only. They cost between €5-10. The fine for non-display is €80. The sticker can be obtained in country from any TUV service station which does testing. You can also buy it on line in advance but again be aware of scam websites. Seen one charging €31!!! You do not need a sticker if you will not be entering a city with an Umweltzone.

Other General points.

Speed limits. These vary so check each country.

Parking Disk. Some countries require these. Obtain from local shops.

Belgium. Cruise control is banned on congested motorways.

Austria. No overtaking a school bus when it is stopped and yellow light flashes.

All vehicles using motorways must have a tax sticker.

France All drivers should possess a breathalyser. Currently a driver cannot be penalised for not carrying one and the fine has been postponed indefinitely. However it would be wise to carry one. The breathalyser has to be certified by the French authorities, showing an 'NF' number. The official text states that one unused breathalyser should be produced. It is recommended that two single-use breathalysers are carried, so if one is used or damaged you will still have a replacement to produce.

Children under 10 in the car must travel in the back.

Germany. Driving on sidelights is prohibited. Well done the Germans!

Emission Zone(Umweltzone) sticker required in some cities. Cost €5-10.

Holland. Driving on sidelights is prohibited. Another sensible nation.

Buses have right of way when leaving bus stops in built-up areas.

Portugal. Illegal to carry bicycles on back of passenger car.

Need to carry Photographic proof of identity.

Spain. Reduced speed limits in order to save fuel.

Only full 'hands-free' phones allowed. Earpieces not permitted.

Check the parking rules in cities.

And finally don't forget your breakdown cover.

Happy Holiday, Paul Wallace-Stock

May 2017

CONTROLS, GADGETS & GIZMOS: No.4

'Surprising range of safety and driver assistance aids in the new 2017 Honda Civic'

Advanced Drivers should always be in command of the technology in their vehicles, use it to their advantage, and be safe when it is off or fails. Also, most importantly, IAM Observers need to have a good understanding of what's out there.

I was recently testing a couple of modest current model Honda Civics in May. Whilst I must admit whilst I thought I was aware of most driver and safety aids, I was somewhat amazed at the scope of the technology on this car. Clearly these systems won't be unique to Honda, I'm sure other car manufacturers will offer similar attributes. This article is not an IAM/GAM endorsement of the Honda product or systems. In this article, I have used information and terminology from Honda for clarity. Some of these systems may not be available on European specified cars.

The sales literature tells us that the 2017 Civic incorporates Honda's latest active safety, passive safety and driver assistance devices.

Active safety features include a suite of Honda Sensing™ features that can help avoid a collision. An Auto-High-Beam System (AHB) is offered for the first time. When set to auto, the high

beams are automatically selected until an integrated camera detects and oncoming or preceding vehicle in the vicinity, when the system automatically selects dipped or low beam.

Traction control and ABS gets more sophisticated, and Honda call it "Vehicle Stability Assist™ (VSA®) with Traction Control"

Vehicle Stability Assist™ (VSA®) is an Electronic Stability Control system that works in conjunction with the Drive-by-Wire™ throttle and the 4-channel ABS systems to enhance control capability while the vehicle is accelerating, braking, cornering or when the driver makes a sudden manoeuvre. VSA functions by applying brake force to one or more wheels independently while also managing the throttle, ignition and fuel systems to help the vehicle maintain the driver's intended path of travel. VSA also provides a limited-slip differential effect for the front wheels by applying braking force to a slipping wheel, thereby redirecting driving force to the wheel with more traction. By pressing the VSA button, the driver can temporarily reduce the traction control effectiveness, allowing more wheel slip during stuck condition. ABS remains fully operational at all times. **Brake Assist** is a function of the VSA® system, Brake Assist recognizes emergency or hard braking situations and almost instantly applies added braking force to ensure maximum stopping force, an action that can help shorten braking distance.

Driver aids: Indirect Tyre Pressure Monitoring System. The Civic's indirect Tyre Pressure Monitoring System (TPMS) uses wheel-speed data collected by the ABS system to determine when the air pressure in one tyre drops below the recommended minimum. The system relies on the detection of differential wheel rotation speed caused by deflation. When this occurs, a symbol illuminates on the instrument panel to warn the driver. **Multi-Angle Rear-view Camera.** The camera can show a top view, normal or wide view when the transmission is in Reverse, based on the driver's selection. **Honda Sensing™** helps provide greater awareness of driving conditions around the vehicle, providing warnings to the driver and, under certain conditions, aiding the driver in avoiding or mitigating the severity of a collision. Honda Sensing™ features include the following:

- Collision Mitigation Braking System (CMBS™)
- Forward Collision Warning (FCW) – Integrated with CMBS
- Lane Keeping Assist System (LKAS)
- Road Departure Mitigation (RDM)
- Lane Departure Warning (LDW) – Integrated with RDM
- Adaptive Cruise Control (ACC) with Low Speed Follow (LSF)

Collision Mitigation Braking System™. The Collision Mitigation Braking System (CMBS), is one of the most sophisticated driver-assistive technologies available. A millimetre wave radar unit, located behind the front grille, and monocular camera, located between the rearview mirror and windshield, scans traffic conditions ahead of the vehicle. When the system determines a collision is possible with a detected vehicle, the integrated Forward Collision Warning (FCW) system's visual and audible alerts prompt the driver to take corrective actions. The visual alert appears on the Multi-Information Display (MID). If the situation is not resolved, CMBS can apply different levels of automatic braking action to help reduce vehicle speed and eventual collision forces, and therefore to help reduce the severity of a collision if the driver doesn't take corrective action on their own. The radar unit and camera work simultaneously and cooperatively to control the VSA modulator, which initiates any required braking.

Due to the effectiveness of its monocular camera, CMBS can recognize shapes and differentiate between a vehicle and a pedestrian, warning the driver in each case.

It is important to note that CMBS cannot detect all objects ahead, nor is it intended to replace the driver's assessment of traffic conditions and control of the vehicle. The driver must intervene in certain situations, and must always be attentive when using the system. Although in many cases CMBS will stop the vehicle, it is not intended to apply enough braking force to prevent all collisions. Based on the conditions, the system also may not perform all visual- and audible-alert stages, and may instead automatically engage the brakes if the system deems it necessary. CMBS may be turned off by pressing the CMBS button on the left side of the dash.

Lane Keep Assist System. This technology is for the US market currently, and is intended to provide a less stressful driving experience by reducing the need for steering correction movements and driving effort on the highway. LKAS uses a camera to read lane markings and uses Electric Power Steering (EPS) to assist the driver in maintaining their position within the lane. Designed for the U.S. road structure, the system uses a monocular camera mounted on the upper portion of the windshield to identify painted lanes, Botts' dots (US roadway markers) and cats eye markers at speeds between 45 mph and 90 mph. When LKAS senses that the driver is drifting from the middle of a detected lane, the system generates corrective steering torque to assist the driver in maintaining lane position. Drivers using LKAS need to keep their hands on the steering wheel and their eyes on the road.

Road Departure Mitigation. Integrating Lane Departure Warning (LDW) (see below), Road Departure Mitigation (RDM) uses a monocular camera (mounted on the upper portion of the windshield) to identify solid or dashed painted lane lines, Botts' dots and cats eye markers. RDM uses steering force, via EPS to help the Civic Hatchback stay in its lane and, if the vehicle is detected leaving a lane marked by solid lines, braking force, via Vehicle Stability Assist (VSA), to keep the vehicle from departing the lane or roadway altogether.

The monocular camera recognizes lane features and identifies the lane. If the RDM system determines that the car is about to leave a detected lane, it will provide steering assist (primary) and in rare occasions when steering assist is not sufficient to avoid leaving a lane marked by a solid line, braking assist, to help the driver stay on the road. RDM is integrated with the VSA system to provide moderate braking, and with the Electric Power Steering (EPS) system to provide steering input.

Multiple visual warnings alert the driver when the RDM system is taking corrective action. These include a lane departure warning on the driver's Driver Information Interface (DII) along with a steering wheel vibration as an initial warning.

RDM also has customizable timing of the initial warning of the steering wheel shake/vibration. This can be adjusted in the vehicle settings. RDM can be turned off by using the RDM Off button on the left of the dash.

Lane Departure Warning – Integrated with RDM. Lane Departure Warning (LDW) is designed to alert the driver if the vehicle is leaving a detected lane without the turn signal being activated. The system functions at speeds from 45 to 90 mph on straight or slightly curved roads, alerting the driver of deviations from a detected lane. The LDW system utilizes the same upper front windshield camera used for LKAS and RDM and provides the visual and haptic alerts prior to the other systems actively engaging.

If the vehicle begins to move out of a detected lane without the turn signal activated, LDW illuminates a Lane Departure message on the Multi-Information Display (MID) and oscillates the steering wheel, advising the driver to take appropriate action. The system can be activated and

deactivated by pressing the LDW button located on the instrument panel, to the left of the steering column.

There are certain conditions under which the system may not engage or operate, including inclement weather (e.g., snow, ice or heavy rain) and extreme cabin heat (due to operability of the camera). The system will automatically suspend operation when the brakes are applied or the turn signals are used. LDW may not detect all lane markings or lane departures; accuracy will vary based on weather, speed and road condition. The driver remains responsible for safely operating the vehicle.

Adaptive Cruise Control with Low-Speed Follow. Adaptive Cruise Control (ACC) with Low-Speed Follow (LSF), available on CVT equipped models, and allows the driver to set a desired speed and following interval from a vehicle detected ahead, allowing the use of cruise control in light traffic conditions. This significantly reduces the driver stress of driving in traffic. The system uses the millimetre wave radar and monocular camera to continually track the distance to the vehicle detected ahead, and then adjusts the car's speed to maintain the set following interval. A short, medium, long, or extra-long interval can be selected. When required, the vehicle automatically brakes using the VSA modulator. Integrated Low-Speed Follow (LSF) extends the automatic following capability to stop-and-go traffic situations (down to 0 mph).

ACC operates in the following ways in the listed circumstances:

- **A preceding vehicle is detected in the lane ahead** – Decelerates automatically, if required, and then controls the following distance.
- **The preceding vehicle slows to a stop** – Stops automatically and remains stationary.
- **The preceding vehicle accelerates from a stop** – Resumes following when the SET or RES switch or accelerator pedal is operated.
- **Another vehicle merges in between the Civic Hatchback and the preceding vehicle** – Automatically switches "targets" to the nearest detected preceding vehicle.
- **The preceding vehicle exits the lane** – ACC system continues at cruise-control speed previously selected by driver (25 to 90 mph).

Impact on IAM GAM Observers:

We are not suggesting that these safety and convenience aids are necessary or should be fitted to all cars. However, drivers and observers are going to meet these systems more and more frequently. In the first instance, we need to be aware of what is going on out there. GAM is planning to recommend that Associates have a check-list for their car, and share with Observers and Examiners what is fitted, and whether it is ON or OFF.

Gordon Farquharson

GAM April 2017

Need a refresher?

Lost some of those finely tuned skills?

Book a refresher drive with our GAM Associate Co-ordinator and get back to 'test standard' with our experienced volunteer Observers.

All it takes is an hour or so of your time and a gallon or so of fuel.

Call Paul on 01252 519355 and arrange an appointment for 11:45 on one of our Sunday Runs – it's free for Guildford Group members.

Advanced Driving in an Electric Vehicle (EV)

Advanced Driving in an all electric (EV) car. BMW i3, courtesy of BMW Vines Guildford.



This test was carried out by Gordon Farquharson and Graham Ranshaw (GAM observers) over 170 miles of varied driving in mid-April 2017. GAM greatly appreciated the interest and support provided by Jamie Lowther at Vines of Guildford for providing the car for two days of independent testing. Our purpose wasn't a sales oriented appraisal, but had a strong focus on the driving experience, and to provide guidance to owner/drivers and GAM Observers wishing to put into practice Advanced Driving techniques in this type of car.

For the technically minded:

The car was a brand new 2017 BMW i3 with a 96 A-hr (27 kWh) capacity battery.

The kerb weight is 1400 kg (R/E - Range Extender version).

Maximum motor output 170 bhp (125 kW); Maximum torque 250 Nm; driving the rear wheels.

Acceleration 0-60 mph 7.3 secs (8.1 secs R/E model) – really quite a quick car.

Top speed 90 mph restricted in energy efficient Comfort mode.

Practical range 110 miles; with an additional 80 miles range achieved with Range Extender version on a single tank of petrol (this comprises a 600cc 2 cylinder petrol engine driving a generator purely to charge the battery).

Battery Charging time – 10, 4 or $\frac{3}{4}$ hr depending on method available (13 amp, 30 amp, and DC charging respectively).



50%

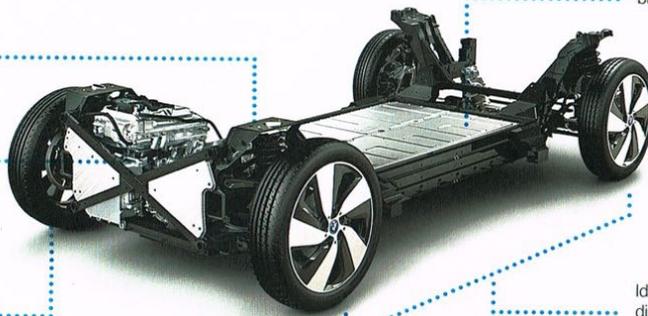
lighter than steel, carbon is also exceptionally strong.



High-voltage lithium-ion battery.¹

Optional Range Extender for longer drives.

Electric motor with transmission and power electronics.



Rear-wheel drive.

Ideal 50:50 axle load distribution.

First impressions:

We found this immediately an engaging and enjoyable car to drive. You must have an open mind and recognize that the feel and experience is different from any internal combustion engine vehicle, including even the most sophisticated automatic and hybrid vehicles. It's the instant torque availability that is most striking, delivering exceptional 0-40 mph acceleration!

There are some novel high-tech toys also, including a smartphone APP that allows you to interrogate the car's systems, and even remotely pre-heat it for winter driving. There's no engine to warm-up, so once prepared you're ready to go. This is ideal for local and town use.

So, what do we mean by engaging? It of course depends a little on your reference point. Both Graham and Gordon are experienced with high-performance motor cars, and this is perhaps not really the comparison that one should make when choosing a vehicle like this. However, the acceleration, ride, handling, and directness of the steering made this an enjoyable driving experience. The fact that you don't have any gears to change, means the closest comparison would be with an automatic car with 7/9 speed gearbox or a CVT transmission. The main handling compromises, although small would seem to come from the use of very narrow low rolling resistance tyres. However, the tyre technology on the i3 is really quite clever. See the interesting Bridgestone derived information at the end of the article about the tyres used.

The prime IAM objectives of safe, progressive, smooth, and economic driving are all readily achievable in this vehicle, although it is essential to understand the technology, and adapt your driving style to the unique aspects of the gearless direct drive electric motor, the associated regenerative braking effect, and the importance of energy recovery.

POWDERY

All our IAM principles can be applied directly with one exception, that is range planning. It is interesting that about 75% of i3s sold in the UK are supplied with the optional petrol engine Range Extender. This is a 600 cc two cylinder motorcycle engine connected to a generator, operating at the most efficient constant speed of around 3000 rpm, and purely used for top up charging of the high voltage battery. So, you clearly need to understand whether your vehicle has this capability are not, and in any event, ensure that your journey fits within the range available. The instrumentation gives real-time information on the remaining range available, and the sat-nav system can provide you information on available charging stations en-route.

Cockpit drill.

The cockpit drill on start-up will be very like any other highly instrumented vehicle, with the instrument panel giving you an array of information, and warning lights that should be observed and checked for normal modes before setting off. The start-up procedure is rather different from an internal combustion engine or hybrid vehicle because effectively you are just switching the machine on. However, there are various interlocks between the foot brake and transmission selection, and the function of the parking brake. The parking brake is electronic, and auto releases as you depress the accelerator to start moving (either forward or reverse). This effectively prevents rollback.

For an IAM observer, it would be very important to ensure that an IAM associate is fully conversant with the functionality of the controls, and can explain these effectively for the benefit of an observer or an examiner during an IAM Advanced Driving Test

Driving the car.

What's different in an i3? You need to adjust and learn some new rather different driving skills, consistent of course with IAM objectives.

The single aspect of an all-electric vehicle like the i3 that is quite unique, and has to be mastered, is the braking effect due to electrical regeneration as you slow down. This occurs when you reduce the pressure on the accelerator. The best way to describe this is 'one pedal driving'.

During the first drive of the car from Vines in Slyfield Guildford to the village of Ewhurst, passing through the centre of Guildford, it was only necessary to apply the foot brake on a couple of occasions. The foot brake provides frictional braking effect on all 4 wheels, through standard pads and discs, and is clearly intended only to be used to provide more aggressive braking or to hold the vehicle stationary on foot brake. During normal driving, progressive braking is achieved through reducing the pressure on the accelerator pedal. You can bring the vehicle to a complete halt, at a Junction for example, simply by progressively reducing the pressure on the accelerator. This is completely different from the approach you would adopt in a manual, automatic, or hybrid transmission car. In all those cases you would normally remove pressure from the throttle, and progressively adjust the pressure on the brake to slow down or stop for a hazard. It takes quite a while to develop this rather different skill of delivering all the speed control through one pedal. There are many situations in a conventional manual, automatic or hybrid car, where, on approaching a hazard, we simply 'come off the gas' to slow a little. In an i3, you need to come off the accelerator sufficiently to slow just enough. Much more judgement is required.

There are some safety systems that are a little different on a i3. The frictional brakes have a normal ABS system. We tested this on a loose surface, and it worked as expected, with the normal kick-back felt through the brake pedal, and the vehicle being readily controllable. The regenerative braking system (on the rear wheels only), is also provided with an anti-lock function. If the regenerative braking effect were to cause rear wheel locking, an ABS function prevents this. The regenerative braking effect makes getting the accelerator balance right for corners something needing lots of practice.

Clearly from a good driving practice perspective, and certainly an IAM essential, we would expect the competent driver to understand the accelerator functionality, and carefully control the deceleration before a bend and apply level or slightly leading accelerator opening through the bend, and progressive acceleration once the hazard has been cleared. We tested firm acceleration on a loose surface tight turn, and found that the traction control system effectively prevented the vehicle from spinning.

The traffic light drill, when you wish to remove your foot from the friction brake, to prevent brake lights shining in the face of the driver behind, or to rest your foot is extremely simple because the parking brake is an auto-release type. Having come to a halt, apply the foot brake, and then apply the parking brake, and remove your foot from the foot brake leaving the vehicle in drive (D). With your foot off the accelerator, there is no drive against the brake. Moving off simply requires pressing the accelerator pedal progressively.

Tyre technology used on the BMW i3

The following information is taken from Bridgestone literature about the car and their tyre development. According to Bridgestone, the tyre manufacturer worked with BMW from the i3 programme's inception, so the i3 was designed and built almost literally from the ground up with the tyres in mind. Everything from the suspension geometry to the ride quality to the energy efficiency depends on the EP500's unusual proportions.

The i3's tires are unusually narrow. Measuring just 155mm wide, the rubber is significantly narrower than the **Fiat 500e** (185mm), the **Nissan Leaf** (205mm), and the **Ford Focus Electric** (225mm). On paper, conventional knowledge points to the i3 having less grip and poor performance, but there's more to this tyre than its width.



Looking at the EP500's entire designation: 155/70R19 for the stock car, base setup. The 155 represents the width in millimetres, which we've already discussed, but things get interesting from there. The number 19 at the end indicates that the tire is designed for a 19-inch wheel -- larger than anything offered by the i3's competition -- and the 70 in the middle designates the tyre's aspect ratio. An aspect ratio of 70 on a 19-inch, narrow tread offers an unusually narrow tall wheel for a vehicle of this size, almost motorcycle proportions.

Once the tyres are fitted, and are subjected to the weight of a car, the rubber deforms and flattens against the road ever so slightly, forming a grippy contact patch. The EP500's larger diameter and circumference mean that this tyre has a slightly larger contact patch when measured front to rear. This makes up for the compromised width and means that when it's time to turn, there's still enough contact area to provide adequate grip.

What Bridgestone and BMW have done, essentially, is rotated the i3's contact patches by 90 degrees -- going long and narrow rather than broad -- but why? For the i3, a tall and narrow tire carries a few advantages, according to Bridgestone, the narrow EP500 creates less aerodynamic drag as the electric hatchback rolls along and works with the 'Ecopia' low rolling resistance compound to reduce efficiency losses to friction when cruising. Bridgestone also claims that the narrow width is more resistant to hydroplaning, which boosts the i3's wet driving performance."

The Revised Driving Test (DSA for new drivers) – 4 key changes

1. Independent driving part of the test will increase to 20 minutes

The independent driving part of the test currently lasts around 10 minutes. During this part of the test, you have to drive without turn-by-turn directions from the driving examiner. This part of the test will be made longer, so it'll last around 20 minutes – roughly half of the test.

2. Following directions from a sat nav

During the independent driving part of the test, most candidates will be asked to follow directions from a sat nav.

The examiner will provide the sat nav and set it up. You won't need to set the route – the examiner will do this for you. So, it doesn't matter what make or model of sat nav you practise with.



You can't follow directions from your own sat nav during the test – you have to use the one supplied by the examiner.

You'll be able to ask the examiner for confirmation of where you're going if you're not sure. It won't matter if you go the wrong way unless you make a fault while doing it.

One in 5 driving tests won't use a sat nav. You'll need to follow traffic signs instead.

3. Reversing manoeuvres will be changed

The 'reverse around a corner' and 'turn-in-the-road' manoeuvres will no longer be tested, but you should still be taught them by your instructor.

You'll be asked to do one of three possible reversing manoeuvres:

- Parallel park at the side of the road
- Park in a bay – either driving in and reversing out, or reversing in and driving out (the examiner will tell you which you have to do)
- Pull up on the right-hand side of the road, reverse for 2 car lengths and rejoin the traffic

4. Answering a vehicle safety question while you're driving

The examiner will ask you two vehicle safety questions during your driving test – known as the 'show me, tell me' questions.

You'll be asked the:

- 'tell me' question (where you explain how you'd carry out a safety task) at the start of your test, before you start driving.
- 'show me' question (where you show how you'd carry out a safety task) while you're driving – for example, showing how to wash the windscreen using the car controls and wipers.

Transport Minister, Andrew Jones, said:

"Our roads are among the safest in the world. However, road collisions are the biggest killer of young people. These changes will help us to reduce the number of people killed or seriously injured on our roads and equip new drivers with the skill they need to use our roads safely."

NEWS & GUIDANCE FROM IAM

Don't get too 'tired' ... tips from IAM RoadSmart

Sometimes it seems the roads have it in for us and our tyres can't cope. If you are like the many that do not have the pleasure of having run flat tyres you may have to experience the 'fun' of waiting on the hard shoulder for a breakdown recovery team. This week's tips give advice on how to change car tyres, from IAM RoadSmart's head of driving and riding standards Richard Gladman.

- If it is possible pull off the road to a safe secure area - changing a wheel with traffic inches away from you is not safe. If you have to stop on a road, place your warning triangle at least 45 metres behind your vehicle. Activate your hazard warning lights to warn other traffic. Raising the bonnet or hatchback will help other traffic realise you have an issue. If you have a passenger get them to act as spotter and warn you of approaching traffic.
- A level hard standing will be best, soft ground will not allow the jack to be used correctly. If the ground is not suitable you may need assistance from a professional.
- Locate the jack and wheel brace, it may help if you do this during your weekly vehicle checks so you know where it is and how to release it. This is also a good time to locate the jacking points and find out how the jack works. Often the kit will have a wheel chock; use this on the other axle of the vehicle to assist keep it still.
- Loosen the wheel nuts slightly before you start jacking the car up, the vehicle will be unstable after you raise it and you will not be able to get as much leverage. Remember one of the nuts is likely to have a lock function and will require the unique key.

- When jacking the vehicle you will need it to be raised high enough to fit the new tyre (this will be higher than required to remove the old). Wear gloves when handling the old tyre, if it has punctured it is likely to have sharp steel protruding from it.



- Tighten the wheel nuts until the wheel sits squarely on the hub and then lower the jack. Further tighten the wheel nuts with the vehicle stable. You will need to get the wheel nuts checked for tightness by a professional (when you repair or replace the punctured tyre). If fitting a space saver spare, remember the restrictions that imposes i.e. no more than 50mph (80kph) and should be used to get you to a place of repair - not as a substitute for the correct tyre.

- Avoid changing your wheels on the hard shoulder of a motorway. If you have a puncture on a motorway, contact the Highways Agency or the police for assistance before you attempt any repair. They will attend and assist to make the area safe for a tyre change to be conducted

Richard Gladman says: "Punctures are much rarer these days but the risk associated with conducting a tyre change has increased with the volume of traffic. Safety has to be your main concern if you cannot get to a safe area to make the change; get the vehicle off the road and call for assistance. A vehicle recovery service will have access to professional equipment which will allow a much speedier repair to be conducted. If you are in any doubt, call for help."

Satellite navigation systems

Satellite navigation systems (sat navs) are a must have these days but many road users fail to use this travel companion in the correct or safe manner. In a recent simulator study looking at a variety of distractions, programming a sat nav had the biggest negative impact on driving standards. This week's tips give advice on riding and driving with a sat navs, from IAM RoadSmart's head of driving and riding standards Richard Gladman.

- Programme your journey before you set off. Looking at your sat nav system to make changes to your destination is a distraction and may prove to be dangerous. If you need to make an alteration find an appropriate place to stop.
- Get to know your system; being able to mute or activate voice commands without having to look at the system will be useful. Features such as live traffic updates and road works warnings will help in planning your arrival time. A state-of-the-art system will offer route changes where time savings are possible.
- If you are buying a stand-alone unit or picking up your new car with a built in sat-nav ask for a demonstration of the features. It can be frustrating trying to 'educate' a different system to your way of working.
- If you are using your phone as a navigation device make sure it is securely mounted and programmed prior to departure. Being a mobile, notifications, message alerts and calls can pop up. Do not be tempted to respond or touch it as you may fall foul of mobile phone legislation.
- Don't attract thieves. Remember to take off your sat nav and pop it in the glove compartment and wipe down the window so there is no tell-tale ring marks pointing a thief in the direction of your car

Driving safely with hay fever

A sneeze or sniffle has a way of creeping up on you, especially when you least expect it. Hay fever seems to affect many of us. This week's tips give advice on riding and driving with hay fever, from IAM RoadSmart's head of driving and riding standards Richard Gladman.

- Keep your car clear of dust and pollen by vacuuming carpets, mats and upholstery; this will help reduce the problem. Check to see if there is a pollen filter available for your car - if you have one installed, does the filter need changing?
- Keeping your windows closed and setting your air-conditioning to recycle will reduce pollen concentrations in your vehicle. Give the vents a good blow through with cold air when you are not in the car to remove any dust that may be in them.
- Taking the right non-drowsy medication is vital - charging into the chemist with an itchy nose, and eyes running to pick up the nearest antihistamines can be costly and could cause drowsiness. Always read the label, or better still ask the pharmacist.
- Keep tissues close by to avoid taking your eyes off the road. Putting a few dabs of Vaseline inside your nostrils will also aid in trapping pollen.
- Slow down or drop back from the vehicle in front if you think you're going to sneeze. If you can do it safely, stop. If you are one to have a sneezing fit we recommend finding an appropriate place to stop and allow yourself to recover.
- Wearing sun glasses can help – but make sure they don't have a negative impact on your vision through windows that are already tinted.

Richard Gladman said: "If you are struggling to see and sneezing as well, you can't be safe on the road. Visit your pharmacist or GP to see if they can offer driver-friendly medication. Here is a link so you can check your medication effects <https://www.gov.uk/drug-driving-law> . If in doubt stay off the road and look for another mode of transport.

GAM MEMBER INFORMATION

New Associates

We hope you enjoy your observed runs and wish you luck taking your Advanced Driving test. As you can see, we have a large number of new recruits, and hence we have a waiting list to start runs. Welcome to:

Peter Juson	Reginald Bull
Graham Orrick	David Simkin
Ben Goulter	James Abraham
Duncan Geoffrey	David Holroyd
Gerald Blues	Tracey Mortimer

Recent Test Passes Congratulations to:

Congratulations on passing your advanced driving test; keep up the skills you have demonstrated. Have you thought about the next stage? Masters; become a GAM Observer.

Julian Saunders	David Kingham
Emma Swaine	Marek Hutchins
Paul Mullins	Jeff Robinson
Neil Fuller	Nicole Williams



IAM Masters Roll of Honour

We're delighted to congratulate 2 new Masters who have recently joined this elite group of members:

Peter Laub	2013	Phil Headen	2016 Distinction
Howard Quinnell	2013	Ben Bridge	2017 Distinction
Dmitri Savin	2016	Graham Ranshaw	2017 Distinction
John Holtcroft	2016 Distinction		

Editor

Officers and Committee Members

PRESIDENT	Alan Bone	
CHAIRMAN	Graham Ranshaw	chairman@guildford-iam.org.uk
VICE CHAIRMAN	David Mesquita-Morris	Vice.chairman@guildford-iam.org.uk
SECRETARY	Paul Whitehead	sec@guildford-iam.org.uk 01276 472354 – 07860 600477
TREASURER	Michael Tilney	treasurer@guildford-iam.org.uk
ASSOCIATE CO-ORDINATOR	Paul Wallace-Stock	associates@guildford-iam.org.uk 43 Manor Road, Farnborough, GU14 7HU 01252 519355
CHIEF OBSERVER	Phil Headen	chiefobserver@guildford-iam.org.uk
MEMBERSHIP SECRETARY	David Pearce	memsec@guildford-iam.org.uk 17 Burpham Lane, Burpham, Guildford, GU4 7LN – 01483 505389
NEWSLETTER & Website EDITOR	Gordon Farquharson	editor@guildford-iam.org.uk
EVENTS CO-ORDINATOR	Gordon Farquharson	marketing@guildford-iam.org.uk
TRAINING OFFICER	John Holcroft	training@guildford-iam.org.uk
COMMITTEE MEMBER	John Panting	48 Linden Way, Send Marsh, Ripley, Woking, GU23 6LW – 07713 485547
FRONT DESK MANAGER	Jacqui Mesquita-Morris	07706 930 315

Observed Runs

SUNDAY Observed Runs: These are our main training runs. They will normally be conducted on the 3rd Sunday of each month (2nd Sunday in December) at 9.15am and 10.30am – refresher/taster drives at 11:45 am.....See the 2017 dates on page 2.

Location for SUNDAY Observed Runs:

Guildford Borough Council Woking Road Depot, Guildford, GU1 1QE (see map on back page).

Front desk manager - Telephone contact number 07706 930 315.

ALTERNATIVE Observed Runs (non-Sunday): We can also offer some limited alternative observed runs on other days subject to availability of observers. These may be helpful if you need additional support or are unable to attend a regular series of Sunday runs. Meeting arrangements will be handled by your Observer. Make sure you have his/her contact details.

Appointments for Observed runs - contact the Associate Co-ordinator:

e-mail associates@guildford-iam.org.uk; tel 01252 519355.

Can't make your Observed run appointment? We try to match the number of available Observers (all volunteers) with the number of booked Associates, but sometimes we realise things can go wrong. If you cannot attend your booked appointment please let us know. Call the Associate Co-ordinator on 01252 519355 any time, or on the morning of your appointment please call Jacqui Mesquita-Morris on the front desk 07706 930 315.

About the IAM RoadSmart – Advanced Driver Course

Course overview:

Do you want to join a driving elite and be one of the most skilled drivers on Britain's roads?

In the 60 years since IAM was founded, half a million people have qualified as advanced drivers on our flagship Advanced Driver course – the only one accredited by the DVSA. With a commitment of three to six months to complete the comprehensive course and some practice, you could add your name to the list, and enhance your driving skills.

So what can you expect from our advanced driver course? Sign up and you'll receive a welcome pack and course manual, followed by an introduction to your nearest local IAM RoadSmart group of volunteers. Our skilled experts, all Institute of the Motor Industry (IMI) qualified, will take you through a number of observed drives in your own car.

Each session with your expert lasts a couple of hours and you'll focus on specific skills to develop across a wide range of competencies, where you'll need to demonstrate your newly acquired advanced driving skills such as, control, observation, timing, optimum road positioning, ability to deal with unpredictable roads and other road users' behaviour. When you're ready, you'll take the advanced driving test.

As well as gaining recognition for your skills, once you're qualified you'll become a full IAM member and you can often receive insurance benefits as a result - around 90% of our members do.

You'll also feel more confident and safer on the road and if you drive for a living an Advanced Driver qualification can add Brownie points to your CV.

IAM RoadSmart - Advanced Driver Course - £149

The course is purchased directly from IAM RoadSmart via their website. Once purchased, IAM RoadSmart inform us (GAM), and you are added to our Associate Membership. We then contact you and let you know when to start. A part of the fee is transferred to GAM in recognition of our role as an approved provider.

<https://www.iamroadsmart.com/courses/advanced-driver-course->



Entitles the Associate to Observed Runs in their own vehicle during the 12 months following the date of their first appointment, and includes:

- the cost of the IAM Advanced Test
- the first year's membership of the Institute from the date of the first run
- copy of 'Advanced Driving' course manual
- copy of the Highway Code
- Associate membership of the Guildford Group

The next stage – Have you thought about the IAM RoadSmart Masters programme?

Open to all current IAM members, the IAM RoadSmart Masters programme provides true one-to-one mentoring support and guidance that will help you to attain the highest standard of civilian driving or riding ability in the country. Building on your skills as an existing advanced road user, the Masters programme will help to enhance and develop your ability even further in the following areas:

- Applying cornering principles
- Assessing, planning and executing safe overtaking manoeuvres
- Recognising opportunities to make safe progress (within the speed limits)
- Improving observation, anticipation and awareness consistent with vehicle speed

- Applying sound judgement of speed and distance
- Delivering a fluent, relevant and continuous commentary

Once you and your mentor feel that you are ready, we will offer you a ninety minute test that includes both a theory session and an extended drive or ride. To challenge you the Masters test will be conducted on roads unfamiliar to you, and may therefore involve travelling a fair distance from where you live. You will be scored on a series of criteria and able to achieve either a **Pass** or a **Distinction** award.

- The programme consists of:
- A personal logbook
- The latest copy of Roadcraft (or Motorcycle Roadcraft)
- An introductory drive or ride
- A dedicated Mentor
- Typically up to six sessions or 10-12 hours of mentoring (a top-up is available to purchase for those who require more mentoring to become a Master)
- Invitation to participate in group training and development days

Our Masters qualification is valid for FIVE years after which time we will invite you to re-qualify. The current price of the re-qualification is £129 and upon passing you will be awarded either a Pass or Distinction and the online Register updated. For those riders and drivers who feel that they are at the required level already a 'test only' Masters option is available. This does not include any mentoring and candidates will be expected to demonstrate a very high level of skill and knowledge based on the criteria above. Candidates must demonstrate a good knowledge of the Highway Code, Roadcraft and the IAM RoadSmart Advanced Driver/Rider Course logbook.

CONTACT

GAM

Guildford Advanced Motorists



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@IAMgroup



facebook.com/guildfordiam

Our Website: www.guildford-iam.org.uk

(website devised and managed by Guildford Advanced Motorists (GAM)).

Do you have a friend or relative who would benefit from our advice and guidance?
How about a better driving course as a birthday present for a partner or family member?
If so, please put them in contact with us,
associates@guildford-iam.org.uk - 01252 519 355

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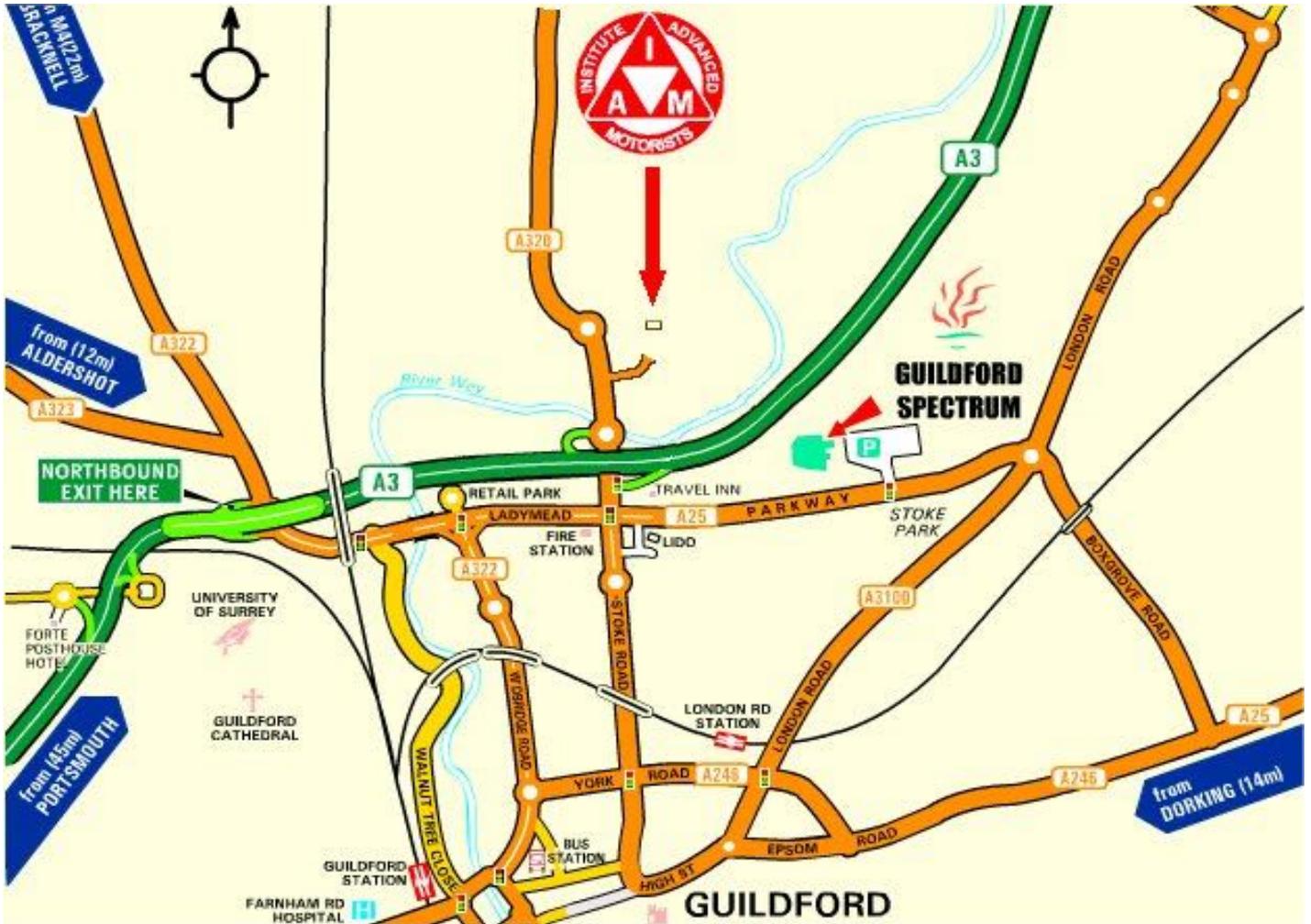
Remember to look at the IAM RoadSmart website:

www.iamroadsmart.com

Newsletter of the Guildford & District Group of Advanced Motorists © GAM 2017
Registered Charity No. 1051069

Location for our GAM Sunday runs:

Guildford Borough Council Woking Road Depot, Guildford, GU1 1QE



In our next edition of the GAM Newsletter, we can look forward to the following:

- AGM notice
- Experience of a first assessment run.
- News from IAM RoadSmart.
- Our evening "View from the cab" with CFS at Dunsfold.

Wheel alignment. Local firm Guildford Tyres help us with an insight into wheel alignment technology, its importance, and the test procedure.

Please pass on this newsletter once you've finished with it !

How about taking it to the garage where you have your tyres fitted or car serviced, and ask them to support us?