



IPSCA, the driving routine





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Thoughts

You should read my documents:

'How to read the road – Anticipation and Planning'.

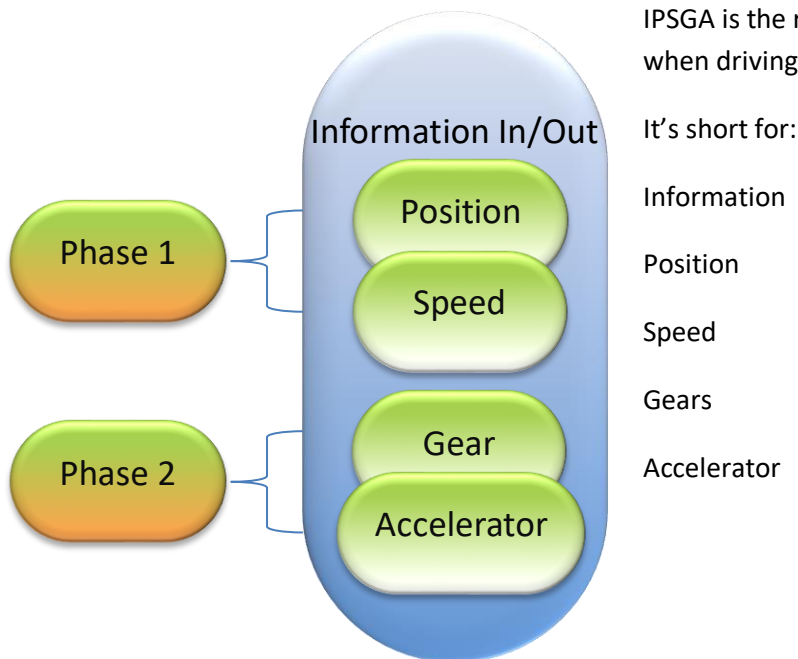
'Use of speed and limit points'.

'How a car works'.

'Horses, Gears, Why, When'.

'Meeting'.

What is IPSGA?



IPSGA is the routine of car control that we use when driving.

It's short for:

Information

Position

Speed

Gears

Accelerator

It helps you focus on the main areas and makes sure that you are doing the correct thing. When I approach a junction for example, I look around and tell people what I'm doing. I get in the correct lane and start slowing down. When I decide it's safe to drive on again, I THEN pick a gear and drive off into the sunset shouting 'you'll never take me alive Coppers'. **Notice that I only do a gear change when I have finished slowing down.**

Information (In and Out)



Figure 1. Look around, get information in



Figure 2. Give off information



Figure 3. Joke, don't start offering opinions on others driving, that's not the sort of information you want to give off.

This means getting in (looking around) and giving off information (indicators, brake lights etc).

Your job as a driver is to get from A to B without scaring the life out of people, breaking laws or crashing. To do this, you need to plan ahead and look along the route you wish to take.

You need to see what other people are doing or are going to do and adapt your drive to cater for it. If you are being overtaken, you would delay doing a lane change, but if you knew earlier that someone was coming up behind you, you could now decide to lane change earlier and get in front or wait and go out behind the approaching car.

If you didn't know you were being overtaken because you don't use your mirrors, you might crash!

You need to see the road signs and road markings, look out for vulnerable road users, ensure you don't hit things like potholes, traffic cones, brick walls or small dogs.

Additionally, you have to tell other people what you are doing so that you are less likely to get any conflicts. You must give people warning in good time so that they have time to see your signals, check their situation, formulate a plan and action the plan.

You need to get your timing right when indicating. If you put an indicator on just as someone goes to overtake, they might panic and brake. If you wait until they are next to you, they won't panic and you can go out after them.



Figure 4. Naughty! I said don't offer opinions on other people's driving

If you wish to be let into traffic, put an indicator on and wait for someone to let you out; leaners often don't indicate and just wait for a gap. No one else around you knows that you want to lane change because you don't have an indicator going, so no one lets you out.

You don't want to look in your mirror and find an ambulance to Police car behind you trying to get passed. You can usually see them coming from miles away so

if you knew there was a Police car approaching, you might have 20 seconds or more to find somewhere suitable and pull over; loads of time and no panic required!

You should be looking in a mirror every 4 seconds or so (unless you need to temporarily concentrate on something specific) and scanning for dangers, be that the car ahead or the car 6 cars ahead, or maybe the child hiding behind parked cars.

Basically, the better planning and awareness you have, the better you talk to others at the right time, the easier your life is going to be.

I have a document called 'How to read the road – Anticipation and Planning', go and read it!

Position



Figure 5. Which lane do you need?

When you drive down a road, you position the car to maximum advantage based on what you are doing or will be doing. You could read the document 'Meeting' for further consideration.

There are lane markings and arrows, get in the correct lane.

You are just driving along, you should be in the left lane.

You are following a car, are you at a safe distance?



Figure 6. Try and avoid potholes if you safely can

There are cars coming up behind you, would it be prudent to lane change before them or will you wait for them to pass?

Is there a pothole that will destroy your car? Move over and don't hit it.

Don't just drive along, think about what you are doing and where you are.

I should be able to ask you at any moment, 'why are you in this lane'

and you should be able to answer it with a good reason. If you find yourself saying 'I don't know, I haven't thought about it', you are doing it wrong!

Speed

Make sure you read my document, 'Use of speed and limit points'.

You should be aware of your speed, any speed limits and the conditions. You should drive at an appropriate speed making good progress where you can.

Gears



Gear choice is important, read my document 'How a car works' or 'Horses, Gears, Why, When' for information regarding when you might choose different gears for different situations

Depending on what you are wanting to do, you should be in an appropriate gear, too low a gear and you could blow the engine up, too high a gear and you could stall.

This document is just the high-level basic understanding to get you going, what I'm about to say will cater for 90% of the time.

This varies from car to car based on engine size and the gearbox fitted but, in my 2012 Ford Focus 2.0 litre diesel you can use the following guide.

Speed	Gear
Above 50	6
Below 50	5
Below 40	4
Below 30	3
Below 20	2
Below 10	1

This is a guide for when you have slowed the car down and are wondering which gear to pick, an automatic will do this for you but in a manual, you need to do this yourself. **Don't be too rigid here, it's just a guide, so if you were doing 9mph when you needed a gear, you're only 1mph away from needing 2nd gear so by all means pick 2nd if you want to.**

You may already be in the gear you want and do not need to do a gear change but most of the time you will be going from a higher gear to a lower gear. This means you are likely to have to use the clutch pedal and change gear from whatever gear you are in, to whatever gear you now want.



Yes, you can miss out gears, it's called 'Block Changing'. You can go from 6th to 2nd or 1st to 4th, any gear to any gear whenever you like – cool huh!

I do not need you going up a gear every time you increase your speed by 10mph, do it when it sounds right to do so (it's a sound and feel thing you'll get when physically driving). The previous table is a guide to tell you which gear you could pick if you SLOWED down to that speed.

When you slow a car down, you often push the clutch down to avoid stalling the car. **Just because the clutch goes down does not mean you have to change a gear!**

A clutch can go down because:

- You want to do a gear change – in which case do the gear change.
- To stop the car from stalling – in which case you don't need another gear at this moment so don't do one.
- You are doing clutch work such as slow speed creeping to a junction.

Brakes are to Slow, Gears are to Go

With this in mind, I only pick a gear when I actually want to continue driving. I could elect to stop the car which means I would be driving along the road in the appropriate gear for my speed.

I start braking,

Revs would get low and I push the clutch down to avoid stalling,

I keep slowing to a stop.

I may have just stopped in 6th gear or 3rd! I don't care, I didn't need a gear to brake. I will just stop in whatever gear I was driving in already.

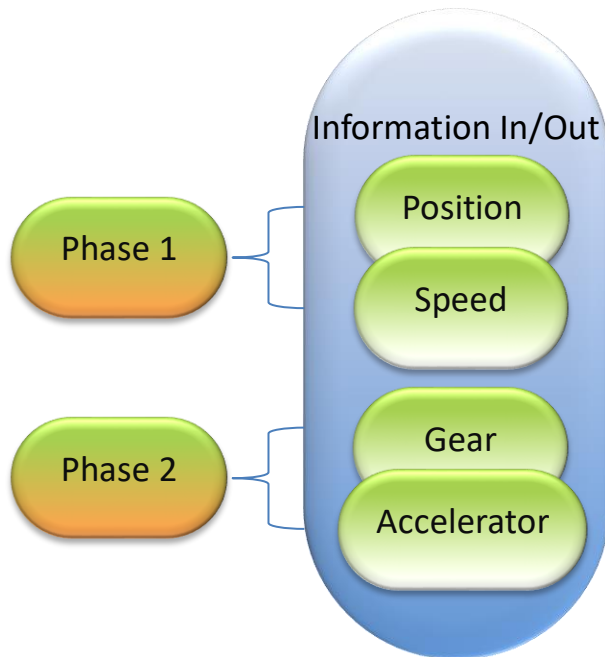
It's only when I need to continue driving again that I need a suitable gear.

If I was stationary, I would need 1st, if I slowed to 12mph, then I would pick 2nd to drive on again.

Accelerator

This doesn't mean you have to be accelerating, it means judicious use of the accelerator. You may wish to maintain your current speed, speed up or slow down. You just need to consider the correct course of action.

How do we use it?



The blue section should be constantly ongoing.

You should always be considering how you will interact with the world around you whilst you control the car.

You should be permanently getting information in from all around and telling people what you are doing.

So, assuming that you are being a shining example to us all and doing that, let's move to the car control part.

The green section is the physical moving of the car and is realistically broken into two phases.

Phase 1 – Position the car for maximum advantage and get to the speed you want.

Phase 2 – Pick a gear based on your speed and drive.

Situational examples

You are accelerating



Just keep accelerating and go up gears one by one when the car sounds like it needs a gear change, don't worry if you don't know when that is, you will practice and learn it in the car.

Information

Check road signs and road markings, check for signs of life on your route, check for

people behind you and anticipate what they might do. Remember to look far and near, not just the vehicle immediately near you but also the vehicle 6 cars behind them.

Should you be indicating to tell people what you are doing? Should you have switched an indicator off by now?

Position

Are you in the correct lane? Have you catered for the pothole ahead? Have you catered for the parked cars who's door might open?

Speed

Are you at the speed limit yet? Is your speed appropriate for the conditions and your situation?

Gear

Does the car sound like it needs a gear change? If not, don't worry about it, if it sounds horrible, go up a gear.

Accelerator

The harder you press the accelerator the quicker you will build speed. Are you happy with your rate of acceleration or is it too slow/fast?

Just keep cycling through this routine checking these key points.

There's a pedestrian crossing the road ahead



You were happily driving at 30mph in 4th gear before the pedestrian walked out. The pedestrian could be near you or far away. You need to slow down to keep a safe distance from them just in case they trip or drop something, or maybe turn around and go back again.

You should be slowing and if necessary push the clutch down to avoid stalling. When the pedestrian clears the road, carry on driving.

Information

Check road signs and road markings, keep an eye on the pedestrian, check for people behind you and anticipate what they might do – they might not have seen the pedestrian and not expect you to slow. Remember to look far and near, not just immediately near you but also long distance.

Should you use hazard lights to warn people behind you or is a brake light sufficient?

When the pedestrian is safe, are you now being overtaken? Should you wait to move off or can you move now?

Position

Are you in the correct lane? Have you catered for the pothole ahead? Have you catered for the parked cars who's door might open?



Speed

You should brake and slow down. The clutch may need to go down to avoid a stall. When it is safe to drive on again, check your speed.

Gear

We don't know how fast you will be going when the pedestrian gets out of the way, (anything between 30mph and zero) therefore we can't anticipate what gear you will need. Gears are picked based on speed at the time you want to continue driving.

Check your speed, pick a gear that's appropriate for that speed, do the gear change from whatever gear you were in to the gear you now need (you might not even need to do a gear change if you didn't lose much speed).

Accelerator

Now that it's safe to proceed, the harder you press the accelerator the quicker you will build speed. Are you happy with your rate of acceleration or is it too slow/fast?

Just keep cycling through this routine checking these key points.



Parking outside a house



You were happily driving at 40mph in 5th gear, you see your house ahead and park by the kerb out front.

Information

Check road signs and road markings, check for signs of life on your route, check for people behind you and anticipate what they might do. Remember to look far and near, not just the vehicle immediately near you but also the vehicle 6 cars behind them.

Should you be indicating to tell people what you are doing?

Position

Are you in the correct lane? Have you catered for the pothole ahead? Have you catered for the parked cars who's door might open?

Speed

You should brake and slow down. The clutch will need to go down to avoid a stall when the revs get low. Vary the brake pedal to come to a smooth stop outside your house.

Gear

No gear change required. You can stop the car in 5th gear with clutch down.

You could now secure the car and switch the engine off. Go and have a cup of tea!

You would need to change gear to 1st when you get back in to drive off again though.

Accelerator

Didn't even use it, we were braking to a stop.

Brakes to Slow, Gears to Go!

Conclusion

The IPSGA routine is the routine you use when driving.

Hopefully you understand that you only do gear changes when you need to do them. Gears are based on speed, nothing else.

The example of a pedestrian crossing the road could just as easily have been you approaching a junction and waiting for a car to pass before emerging into traffic, like entering a roundabout!

Just keep getting information and giving it off and make sure you're in a logical place, slow, then gear, then go.

