A partnership approach to improve the lives & safety of all riders within our communities

We are all motorcyclists and ride for various reasons, and we all enjoy our riding.
However, it is a statistical fact that as motorcyclists we only make up about 1-2% of the road traffic, depending on weather and time of year, but we represent about 21-23% of the road casualties
So, our aim in these sessions is simply **To reduce rider casualties.**
Accidents don't just happen. Falling off hurts, so let's think about what we are doing and why we are doing it. As bikers we are more likely to come off worse in any crash, irrespective of whose fault it is.

Our objectives for the course are:

- **Raise rider awareness and hazard assessment.**
- **Explain and demonstrate the system of motorcycle control.**
- **Deal with any of YOUR individual riding concerns.**

This document is based on the Police riding handbook, commonly referred to as 'ROADCRAFT' that can be obtained from any bookstore ISBN 9780117083783. All of our observers have an extensive knowledge and use of the techniques explained within this handbook. Most Post-test advanced training organisations use the Police riding system.

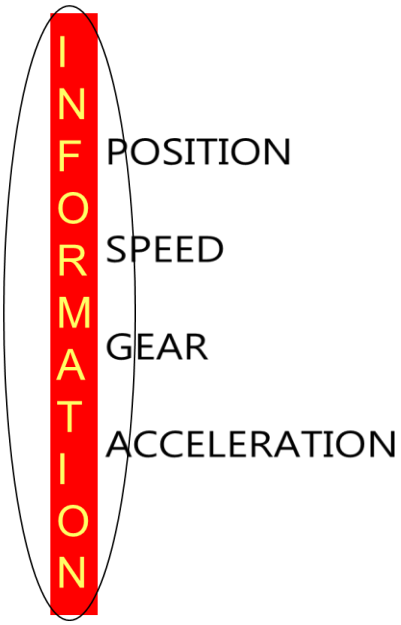
The foundation of the whole manual that everything is based on is called, 'The System' You already use a System, MIRROR, SIGNAL, MANOEUVRE.

"The System" of motorcycle Control

The Roadcraft system is a way of approaching and negotiating hazards, that is methodical, SAFE and leaves nothing to chance.

- We use the same system every time we observe a hazard, it may sound complicated but with practice it becomes second nature.
- We consider each phase in sequence for any hazard but may not physically use every phase.
- What is a hazard? Its anything that contains an element of actual or potential danger.
- There are 3 main types of hazard.
    1. **Physical features,** bends, junctions, bridges, hidden dips, etc. these don't often change or move.
    2. **Position and movement of other road users**, Vehicles, pedestrians, cyclists, animals. These are always changing and can be unpredictable.
    3. **Changes in road & weather conditions,** rain, mud, diesel, frost, wind, sunshine etc. Microclimates, like frost on shaded roads are particular hazards.

5 Phases of the System



INFORMATION this is based on our observation of what is happening around us.

POSITION. On the approach to any hazard we need to consider what is the SAFEST position for our bike on the road to negotiate the hazard.

SPEED. Consider the speed appropriate to the hazard and position chosen.

GEAR selection appropriate to the speed and the degree of

ACCELERATION needed to negotiate and leave the hazard safely

EACH PHASE IS CONSIDERED IN THAT ORDER

INFORMATION is an ongoing phase and overlaps the other 4. If the information changes, we reconsider the other 4 phases again.
We will now cover each of these phases in more depth.

Information

We **TAKE** information using sight, hearing and sometimes smell and feel. Sight is the predominant sense, so we need to look as far ahead as possible also scanning all around and use mirrors to check behind. The sooner we recognise a hazard it gives us more time to deal. Observation is more than just seeing, its noting what you see.

We **USE** information to decide on the best course of action. We formulate a riding plan based on What we can see, What we can't see & What we can reasonably expect to happen. Also try to have a 'Plan B' in case things don't turn out as expected. This mental processing is what causes fatigue and requires constant concentration. Keep reviewing information and prioritise the greatest Hazards

We **GIVE** information to others by indicators, brake lights, headlamp flash or horn. Occasionally we may give arm signals and often our position and speed can also give information to others of what we are intending to do. Consider how you feel when someone else does a manoeuvre without giving you any clues.

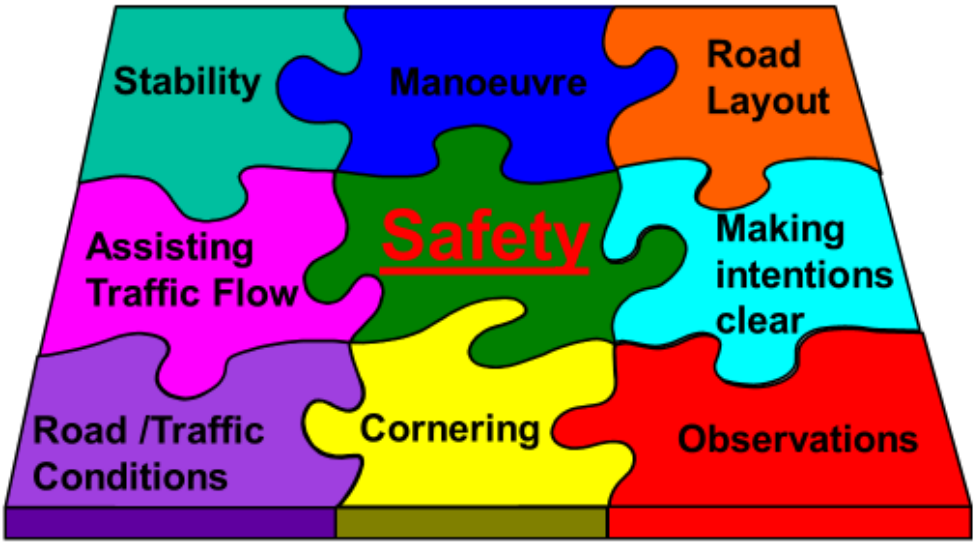
Position

Having taken and used our information we then consider the appropriate position to approach and negotiate the hazard or manoeuvre.

The motorcycle advantage is manoeuvrability and space required on the road and also eye height. Good positioning gives many advantages and we position for 3 main reasons:- SAFETY, STABILITY and VIEW
We may not always be able to attain our preferred position and at times we may sacrifice our stability and view for various reasons, but we will never sacrifice **SAFETY.**

If you cannot take the safest position, we should aim to regain safety by another adjustment which will usually be a further speed reduction.
Whatever position we take it should be as early as possible. Before making a change of position we should consider a rear observation.

The Ideal Position takes account of all these factors-



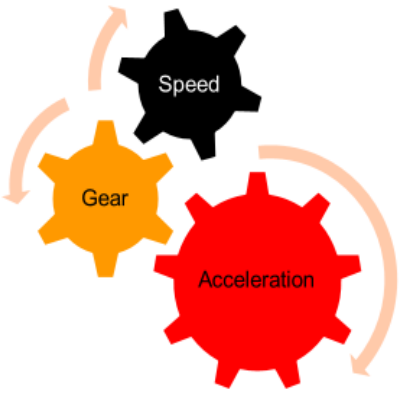
Speed

We now adjust our Speed if necessary, so that it is appropriate for the hazard, our position, the road and traffic conditions and our view at that time.
DO NOT rely on historic information which often occurs when on familiar roads. The road layout is usually the same, but the road and traffic conditions are always changing.
It is more preferable to lose speed by braking if necessary, rather than a common practice of sequentially changing down to a lower gear to lose speed which increases wear on clutches, gearboxes and chains. Also, by using gears to slow you may mislead following traffic by not showing a brake light. Before we make an adjustment to our speed, certainly before applying the brakes, we should consider making a rear observation.

Now consider the way you use your brakes. Most bikes have antilock Braking systems (ABS) and some have linked braking systems, but whatever you are riding there are some basic principles for braking:-

- Brake firmly only when travelling in a straight line. I.E. when the bike is upright.
- The front brake should be applied smoothly and progressively just before the rear brake.
- This compresses the front suspension and tyre allowing you to brake even firmer.
- Application of the rear brake after the front stabilises the bike and causes the whole bike to settle.
- If the bike is banked over, we will not be able to brake as firmly as when we are upright.
- When banked over the rear brake should be applied predominantly.
- The front brake can be applied in a bend, but it should be cautiously and smoothly.
- The more you are banked over the less grip you have for braking. *See Tyre/Grip trade off.*
- Any harsh brake application should be avoided to prevent inducing a skid.
- When braking firmly close attention should be given to the quality of the road surface.

Gear

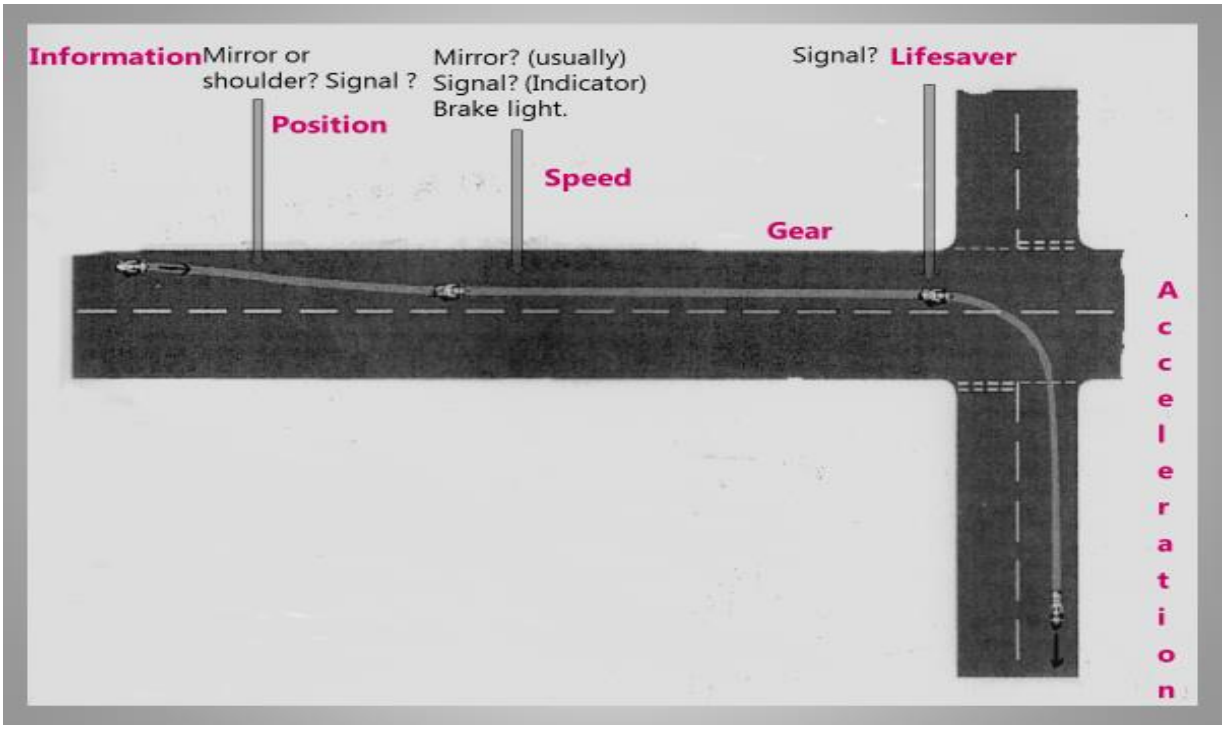


We select the appropriate gear for the speed at which we intend to negotiate the hazard or manoeuvre.
The gear is selected by passing through intermediate gears at the later stages of braking.
The gear selected should be suitable to provide an adequate reserve of power and sufficient to accelerate away from the hazard or manoeuvre.
Try and use brakes for slowing, Gears are for going.
Avoid using gears to slow down except possibly in slippery conditions, when any braking could induce a skid. We may then consider touching the brake lever lightly to give information and show a brake light to following traffic.

Also consider when you change up through the gears. Many riders change up based on sound or vibration, often getting into too high a gear too early. Before changing up consider if the gear you are going up from would be suitable for a hazard that you are approaching.

The Lifesaver?

WHEN do we use it?
Before we make a manoeuvre, we must always consider a life saver/rear observation.
This is particularly important for example when making a right turn from a major road into a minor junction.
WHY?
Although most machines now have good mirrors, there is still a 'blind' spot just behind us on either side.
WHERE.
Depending on your mirrors, its generally not a full head turn to look behind, but merely a look over either shoulder to clear up the blind spot.
WE WILL OBVIOUSLY LOOK IN THE DIRECTION IN WHICH WE ARE ABOUT TO TURN.



We always aim to be-

In the Right position
At the Right speed
In the Right gear
At the Right time

Tyre Grip trade off?

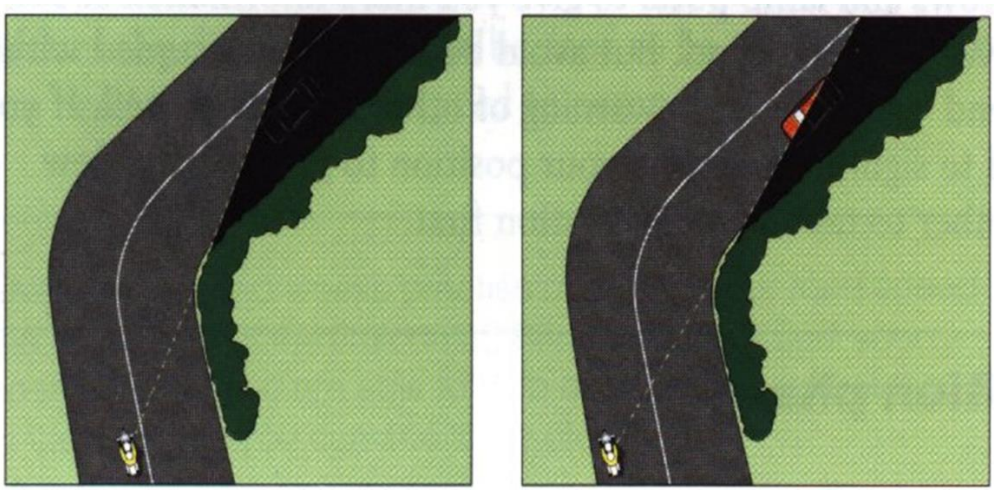
Our tyres are our only contact with the road, so we need to pay particular attention to the road surface. Modern bike tyres have very good grip in dry good conditions, but this is shared between Accelerating, Braking and Cornering. If we wish to accelerate or brake firmly, we need the bike to be upright. If the bike is banked over, we are then using some of that grip to corner. The more we are banked over the less grip we have for braking or accelerating. Therefore, if we then encounter an unexpected hazard on a familiar corner that we are taking a little too quickly, we are then not able to stop safely on our own side of the road as we cannot brake as firmly when we are banked over, or if we do control is soon lost.

Cornering

Who is happy in bends? How many of us negotiate a bend and breathe a sigh of relief when they come out the other side?
A bend is a hazard, negotiating bends can be exhilarating. However, it's a manoeuvre which causes a high number of collisions, this usually being due to incorrect assessment.
Let's look at how negotiating bends can be improved.

OUR AIM IS TO ALWAYS ACHIEVE - SAFETY, STABILITY & VIEW.

Right hand bends



By positioning towards the nearside we are extending our VIEW

We keep away from oncoming vehicles which may be on the white line SAFETY

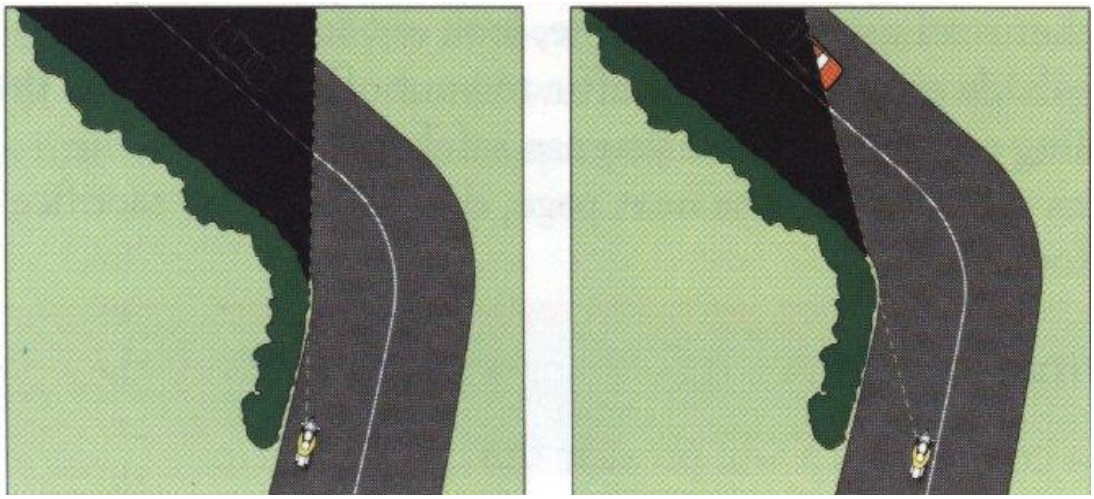
We have reduced the severity of the bend STABILITY

On the approach to the bend, the position

is to the nearside of the road. HOWEVER, CONSIDER NEARSIDE HAZARDS.

When past the apex and the view begins to open we can start to consider the next hazard, which is often another bend.

Left hand bends



By positioning towards the crown of the road we again extend our VIEW.

We keep away from nearside dangers which may be difficult to see because of the bend, i.e. pedestrians and cyclists SAFETY.

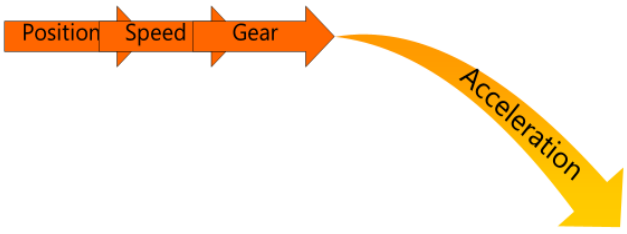
We have again reduced the severity of the curve, maintaining STABILITY.

However, by being close to the centre of the road our SAFETY could be compromised if oncoming traffic appears. By having an extended VIEW we should see any oncoming traffic early, so then we should consider adjusting our position away from the oncoming traffic to maintain our SAFETY

Whatever the bend it is a hazard and needs to be dealt with systematically. Position, speed and gear should all be dealt with on the approach to the bend before starting to corner. As a bike is banked over it will naturally start to slow, unless a little positive throttle is applied to maintain a constant speed through the bend. Both wheels of a bike have a gyroscopic effect on the stability of the bike, and they benefit from a constant speed through the bend to maintain stability.

Accurate bend assessment helps when approaching the bend and a constant speed through the bend increases stability. Sudden braking, decelerating or changing gear through the bend will have a detrimental effect on the bike stability.

Use the System

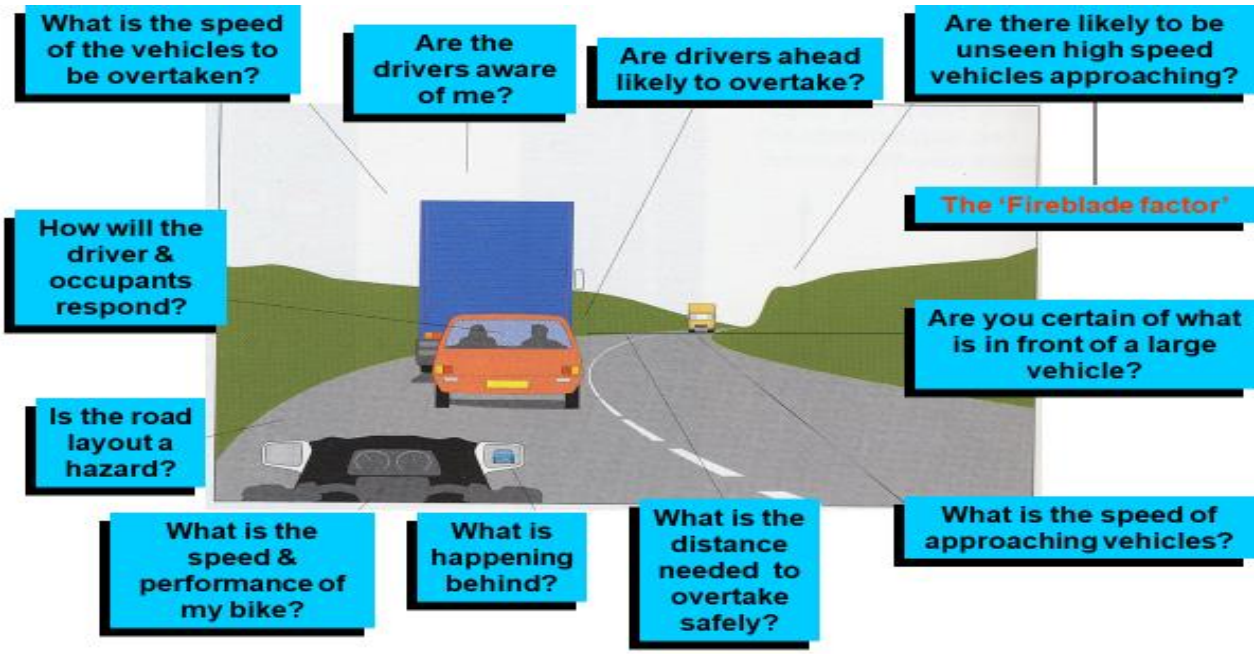


The Golden Rule

Always be able to stop SAFELY on your own side of the road within the distance you can see to be clear.
Be Honest with yourself and remember we cannot brake as firmly when banked over as when upright.

Overtaking, the key points

- How far can you see ahead? Can you see far enough ahead?
- Avoid causing any vehicles to alter course or speed.
- Always be able to move to nearside in plenty of time.
- Before you set off make sure you have identified where you intend to return to the nearside.
- You can abandon the overtake at any time. It is a dynamic situation and things can change very quickly. Keep assessing and consider if it is still safe. If not abandon.
- Highway Code. "Don't overtake where you may come into conflict with other road users". Near junctions and bends, double white line systems, blind brows, hidden dips etc
- Avoid making a third line abreast. I.E 'don't be the meat in the sandwich'
- Take care overtaking on nearside. Vehicles turning right, multi lane carriageways, one-way streets etc.



Filtering

- Filtering is slow speed overtaking. If it goes wrong, you are the one overtaking.
- Bikes have no right to filter, it is accepted here, but not in every country.
- If it is safe, good progress can be made.
- Like any overtake, don't take off till you know where you can land.
- Keep a space in view even if you don't use it. Identify your next space before you leave the previous
- Be courteous, thank them with a raised hand, try and make eye contact.
- The closer you are the slower you must go, in comparison to the vehicles you're passing.
- You are often the meat in the sandwich. Beware of vehicles turning, emerging, cyclists, other bikes, pedestrians, doors opening, etc etc.

Always remember that the decision to overtake is <u>yours,</u> you can reconsider it at any point

The basic guidance for our on-road riding.

- You are responsible for your own safety.
- Ride within your own capability. If others in your group do something you don't like, don't do it yourself.
- Don't take a chance to catch up. The group will slow for people to catch up. We don't all have to be close together and sometimes other traffic will be between us. As long as the bike behind you is in sight keep going. If you lose sight, slow down for a while. If the following bike doesn't come in to view soon, find somewhere safe to stop, but keep your engine running. If after a couple of minutes, they still haven't appeared, retrace your route to find them.
- Ride as a group of individuals. Don't hold off of pulling out of a junction or overtaking because there isn't room for all the group. If you're happy it's safe, GO
- Think of what's coming, not what's gone. You will make mistakes, because there is no such thing as a perfect ride. From Anyone. Don't dwell on mistakes, you can't change them, but you can change what's coming up next.
- No overtaking within group.
- If in doubt, stop and wait. You may have a problem yourself or with your bike, or you may have taken a wrong turn.
- Try and exchange mobile numbers with your instructor before setting off.
- Don't be afraid to ask questions, especially if you see your instructor do something you don't understand, or not do something you thought they would do.

The team look forward to seeing you on the day.

If any of this handout is confusing, please ask for clarification on the day. This handout and the on-road riding is meant as an introduction to advanced riding techniques. We will aim to cover as much as we can, but sadly it is not possible to turn you into an advanced rider in just one day. Hopefully you will wish to do more afterwards. For further training see the links below, both IAM RoadSmart & RoSPA have active groups throughout the country.

Advance riding in its simplest form is Looking in advance. Thinking in advance, then Doing something in advance of any particular hazard. It's safer to arrive at the hazard prepared rather than trying to deal with it when you are upon it.

IAM RoadSmart

https://www.iamroadsmart.com/

RoSPA (ROADAR)

https://www.roadar.org.uk/

Rider Enhancement Training

https://www.somersetroadsafety.org/