The IRT model European initial rider training programme

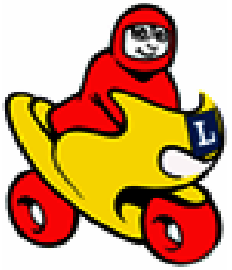
The Initial Rider Training Project

This programme was developed by the IRT Project team, funded by the Directorate-General for Energy and Transport of the European Commission, the Federation of European Motorcyclists Associations (FEMA), the Fédération Internationale de Motocyclisme (FIM), the Association des Constructeurs Européens de Motocycles (ACEM) and Vägverket, the Swedish national road authority.

The structure was conceived by the IRT Project Coordinator, Robert Tomlins. It was developed by the IRT Instructors working group, comprised of two National police rider instructors, Roger Renoy (Belgium) and Brane Legan (Slovenia) and three professional rider instructors, Peter Smirz (Austria, Vice-President of IVV, the international rider and driver instructors organisation), Marc O'Loideoin (Ireland) and Ian Lee (United Kingdom), together with the IRT Project Coordinator, who wrote this manual.

Any person or organisation wishing to use the programme, in part or in whole, should seek permission in writing from FEMA. All parties to the IRT Project wish to encourage the use of the IRT programme, and permission will not be unreasonably withheld.

The Initial Rider Training Project



Before starting to ride

the Theoretical element of the IRT programme

The Initial Rider Training Project

The Initial Rider Training Project

Theoretical

1 Road regulations

2 Signs and markings

3 Dynamics and mechanics

4 Hazard awareness

5 Helmets and clothing

6 Social responsibilities

7 Impairment

8 Attitude and behaviour

Machine control

1 Machine familiarity

2 First movements

3 Gears, brakes and direction

4 Steering and counter-steering

5 Low speed manoeuvring

6 Hazard management

Traffic interface

1 Positioning in traffic

2 Distance and speed

3 Curves and bends

4 Junctions

5 Overtaking

6 Motorways

7 Anticipation

8 Riding in Groups
(in pairs or larger groups)

9 Route planning

The Theoretical element of the IRT programme

1. Road regulations

Why they exist

Road regulations control circumstances where road users may come into conflict. Failure to comply can lead to penalties including loss of a driving licence.

Making it safer

The rider should understand that safety is at the heart of regulations.

Speed limits are set taking into account local conditions and associated risks. A pedestrian struck by a vehicle at 30 kph has a better than 90% chance of survival. At 70 kph the result is usually fatal. Regulations prohibiting overtaking exist because a dip or a bend in the road may hide oncoming traffic or a junction from which traffic could suddenly emerge. It is important to obey speed limits.

International Treaties and Conventions

Many regulations on driving, the construction of vehicles, and rules about the behaviour of road users are international, which is helpful when travelling. However there are exceptions as some countries have not signed the UN conventions.

Treaties include the 1968 United Nations Convention on Road Traffic and Road Signs and Signals. Vehicle construction regulations, for example on vehicle noise limits, are covered by European Union Directives, and the United Nations 1998 Global Harmonisation Agreement.

National road codes

In European Union countries passing a theoretical test is a requirement before commencing training. This requires study of the national road code published by the Transport Ministry or Road Authority. The theory test is the starting point for riding safely.

The Initial Rider Training Project

2. Signs and markings

Signs and markings

Understanding road signs and markings is essential to pass a theory test. Observing signs and markings aids decisions as you ride, helping to “read” the road ahead.

Lines and markings on the road

Markings on the road have the same authority as signs at the roadside. Continuous lines indicate a prohibition. They should not be crossed when in the centre, and usually indicate parking restrictions when at the side of the road. The markings of pedestrian crossings and lanes for buses and cycles are also important.

Significance in the shape

In countries that have adopted the UN Conventions:

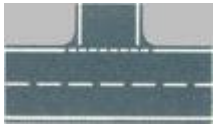
The shape of a road sign is generally an indication of its significance.

Round signs give instructions, and when circled in red signal prohibitions.

Triangular signs show warnings, and when point down must be obeyed, when point up they are advisory.

Rectangular signs contain information, often giving directions.

The Initial L Rider Training Project



3. Dynamics and mechanics

Two gyroscopes

Controlling a motorcycle or scooter is very different to driving a car.

When revolving the wheels become gyroscopes; the gyroscopic effect keeps the vehicle stable. Changing the direction of a gyroscope is achieved by exerting force in the opposite direction to that which the rider wants to steer.

As with riding a bicycle this is an intuitive action that new riders are unaware of until it is demonstrated.

When a motorcycle is moving at 20 or more kph, to steer left forward pressure is applied on the left side of the handlebar. Contrary to expectation the machine does not turn to the right, but to the left, the opposite direction to the force that is applied.

Conscious application of this technique is called, “counter steering” and using it enables precise control.

A training aid to illustrate this is a bicycle wheel and axle. Holding the axle ends and with a partner to spin the wheel, a student will experience the dramatic effects of, “counter steering” by moving the axle as if it were the handlebars. **

After each student has experienced this demonstration of how a motorcycle works add the following information:

As a motorcycle has not one but two wheels, and they are linked together, the gyroscopic effect is increased many times over. Ridden correctly the motorcycle is the most stable vehicle on the road - a safety advantage that can be used to good effect by the trained rider.

**** This effect can be seen in speedway and other forms of track racing where competitors use extreme counter steering for very quick turns – the technique is clearly visible to spectators.**

Checking all is well

All machinery needs regular checks, maintenance and repair. The extent to which repairs will be needed is influenced by the frequency of the checks and maintenance. A minor adjustment can, if left unattended, end up as a major repair.

Read the manual supplied by the manufacturer. These contain useful information and maintenance schedules.

Inspect the motorcycle or scooter at least once a week, and always before starting on a long journey.

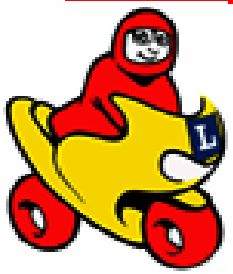
Maintenance checks should include the operation of the brakes and the condition of their mechanisms and pads or linings, the fork oil seals, the pressure and condition of the tyres, the lubrication and tension of the chain, the level of the engine oil, the condition of the battery and evidence of oil, hydraulic and cooling fluid or fuel leaks. A well maintained machine is unlikely to break down, or cause or contribute to an accident.

Power to the wheels

The operation of the clutch, whether automatic or manual, should be explained by the instructor.

Slowing and stopping

The brakes are operated by hand and/or foot levers, which force a hard wearing friction material onto a disc or drum attached to the wheels, to slow or stop the machine.



4. Hazard awareness

Position, speed and distance

Too fast, too close and/or in the wrong position on the road are factors in the majority of road traffic collisions.

Seeing and recognising

A vital skill is to learn to recognise potential threats. This is known as hazard awareness, sometimes also called, “risk perception”. A rider needs to know where to look when riding at different speeds.

Having identified a hazard, the ability to evaluate the demands and take action to avoid or minimise risk requires an understanding of many situations across a range of circumstances.

Road conditions

The type of road surface, its condition, and the volume of traffic all affect safety.

Other road users

Understanding behaviour: We can learn to anticipate many situations. For example, how the driver of a lorry or a bus may behave, and adjust position, speed and distance accordingly.

Pedestrian behaviour can be anticipated, for example when crossing a road to catch a bus at a stop.

Children and the elderly are said to be the most unpredictable. It is essential that the rider remains alert, as human behaviour can be unpredictable.

5. Helmets and clothing

Helmets

Wearing a helmet when riding is a legal requirement in the European Union. The few exceptions that apply to moped use in some countries are fast disappearing.

A helmet is the most effective road safety aid available to riders. However it does not make riders invulnerable and there are limits to the protection it affords. The rider should never forget this.

Wearing a helmet has additional benefits. Being hit by an insect at 100 kilometres an hour really does hurt and the effects of rain, cold and noise are all reduced by a good helmet.

Choosing a helmet

A vast range of helmets are available from numerous manufacturers. There are two types and two variations:-

First is the integral helmet where the helmet extends in front of the jaw and the riders looks through an aperture covered by a visor. The variation is where the whole of the front of the helmet, including the visor, can pivot up. This makes it easier to put on and to speak to people without removing the helmet. (This type is used by many police motorcyclists).

Second is the open face helmet, with or without a visor. Where an open face helmet does not have a visor, goggles or other eye protection will be needed. Do not rely on sunglasses as they may not be strong enough. Purchase an eyeshade made for motorcycling use.

Helmets are generally made from two types of material. A resin reinforced with glass or carbon fibres and polycarbonate plastic. Whichever choice is made do not paint it or put stickers on it. – These can seriously weaken it! The paint and stickers applied by the manufacturer are specially developed for helmet use. Always ensure a helmet has CE and/or national safety markings.

Choose a helmet that fits correctly and is comfortable. Buying the best helmet one can afford is good advice. Do not be over influenced by expensive paint finishes. A plain version of a better helmet is better than buying a cheaper one with a fashionable painted design. Shopping with an experienced rider can help, as can checking on back issues of motorcycle magazines, which occasionally feature, “best helmet” surveys. Factors such as noise attenuation, lateral vision, ease of visor operation, weight and ventilation should be considered when choosing.

Wearing a helmet for the first time is a strange experience! This is another reason for taking care when choosing and taking advice from an experienced rider. Helmets of the same nominal size from different manufacturers will feel very different. It is therefore not sensible to purchase via the Internet – go to a shop and try on a range of different helmets.

Seeing clearly

Caring for the visor or goggles is important. A purpose made cleaner is best, the alternative is plenty of water with a little detergent (of the type used for washing dishes), followed by a thorough rinse and drying with a soft cloth.

A heavily scratched visor is extremely dangerous at night and in rain. It should be replaced. A visor will mist-up in cold or wet weather and if the helmet has a ventilation system it should be used. Anti-misting products are recommended. Some visors can be fitted with a secondary glazing system which provides the most effective solution to the problem of misting.

5. Helmets and clothing

(continued)

Protecting yourself by wearing appropriate clothing

The need to wear appropriate clothing should be obvious.
However many riders persist in taking terrible risks in hot weather by riding in tee shirts and shorts and often wearing only sandals on their feet.
For many years motorcycle specific clothing was biased towards the needs of riders in temperate countries. This is no longer the case and protective clothing suitable for use in hot climates is widely available. – For example reinforced denim clothing pioneered in Australia is now available worldwide. These garments (jackets and trousers in a variety of styles) are exceptionally effective whilst retaining the look of normal clothing. Normal denim will tear in less than a second on contact with a road. For added protection many of these specialist motorcycling denim garments can be fitted with impact protectors identical to those used in other motorcycling clothing.
Similar considerations apply in bad weather. Without suitable jacket, trousers, gloves and boots a rider can become so wet and cold that it can be difficult to operate the controls and ride safely. As when buying a helmet, refer to a motorcycle magazine, “best buy guide” for advice on quality and value for money. Some magazines commission independent tests, making those guides particularly useful.

Jacket and trousers

Think before buying a riding suit. Different types, with the jacket and trousers, or one-piece, are available.
The temperature range in which it will be worn should influence the choice of weight and material and whether it has a lining that can be removed. Fit should be considered. Is extra clothing going to be worn under it?
Fit is also important if the suit has impact protectors; too loose and the protectors will move in a fall.
Choosing between rain proof and shower proof clothing depends on the climate it is to be used in. Another option is a lightweight over suit for wet weather. This is not a substitute for protective clothing but an additional item for use when necessary. – It allows for a greater choice of the main clothing.
Look for the CE mark if the garment has impact protectors fitted. Normally this will only cover the impact protectors. Very few garments are made that have “whole garment” approval to the CE standards.

Gloves and boots

Wearing gloves and footwear that covers the ankles will provide protection in a collision. Again the best that can be afforded is good advice. Gloves and boots should be waterproof as when wet they can take hours, sometimes even days, to dry out properly. An alternative is to use a waterproof, “overboot” but again this is an addition, not a substitute for strong footwear.

Protecting your hearing

Cruising at speeds as low as 90 kph generates noise levels that can permanently damage hearing. Using earplugs is a good idea, -most experienced riders do. Hearing protection is especially important on long journeys where higher speeds will result on more exposure to noise than slow town riding.

6. Social responsibilities

First aid and accidents

Before learning to ride it is an excellent idea to complete a course in basic first aid.

In the event of coming upon an injured motorcyclist do not attempt to remove the helmet, unless
trained to do so, or move the injured person unless they are in a life-threatening situation. The emergency services should be informed straight away.

Upsetting the neighbours

Excessive sound from motorcycles and scooters is one of the most annoying sources of noise. Everyone should ride in a manner that limits sound, in particular taking care to keep down speed and
acceleration in residential areas.

Never modify a silencer to make more noise or fit an illegal system. Angry neighbours will support anti-motorcycling legislation!

Consideration for other road users

Riders should behave in a responsible way, taking into account other road users. It is important to pay particular attention to pedestrians. – When crossing a road they may not notice a motorcycle or scooter. Or they may see it but misjudge its speed. Children and senior citizens in particular may be distracted and not giving their full attention to the road.

Look out for cyclists. The speed differential with motorised traffic can be a factor in how they will react.

The driver of a large vehicle often has limited vision and a rider should not be in the driver's "blind spot". If you cannot see the mirrors the driver cannot see you!

Car drivers frequently under estimate the speed of an approaching motorcycle.

When it goes wrong

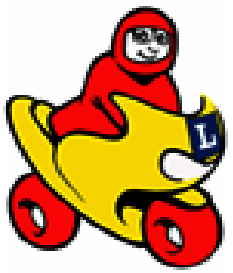
Riders must appreciate that not only they will suffer the consequences of a road traffic collision, whether it is their fault or not. For a mother or husband, learning that a son or wife has been involved in a collision is a devastating experience. A motorcycle or scooter does not have the benefits of airbags and seatbelts. Minimise risk by riding with care.

The Initial Rider Training Project

7. Impairment

Fatigue

Tiredness is a big a killer on roads. It is possible to fall asleep on a motorcycle as it is at the wheel of a car so when tired stop and take a good rest. Starting a long journey after work is not a good idea as even the level of fatigue felt after work can affect awareness and reactions. Add an evening of entertainment or sport and the effect can be dangerous.



Alcohol and other drugs

Taking any social or recreational drug dramatically increases risk.

Alcohol is a major factor in road traffic collisions and the primary cause of death for more than 15,000 people on European roads every year. Even legal levels greatly increase risk.

Alcohol affects reactions, judgement, balance and co-ordination.

As little as 0.5 mg per litre of blood (the legal limit in 23 EU countries) will slow average reaction time by 50%. At 90 kilometres an hour this means a rider with that amount in their body will be twelve metres closer to a car that has pulled out in front before even starting to try and avoid it. With 1.5 mg per litre of blood a rider is 200 times more likely to have a collision than when sober.

Recreational drugs should also be avoided. All affect the body and mind in differing ways, but all distort judgement and affect reactions. Alcohol and drugs frequently have long lasting effects that will carry over to the next day or beyond.

Illness and medication

Even minor illness, such as a mild cold, can affect awareness, ability and judgement.

With a more serious illness it is not advisable to ride at all.

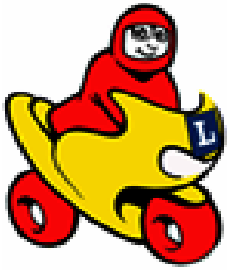
Many medicines carry a warning advising against driving. Ask the doctor or pharmacist if unsure, and if it could affect performance then decide not take the medication, or not to ride.

8. Attitude and behaviour

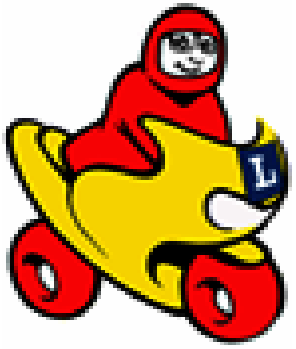
Understanding the needs and intentions of other road users, and identifying potential hazards, are essential skills.

Managing risk requires understanding that only we can control our actions, and adjust speed, position and distance in time to avoid danger. Road traffic collisions rarely occur without any warning. (Which is why the emergency services no longer call them “accidents” but “collisions.”)

The danger signs can be read well in advance and the responsible road user knows this.



Managing your machine



The Initial Rider Training Project

The Initial Rider Training Project

Machine control

1 Machine familiarity

2 First movements

3 Gears, brakes and direction

4 Steering and counter-steering

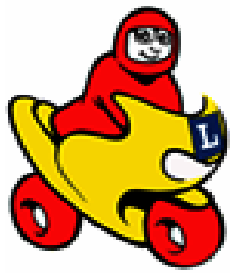
5 Low speed manoeuvring

6 Hazard management

1. Machine familiarity

Rider pre-knowledge

Road regulations, signs and markings
Dynamics and mechanics
Social responsibilities
Effect of impairment through drugs or alcohol
Importance of appropriate clothing



Instructor requirements

Review Instructor notes
Verify legal requirements
Evaluate the extent of pre-knowledge
Explain and demonstrate the main controls
Demonstrate putting machine off and on its stands
Show balance with walk-round demonstration
Explain importance of hazard awareness and attitude and behaviour
Make initial assessment of attitude

The exercises

Correct position on machine with hands and feet in relation to controls.

Putting the machine on and off its main and side stands.

Balancing and moving the machine with engine off.

Introducing the controls with engine off and machine on its main stand.

Starting and stopping the engine including use of kill switch.

Machine safety and maintenance checks.

Hazards, attitude and behaviour

The first aim is to enable the rider to appreciate the weight of the machine and its potential to damage anything that it comes into contact with, particularly when moving.
The second aim is to reinforce and develop the rider's appreciation of hazards and attitude and behaviour introduced in the Theoretical element.

Evaluation

The instructor should be satisfied that the rider can safely and confidently mount and dismount, assume a correct riding position, manoeuvre without power, has a basic knowledge of the controls, can safely start and stop the machine and perform safety checks.

1. Machine familiarity

Instructor note. 1

Preparation and planning

Plan the session. The facilities will to an extent determine the programme, but assessing existing knowledge can be dealt with as a separate topic or addressed at various stages in the session.

Legal requirements

These are set by national law but their importance and relevance should be emphasised. If it is a legal requirement to have insurance, or to have passed a theory test at this stage of the training, the instructor should require the rider to produce proof of compliance. Helmet use should be dealt with at this point with advice being given about benefits and problems, choices and fit, noise and comfort.

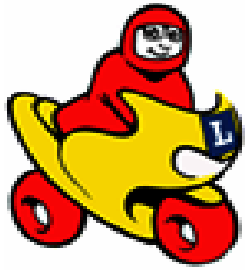
Explaining and demonstrating

When explaining and demonstrating the exercises the instructor should note the attitude, confidence, and ability of the rider. The instructor must constantly assess attitude to learning. Where the rider appears to be too assertive and prone to taking risks, the instructor should address this in the content and style of explanations and demonstrations. If the rider has experience with other types of vehicle point out that it is often not relevant to riding. Limitations on ability to take in information should be recognised. Where possible different types and sizes of the machine should be used.

The Exercises

Getting on and off and sitting correctly

With the machine on its side stand the rider should practice getting on and off. Follow with the machine standing on its wheels. Dealing with problems such as top boxes should be demonstrated.
Point out that the main stand is there to support the weight of the machine. It is not designed to take the weight of a rider as well. Sitting on a machine on its main stand is poor practice. Rolling off the main stand from a sitting position is equally bad, can damage the stand, and the rider may not know if the stand has retracted fully.



Off and on the stands

Starting with the machine on its main stand the rider should practice rolling it off the stand. When astride the machine use the handlebar brake, with the rider taking the weight of the machine against the thigh. The design of each machine will require a particular approach. The position of the rider with one hand on the handlebar and the other on the handle usually provided and the use of a foot on the main stand lever are important. The use of the side stand should also be practised. Where a rider has limited strength the side stand can be used first instead of the main stand to build confidence.

Then the technique of putting the machine onto its main stand can be addressed. Careful tuition will prove that strength is not needed, it is a matter of technique and confidence to get even the largest machine on and off the main stand.

Balancing and manoeuvring

Sitting on the machine the rider should practice moving it backwards and forwards and turning through 90 degrees using the feet.

continued

1. Machine familiarity

Instructor note. 2

***Balancing and manoeuvring* - continued**

Alongside the machine the rider should practice backward and forward movements that simulate manoeuvring the motorcycle in restricted areas, e.g. in a garage or a line of parked motorcycles. Standing beside the motorcycle on its wheels the rider should practice balancing it whilst holding it with one hand.

Introducing the main controls

With the rider sitting on the motorcycle the instructor should explain the operation of the controls. The rider must become familiar with them so when the instructor names them, they can be identified. The instructor should demonstrate all controls, not just those related to starting and stopping of the engine, but also gear selection and drive engagement and braking.

Starting and stopping the engine

With the rider sitting on the machine, the instructor should explain and demonstrate the process of starting and stopping the engine. Check lists can be helpful to the rider. For starting: fuel on, choke on, neutral selected, side stand up, clutch in, ignition switch on, kill switch off, handlebar brake held, appropriate throttle setting and operate starter mechanism. The use of the kill switch only in emergency or particular circumstances should be explained. The rider should always wear a helmet when starting the machine and when sitting on it.

Machine safety checks

Before moving on the instructor must demonstrate a number of checks that should be regularly completed to ensure that the motorcycle is roadworthy. Including the operation of the brakes and the condition of the pads, the fork oil seals, the pressure and condition of the tyres, the lubrication and tension of the chain, the level of the engine oil and evidence of oil or fuel leaks. The importance of these checks, even where they are not part of the licence examination, should be emphasised.

Hazards, attitude and behaviour

The instructor should reinforce the point that collisions do not just happen, they are caused.

Evaluation

Before moving on to the First Movements, the instructor should be satisfied the rider is able to sit correctly on the machine, get on and off safely, use the stands, manoeuvre safely, knows the controls and understands how they operate, start and stop the engine and undertake the safety checks.

2. First movements

Rider pre-knowledge

The aspects of the Theoretical element
Getting on and off and sitting on the machine
Taking the machine off and on its stands
Manoeuvring and balancing without power
Starting and stopping the engine
Undertaking safety checks

Instructor requirements

Review Instructors' notes
Explain the operations of gear selection and drive engagement
Explain the operation of the braking system
Demonstrate the selection of first gear, engagement of drive and stopping of machine
Position in relation to rider enabling errors to be controlled and corrected
Explain importance of rider's visual focus
Explain and demonstrate the exercises
Continue to assess the rider's attitude

The exercises

Selection of gears and engagement of drive

Initial movements with feet down

Moving forward, then braking with only left foot down

First turns with both feet down

Riding in a lane at a constant slow speed with both feet up

Riding in a lane at varying slow speeds

Evaluation

The instructor should be satisfied that the rider can safely and with reasonable confidence use the controls in combination and can smoothly co-ordinate the selection of gears, engagement of drive, use of throttle and application of brakes. The instructor should ensure that the rider understands the importance of the focal point of his or her vision and looks accordingly.

2. First movements
Instructor note. 1

Preparation and planning

In preparing this section the instructor must recognise the rider will need close attention. Distractions to the rider and the instructor from other trainees must be avoided. An area of the training ground should be chosen where the instructor can access the rider and the motorcycle and where there is space to allow the consequences of any loss of control to be minimised.

Legal and safety requirements

If the training ground is a public place the instructor must verify that the rider has complied with national requirements, e.g. insurance cover and licence provisions. The instructor should check the rider's helmet and clothing.

Where the rider has a machine with manual gears the instructor must explain and demonstrate the operation of the clutch to enable first gear to be selected together with the balance between the clutch and throttle, to the point where drive is felt. With the rider sitting on the machine, feet touching the ground, the exercise can be undertaken.

The instructor should stand beside the rider, or in front of the machine, over the front wheel with the headlight against the lower chest, or sit on the pillion behind the rider. The instructor's hands must be close to the handlebar controls and able to reach the kill switch. The rider should understand that the purpose of the exercise is to recognise when the machine is about to move forward.

Explaining and demonstrating

Time spent at this stage is vital for the rest of the course.

Explaining and then demonstrating repeatedly teaches correct skill and confidence. The instructor should vary the way in which the exercises are explained and demonstrated to match the needs of the rider.

The attention span of the rider should be monitored, and breaks should be taken before the onset of tiredness. Whenever possible the instructor should be in a position to reach the handlebar controls if the rider seems to be losing control of the machine.

The Exercises

Selecting gears and engaging drive

Where the rider is on an automatic machine the instructor must explain and demonstrate the relationship between the movement of the throttle and the increase in engine speed and then the point at which drive is taken up.

Initial movements

Before making initial movements under power, the instructor must explain and demonstrate the use of the brakes. The instructor must stress the importance of correct visual focus so the rider does not look immediately in front of the machine, but where he or she wants to go.
.

continued

2. First movements
Instructor note. 2

Initial movements - continued

The instructor must ensure that the rider has checked behind every time before he moves forward. In making the first movements the rider, having engaged gear, should check behind and then move the machine slowly forward under its own power with both feet off the footrests for a distance of a metre or two. The machine should then come to a stop with the rider rolling off the throttle and disengaging the clutch. Neutral should then be selected. The instructor should walk at the side of the rider.

Using the brakes

The instructor must explain and demonstrate the relative effectiveness of the front and rear brakes and the need to apply them in a co-ordinated manner. The instructor should then explain and demonstrate the importance of using the clutch, throttle and brakes in a smooth and balanced way. With the right foot on the footrest the rider should move slowly forward three or four metres and stop by rolling off the throttle, applying both brakes and disengaging the clutch. Neutral being selected when the machine has stopped.

Throughout the exercise the instructor should walk alongside the rider.

First turns

Before requiring the rider to change direction for the first time the instructor should explain and demonstrate the different dynamics of a machine at low and higher speeds. The instructor should also explain and demonstrate the importance of where the rider should be looking when turning. With both feet off the footrests the rider should engage gear or drive and slowly move forward for a distance of a metre or two and then make a gradual turn to the left. On reaching approximately 90 degrees, the rider should straighten and continue for another metre or two and then stop the machine with the use of the front brake and clutch and then select neutral. The instructor should walk alongside the rider. When the instructor is confident that the rider has reasonable clutch and throttle control, the rider should then be required to move to immediately turn left through ninety degrees and continue for a metre or so before stopping. The exercise should then be repeated with turns to the right.

Riding at constant slow speed

This exercise requires the rider to control the machine slowly whilst riding in a straight line. The instructor should explain that the purpose of the exercise is not to go as slowly as possible, but to balance slow speed with directional stability. Again the importance of visual focus should be stressed, with the rider looking forward to a moving point that he would reach in about six seconds.

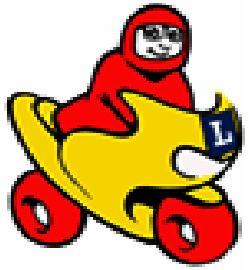
Explain that at this point the bad habit of looking immediately in front of the front wheel can develop. The instructor should highlight that if a rider only sees an obstacle at that point then it is too late to avoid it.

After engaging first gear the rider should move off with both feet on the footrests. When told the rider should stop using both brakes and clutch and then select neutral. Throughout the exercise the instructor should walk beside the rider.

2. First movements

Instructor note. 2

(continued)



Riding slowly and varying speed

The instructor next demonstrates riding slowly in a straight line and varying speed, explaining that that this is a useful exercise, as it resembles real road conditions.

Moving off in first gear, with both feet up, to a speed of about eight kph and with the clutch fully engaged. Then increasing speed a little. As students are now acquiring skills relevant to riding in traffic the instructor should again emphasise the importance of looking ahead to recognise hazards, and having plenty of time to react.

Hazards, attitude and behaviour

The instructor should ensure that within the exercises of the First movements aspect the rider appreciates that the dynamics of the machine make it a hazard to the rider and other road users.

Evaluation

No student should move on the next stage until the instructor is confident they have the necessary skills. The rider must understand the operation of the controls and use them in a co-ordinated way being able to ride the exercises in a safe and controlled way.

The instructor should ensure the rider understands the importance of looking where they are going when riding. A speed of around eight kph should be maintained for a few metres before rolling-off the throttle, allowing the machine to slow under engine braking and then stopping with the use of the brakes and clutch. When stopped neutral should be selected.

When the instructor is sure the student is ready variations can be introduced. The exercise should be repeated without the machine coming to a complete stop and the rider should also practice riding for periods of varying slow speeds, with and without stops.

The rider should also be introduced to the way the brakes can be used and appreciate the different characteristics of the front and rear brakes by being required to brake more and less gently on occasion.

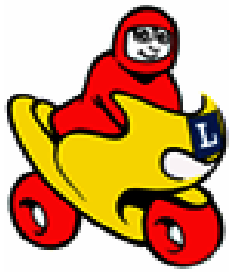
3. Gears, brakes and direction

Rider pre-knowledge

Mounting and dismounting, sitting correctly on the machine and manoeuvring it without power

Starting and stopping the engine, engaging gear, use of throttle and making initial movements

Relationship between throttle and speed, effect of engine braking and operation of brakes
Importance of visual focus.



Instructor requirements

Review Instructor notes
Evaluate the extent of pre-knowledge
Explain and demonstrate operation of the controls for changing speed and braking
Explain steering and counter steering and their relevance to changing direction
Demonstrate how to vary speed with and without brakes and to change direction at varying speeds
Explain importance of hazard awareness and attitude and behaviour in the context of the exercises
Continue to assess attitude

The exercises

Riding without change of direction, varying speed without use of brakes

Riding without change of direction, varying speed with throttle and operation of both brakes

Changing direction in a wide turn and varying speed between changes of direction

Hazards, attitude and behaviour

The rider must know where to look, when starting, moving forward at varying speeds and changing direction. The rider should be confident with the effect of throttle and brake control on road holding and the importance of braking distances and anticipation.

Evaluation

The instructor should be satisfied that the rider can smoothly accelerate to twenty five kph and slow to walking speed without use of brakes. Accelerate to thirty five kph and slow to walking speed with correct use of throttle and brakes, and be able to change direction at low speed within a radius of fifteen metres. Be able to focus in the correct direction and to the right distance whilst riding.

3. Gears, brakes and direction *(continued)*

Preparation and planning

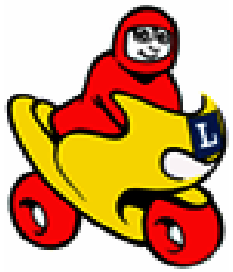
The instructor should plan according to the size of the training ground, the number of riders and the number of motorcycles. Different types and sizes of machine can be used. With more than one student exercises should be organised to ensure adequate separation is maintained and that riders will not endanger each other.

Explaining and demonstrating

The instructor explains these exercises relate to riding on the road. The instructor must never demonstrate incorrect handling or dangerous practices. Where a group contains both automatic and manual machines the instructor must ensure that confusion does not arise due to the different location of certain controls.

After a short distance speed should be reduced to walking pace without the use of the brakes and then, after a short distance at walking pace, the acceleration and deceleration should be repeated. As the rider gains confidence the speed of the machine should be gradually increased up to a maximum of twenty five kph. At the end of the exercise the machine should be brought to a stop with the use of the brakes.

It is important that the rider can decide when to slow down and accelerate within the exercise. When stopped the right foot should be on the foot rest and the left on the ground. When moving the rider should be sitting upright, knees in and both feet on the footrests.



Speed control with throttle and brakes

When the instructor has explained and demonstrated how both brakes should be used in conjunction with the throttle to decrease speed and has reinforced the importance of visual focus, the rider should
do the same exercise as before. This time, slowing with gradual co-ordinated use of both brakes and the throttle.

On gaining confidence the rider should progressively increase the speed up to a maximum of thirty five kph.

If a dangerous or potentially dangerous situation arises the instructor must stop the exercise.

3. Gears, brakes and direction

Instructor note. 1

***Speed control with throttle and brakes* - continued**
Changing direction and varying speed

The instructor having explained and demonstrated how the machine can be made to change direction at a slow speed and reinforced the importance of the rider looking where he intends to go, the rider should demonstrate moving off in a straight line.

On reaching a speed of approximately eight kph the rider should change direction through one hundred and eighty degrees.

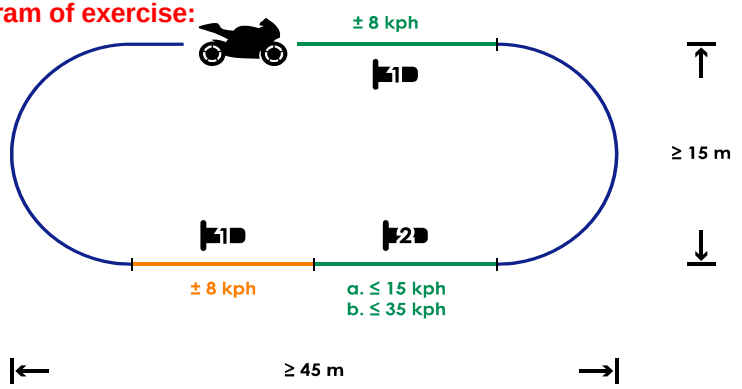
The rider should be able to ride a gradual curve of not less than fifteen metres radius and must always look where he wants to go. On returning to riding straight and parallel to the previous direction the rider should accelerate to not more than fifteen kph and then decelerate to the slower speed and change direction as before. As confidence grows the speed between the curves can be increased and slowing by both throttle and the brakes can be done. Speed in the curves should be constant and slow. Next the rider should change and ride in the other direction.

As speed and the use of the brakes increases the instructor should talk to the students about anticipation, traffic separation and braking distance.

Evaluation

Where progress is borderline the instructor should record which matters need to be addressed, before moving that student on to the next stage.

Diagram of exercise:



3. Gears, brakes and direction

Instructor note. 2

Instructor requirements

Review Instructor's notes

Evaluate the extent of rider's pre-knowledge

Explain and show the operation of the controls for selecting gears, varying speed and braking

Explain steering and counter steering and their relevance to changing direction

Demonstrate how to vary speed with and without gears and brakes and to change direction

Explain importance of hazard awareness and attitude and behaviour in the context of the exercises

Continue to assess the rider's attitude

Rider pre-knowledge

Mounting and dismounting, sitting correctly on the machine and manoeuvring it without power.

Starting and stopping the engine of the machine, use of clutch, selection of gears, use of throttle and making initial movements.

Relationship between throttle, gears and speed, effect of engine braking and operation of brakes

Importance of visual focus.

The exercises

Riding without change of direction, varying speed with the throttle and changing gears, without use of brakes

Riding without change of direction, varying speed with the throttle and changing gears and operation of both brakes

Changing direction in a wide turn and varying speed with the throttle and changing gears and operation of brakes between changes of direction

4. Steering and counter-steering

Rider pre-knowledge

Before moving on to steering and counter-steering, the instructor must be satisfied that the rider has attained reasonable competence in the preceding exercises.

Instructor requirements

Review the Instructor notes

Assess the extent of pre-knowledge

Plan the layout of the exercises

Explain and demonstrate counter-steering

Explain the particular importance of visual focus to machine control when changing direction

Emphasise the importance of hazard awareness and rider attitude in the context of the exercises

Continue to assess attitude

The exercises

Riding in a slalom at speeds from fifteen to fifty kilometres an hour

Riding in a circle at fifteen to forty kilometres an hour

Riding in a figure of eight at speeds from fifteen to thirty five

kilometres an hour

Turning through one hundred and eighty degrees

Evaluation

The rider should be able smoothly ride a slalom, a circle, a figure of eight and a U, at slow speed. The rider should also be able to counter steer. Visual focus to help enable early recognition of potential hazards to aid later riding on public roads.

4. Steering and counter-steering

Instructor note. 1

Preparation and planning

Each of the exercises requires marking the training ground using cones and tapes. The diagrams define the ideal arrangements, however complying with them will not always be possible owing to space limitations. Instructors should plan and adapt the exercises accordingly. If circle or figure of eight need to be reduced then the speed should be correspondingly reduced. With more than one rider ensure separation is maintained.

Explaining and demonstrating

Attention should be given to the gyroscopic effect of the wheels and how pressure can be applied to the handlebar to change direction. Counter steering can be demonstrated at slow speed, showing the effect at higher speeds should be avoided as it can be intimidating at this stage in training. The importance of where to look in these exercises should be stressed.

The rider should brake only while upright and in a turn speed should be adjusted with the throttle and engine braking.

If a riders behaviour gives cause for concern the exercise must be stopped and instructor should address the problem.

The Exercises

Riding in a slalom

The instructor must demonstrate how to ride the slalom and explain this is a skill relevant to riding on the road.

The earlier exercise with the bicycle wheel can be repeated at this stage.

Having checked behind, engaged drive, moved off, accelerated in the defined lane to approximately fifteen kph, the rider should go between the first and second cones, changing direction on exiting to enable the machine to be directed between the second and third cones, and so on.

The visual focus should be progressive moving from the exit of the cones that are about to be entered, to the entrance to the next pair. At the end the rider should come to a smooth stop. The exercise should be repeated and as the rider gains confidence exiting the final cones the rider should ride back to the start point and stop. Following this speed through the cones should gradually increase so that direction is consciously controlled by counter-steering.

4. Steering and counter-steering

Instructor note. 2

Riding in a circle

The rider starts half a metre outside a circle of cones - diameter approximately twenty metres. Maintaining distance from the cones, at a speed of approximately fifteen kph. The rider should be looking to a point one third of the circumference of the circle in front. Initially the rider will steer with the handlebars and as speed increases will lean into the turn.

As speed increases the focus in the circle should increase to about half the circle in front. With the rider turning alternatively left and right, the head should be held level, not at the angle of the motorcycle.

This needs to be clearly demonstrated by the instructor.

The instructor may vary the distance between the circles so the rider changes direction in one fluid or two distinct movements. When turning circles the rider must adjust speed with the throttle, using engine braking to reduce speed.

This requires the correct gear. The rider should understand that if the gear is too high the braking when upright.
engine will have little braking effect. If the rider needs to reduce speed with the brakes this should be done between the circles when the machine is upright or by straightening the machine away from the circle and then braking when upright.

Riding in a figure of eight

With the cones set in two circles with a diameter of around twenty metres and approximately ten metres between them, the rider should start the exercise from a position of ninety degrees facing outwards in an anticlockwise direction. On reaching the point where the second circle can be reached by changing direction by approximately forty five degrees, the rider should join the second circle at around half a metre on the outside of its cones in a clockwise direction. For the first few circuits speed
should be around fifteen kph, which should be gradually increased as the rider gains confidence. When in a circle at slower speeds the rider should focus on at least one third of the circle in front and as the exit point for the second circle can be seen, the focus should move to the entry point on the second circle.

Turning 180 degrees

With the cones set as a figure of eight, this exercise requires the rider to make U turns. The rider should starting in an anticlockwise direction, from a position half a metre outside of one of the circles.

Having checked behind, the rider moves off and gradually accelerates to a speed of fifteen kph. On completing one hundred and eighty degrees and being in line with the initial position on the second circle, the rider should straighten up and just before reaching that point on the second circle, check behind and then enter the turn. The visual focus on entering a turn should be on the exit point and move to the entry point on the second circle as the mid point is reached.

As confidence improves the speed can be gradually increased to around thirty kph in the turns and on exiting a turn the speed can be increased on the straight to a maximum of fifty kph and then reduced before entering the following turn. The exercise can then be repeated in a clockwise direction.

Speed should be gradually increased to a maximum of forty kph. As speed increases the rider should apply counter steering and lengthen visual focus to a point, about half of the circle in front.

4. Steering and counter-steering

Instructor note. 3

Hazards, attitude and behaviour

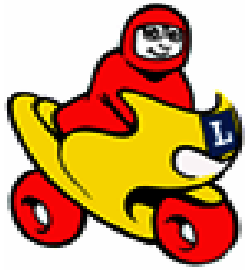
The skills acquired so far are only part of what is needed to be to ride safely and well.

They are necessary to enable a rider to concentrate on traffic conditions and evaluate what situations are likely to develop.

If a rider thinks on entering a blind bend that the exit is clear, or that he has been seen by an approaching vehicle that is signalling an intention to cross in front, then the prospects of riding, without incident, over the first eighteen months will be significantly reduced.

The necessity of correct visual focus should have been reinforced in these exercises with particular importance being given to the need to ensure that all is clear behind before executing the appreciable changes in direction required in these manoeuvres.

The rider should know that brakes should not be used in a turn and appreciate that being in the correct gear at the correct speed is essential to safety.



Evaluation

These machine control skills are the most important for a motorcycle to be ridden safely. It is essential the rider has achieved a level of skill that allows the exercises to be performed smoothly and under full control.

Visual focus should be correct and rearward checks must always be made when commencing a manoeuvre and changing direction. If the rider has shown over-confidence and a propensity to take risks, the instructor must address the issue now. Only when the instructor is satisfied should the rider be allowed to progress.

5. Low speed manoeuvring

Rider's pre-knowledge

The rider should be aware of his or her limitations.

The rider should have an appreciation of the range of hazards that will be faced when riding in traffic.

Instructor requirements

Review the Instructor notes
Assess the extent of rider pre-knowledge
Plan the layout of the exercises
Explain and demonstrate the importance of balance when manoeuvring at slow speed
Explain and demonstrate the particular importance of throttle and clutch control at slower speeds
Emphasise the need for consideration for pedestrians and other road users
Continue to assess the attitude

The exercises

Riding straight at speeds below three kilometres an hour.

Turning at speeds below five kilometres an hour.

Surmounting obstacles at slow speed.

Hazards, attitude and behaviour

Whilst low speed manoeuvring is not seen as being particularly dangerous, the rider should understand that these skills will be used when parking the machine, when there are pedestrians present and car drivers concentrating on finding and occupying a space. It should also be understood that when a bike falls over it can injure the rider and anyone else who is in the way and can be extensively damaged.

Evaluation

The rider should have developed a good level of balance and be able to maintain control of the machine when manoeuvring at slow speeds The rider should be competent in the clutch and throttle techniques required when riding slowly and when surmounting obstacles at slow speeds. Visual focus should be correct and contribute to good balance as well as enabling an awareness of potential and actual hazards.

5. Low speed manoeuvring
(continued)

Preparation and planning

Because the exercises address the ability of the rider to control the machine at slow speeds, the instructor will have greater flexibility in planning how the training ground is set out and in the order and combination of the exercises. For example the turning at slow speeds exercise could use the slalom or figure of eight and the circle layouts or the instructor could prepare other layouts.

The instructor should recognise that the rider could see these as less important because it is less dynamic and the advantages of making the session interesting through a flexible approach should not be underestimated.

On moving off the rider should be looking forward to a point that would be reached on six or so seconds. The rider should keep the speed as slow as possible, using clutch and throttle. The machine should always be in the lowest gear and the brakes should not be used other than when the speed has increased significantly beyond that required for the exercise. Whilst it will be necessary to move the handlebars to assist in maintaining balance, the front wheel should not deviate from the centre of the lane by more than fifteen cm each side. When the rider can maintain at least a steady slow walking speed with the machine under control at all times the instructor can move on to the next exercise.

Explaining and demonstrating

The instructor should explain the dynamics of the machine at slow speeds and the importance of throttle and clutch control.

Whilst the instructor can demonstrate the limits of slow speed control with the “trials stop” technique (where the bike is at a momentary standstill with both feet on the footrests) this should only be attempted by the rider when the instructor is confident of the student’s ability and knows that the challenge this will pose will not undermine confidence.

Particular attention should be given to the importance of correct posture and visual focus.

Initially each manoeuvre within the exercises should be explained and demonstrated separately by the instructor. As competence and confidence grows the rider can combine the manoeuvres within the exercise.

The Exercises

Riding slowly in a straight line

This exercise requires the rider to ride for thirty metres in a straight line at speeds below three kilometres an hour, without putting a foot down or deviating significantly.

5. Low speed manoeuvring

Instructor note. 1

Changing direction at slow speeds

The machine control techniques applied to riding slowly in a straight line should also be used when making directional changes at slow speeds, with one exception, that of the visual focus. Here the practices established in the exercises 3 and 4 should be applied.

Three distinct manoeuvres should be undertaken within this exercise:
1) Successive changing from one direction to another of no more than forty five degrees;
2) Turning through one hundred and eighty degrees from a standstill
3) Turning though one hundred and eighty or three hundred and sixty degrees when moving.

The first could utilise the slalom or figure of eight courses, and the second and third could use the circle or figure of eight courses. With the slow speed required if using the circle or figure of eight courses the student should be on the inside not the outside of the course. Initially each manoeuvre should be practised separately. As confidence grows they can be combined. Only when the instructor is satisfied that the rider is able to change direction at slow speed with the machine under control at all times should the next exercise be attempted.

Slowly surmounting obstacles

This exercise replicates riding up and down a kerb.
It requires more power from the engine and therefore higher throttle settings which need to be finely balanced with the clutch.
Sitting on the machine with both feet on the ground and with the front wheel at right angles against a wall the rider should select first gear, gradually let out the clutch and feel the point at which the engine is about to stall at a range of throttle settings up to approximately one-third open.
When the rider has developed a feel for the balance between throttle and clutch against resistance at higher engine speeds he can move to the next stage of the exercise. Using a pavement with a kerbstone with a height of around ten cm, or a specially constructed fixed platform, the rider should position the machine at right angles to it with the front wheel just touching the kerbstone.
Having selected first gear and with both feet on the ground, gradually let out the clutch and increase the throttle setting to the point where the wheel begins to mount the kerb. As soon as the resistance is overcome the throttle should be rolled back and when the front wheel is fully on the pavement the clutch lever should be pulled fully in. The rider should move forward until the rear wheel touches the kerb.

The rider should appreciate that less power will be needed to raise the rear wheel as most weight is already on the pavement and if too wide a throttle setting is used the rear wheel is likely to skid and slide to one side. This can be dangerous and must be avoided. The easier exercise of riding off a pavement should also be practised. Again the feet should be off the footrests. The throttle should be closed when the wheels are going down the kerb. Careful use of the front brake will ensure that the wheels go down gradually.

Hazards, attitude and behaviour

The rider should appreciate that if the bike falls it can injure the rider and anyone else who is in the way and can be extensively and expensively damaged.

Evaluation

The rider should be able to perform the exercises competently and the instructor should ensure that the rider understands that while the machine is moving slowly it is still potentially dangerous.

6. Hazard management

Rider pre-knowledge

Understand counter steering.

Be sufficiently skilled to counter steer smoothly at speeds above twenty five kph.

Demonstrate the braking skills needed to ride in traffic.

Know that rider attitude and behaviour affect safety.

Know that other road users will not always behave predictably, and understand the need to ride so that hazards are avoided - or managed.

Instructor requirements

Review the Instructor notes.
Evaluate pre-knowledge.
Plan the layout of the exercises.
Explain and demonstrate obstacle avoidance with the use of extreme counter steering input.
Explain and demonstrate the most effective braking techniques in an emergency.
Emphasise the importance of attitude and behaviour to avoid situations where swerving and emergency braking skills are required.
Continue to assess attitude.

The exercises

Swerving to avoid an obstacle at speeds up to thirty kilometres an hour.

Braking to avoid a collision from speeds up to fifty kilometres an hour.

Hazards, attitude and behaviour

Whilst the skills that are addressed here are the most difficult to master the rider should understand that they are essential to avoid collisions with other road users. Reacting to the unexpected is important as in two-thirds of collisions where a motorcycle and another vehicle are involved the driver will not have seen the rider.

Evaluation

The rider should be able to ride around an obstacle using extreme counter steering input. The rider should be able to stop from a given speed in the shortest possible distance with the machine under control and neither wheel locking. The rider should be able to react quickly to a requirement to perform these collision avoidance techniques. The rider should understand that the need for these collision avoidance techniques will be influenced by attitude and behaviour.

The Initial Rider Training Project

Preparation and planning

The exercises are the most demanding of the rider. The instructor should ensure that safety is the priority. The instructor should be aware of the way the braking and swerving techniques will be tested in the national category “A” licence examination. Testing these techniques is now a European Union requirement in all of the Member States, but the arrangements do vary, with differences in speeds, distances and the dimensions of the obstacle around which the rider must swerve.

In some countries the braking and swerving techniques are tested separately and in others they are combined. If the size of the training ground is sufficient and the condition of its surface is good, then the instructor should set the exercises out in a way that is close to that which the rider will experience in the test.

It is possible to teach both emergency braking and swerving in smaller areas at lower speed than required by some national testing authorities.

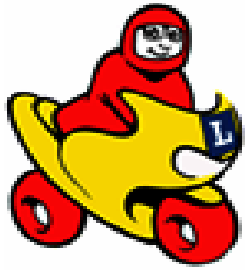
The instructor should introduce the techniques to the rider progressively. The input required to effect counter steering to swerve around an obstacle can be induced at a speeds as low as twenty kph and good emergency braking techniques from as low as twenty five kph.

The instructor must be able to competently demonstrate the swerving and braking techniques that these exercises require and should recognise that to the rider they will initially be intimidating, even frightening. The instructor should carefully explain what is required of the rider and how the machine will react and demonstrate the techniques at slower speeds.

Visual focus is very important and the instructor should emphasise and monitor it.

Explaining and demonstrating

The ability to brake effectively in an emergency and to swerve around a vehicle or person that has unexpectedly entered your road space are essential machine control skills and may be lifesaving. In teaching it is important that the instructor emphasises the risk of being required to use them will mainly be determined by skill in hazard awareness. – Most collisions do not just occur, they are preceded by one or more events. Additionally these skills will only come into effect in an emergency if the brain and body are conditioned to their use because at they are, “counter intuitive.” – Pushing one way to go another!
The only way to maintain these skills is to use them. Counter steering should be used consciously as part of normal riding.



The Exercises

Swerving to avoid

The rider should begin by exploring the counter steering characteristics of the machine. Riding in a straight line at about twenty kph, a firm and deliberate **forward** movement should be made on the handlebar on the **same** side as the **intended** direction of the turn.

The input on the handlebar should be with the wrist locked and the head should remain vertical to the road. The rider should not alter the throttle position or operate the clutch or gears and should look where he intends to go, not at the obstacle to be avoided. After effecting a turn the rider should stop. The manoeuvre should then be repeated with increased input and corresponding tightness of turns.

When the rider has gained competence and confidence, counter steering in the other direction should be practised as well.

Before coming to a stop the rider should bring the machine upright.

continued

6. Hazard management

Instructor note. 1

***Swerving to avoid* - continued**

When reasonably competent in making the two consecutive swerves, the rider should make a further normal turn onto the line in which he or she was originally travelling and then stop.

At this point the rider should be required to make an initial swerve to the left or to the right, depending on a pre-arranged signal being given by the instructor. After the initial swerve the rider should swerve back to his or her original direction and then turn on to the original line.

When the instructor is satisfied that the rider has reached a reasonable standard of competence then the training ground can be laid out to the requirements of the national test (space permitting). The exercise can be practised with the speed being progressively increased to thirty kilometres an hour. Should the national test require the swerving manoeuvre to be taken at higher speeds then this should only be attempted on a training grounds of sufficient size with a good surface.
.

Braking in an emergency

The instructor should stress that when used properly motorcycle brakes are very efficient and a competent rider can usually stop before the obstacle.

The rider should understand that the object of the exercise will be to stop the machine in the shortest possible distance without either wheel locking or the machine deviating from a straight line. Travelling in a straight line at twenty kilometres an hour, on reaching a marked point the rider should very firmly apply both brakes together and pull in the clutch lever and roll off the throttle. This should be repeated until the rider has developed a feel for the braking effectiveness and can regularly stop without either wheel locking.

Braking in an emergency – continued

On each occasion the stopping distance should be marked so that the rider can appreciate that the distance is shorter when the wheels do not lock and is able to judge the improvement in his or her performance. At this stage the speed can be increased to thirty kph and a prearranged visual signal should be substituted for the marked braking point. The stopping distances should be measured and compared with previous performance. This will give the rider an understanding of reaction time and increased stopping distance. When the instructor is satisfied that the rider is able to make an effective emergency stop with the machine under control the speed can be increased in stages. If the size and the surface of the training ground safely allows, the rider can increase the speed up to a maximum of fifty kilometres an hour.

6. Hazard management

Instructor note. 2

Braking and swerving

Normally swerving and emergency braking are two distinct manoeuvres. The Instructor should explain that if there is not enough distance to stop to avoid hitting an obstacle, such as a car that has pulled out in front, then the rider should swerve around it. It would be a very skilled rider who could make the judgement to trade speed for increased manoeuvrability, particularly as changing from braking to swerving controls would require time, and would also need space.

Some national A licence tests do require candidates to combine the braking and swerving manoeuvres. If the size and surface of the training ground safely permits, then this can be practiced, but only if the rider knows that emergency braking should only be attempted with the machine upright and in a straight line. Should the rider need to brake hard whilst in a curve then it will be necessary to bring the machine upright, brake and then lean it over, using firm counter steering input. This must all be explained to the rider in full detail before the rider practices this.

Hazards, attitude and behaviour

This section has focussed on extremely hazardous situations. In the course of the exercises the instructor should ensure that the rider has a wider appreciation of hazards and behaviour beyond the immediate context of a emergency braking or swerving.

When it is necessary to either swerve or brake very hard the rider must be looking where he wants to go and not at the obstacle he is trying to avoid. The rider should have a good understanding of the relationship between speed and distance and the combined delay of thinking and reaction time. Added to this should be an appreciation of the condition of the road surface.

Evaluation

The rider must be able to swerve around an obstacle, to the left and to the right, at speeds of up to thirty kilometres an hour, competently and confidently and with the machine under control at all times.

The rider must be able to demonstrate safe emergency braking skills, keeping the machine under control, from speeds of thirty up to fifty kph. When the instructor is satisfied that machine control skills are such that all the exercises of aspects 1 to 6 can be performed safely, and that the student understands the importance of correct attitude and behaviour, then, and only then, is it time to move on to the challenge of learning to ride in traffic.

Riding safely on the Road

A structure of recommended exercises

The Initial L Rider Training Project

The Initial L Rider Training Project

These exercises were developed by instructors, and tested on a training ground (using simulated road conditions) and on public roads

This section covers:

1 Positioning in traffic

2 Distance and speed

3 Curves and bends

4 Junctions

5 Overtaking

6 Motorways

7 Anticipation

8 Riding in Groups
(in pairs or larger groups)

9 Route planning

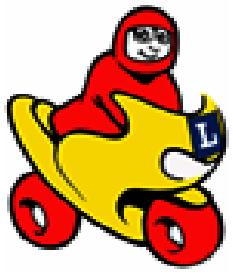
The Traffic interface element - *Riding safely on the Road*

Riding safely on the road

Riding on the road cannot be planned in the same way as on a training ground, as traffic conditions are unpredictable.

To address this we recommend the following points are considered before any training ride in public roads. Do this before every ride.

Before riding on the road



Students

All Students must be reminded of their personal responsibility for their safety.

Remind them that the motorcycle control skills they have learned on the training ground are only part of what is needed to stay safe.

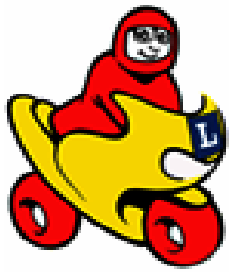
Instructors

We set out a sequence of exercises, but conditions vary so it is unlikely they can be experienced in this particular order.

Think about this when planning and choosing routes.

To start, choose quiet roads with few hazards until the Student has gained sufficient confidence and skills to move on.

Before riding on the road



Pre-Ride Briefing

Check the Student:

- meets legal requirements;

- is properly dressed and equipped;

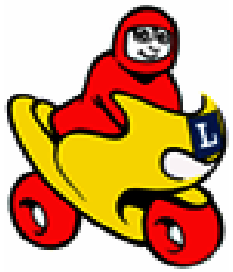
- knows the rules of the road;

- understands the need to follow your instructions;

- has practised communications with the Instructor (radio and/or hand signals);

- knows what to expect in the way of road conditions and hazards for the ride.

Before riding on the road



Instructor pre-ride checks

Has the exercise been planned?

Choose a route to teach the skills identified for the session.

Check compliance with legal requirements by the Student. Both personal and machine aspects. At this point it is a good opportunity to ask the Student to demonstrate a full safety check of the machine as described in the earlier section.

Check that communications will work and be understood.

Brief the Student on likely road conditions and anticipated traffic levels.

Before riding on the road

Instructor pre-ride checks - continued

Make a final assessment of the rider's attitude and likely behaviour. Are you teaching a complete novice with no other road experience? Or a mature Student, new to riding, but with extensive experience of driving other vehicles?

Remind yourself of how this Student performed on the training ground exercises and adjust your approach.

Be On Guard: the apparently mature Student may be more difficult to teach. The inexperienced young person may turn into your star pupil.

1. Positioning in traffic

This covers correct position on the road when riding in traffic.

Planning

The Instructor should select a route with few junctions and one where traffic is likely to be light.

The route should have sufficient places to stop safely, so that Instructor and Student can discuss experiences as the ride progresses and further guidance can be given.
.

Final briefing

Correct position in traffic is affected by constantly varying factors, in particular the behaviour of other road users. Riding in the middle of the lane is the correct starting point. However, this needs to be varied to take account of other vehicles and other roadside hazards.

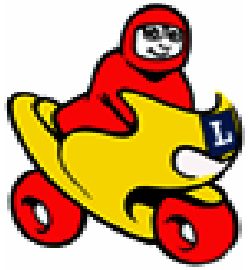
The rider needs to be constantly looking well ahead to monitor and adjust speed and position.

By doing this, potential hazards can be avoided completely, or safely managed to minimise risk.

1. Positioning in traffic - continued

A good way to describe these points is the concept of a “safety bubble” with the rider at the centre. This safe zone can be narrowed at the sides. (See diagrams).

.



In Summary:

Ride so that you are in a position where you can see and be seen

Look well ahead and to the sides

Look for a safe way out

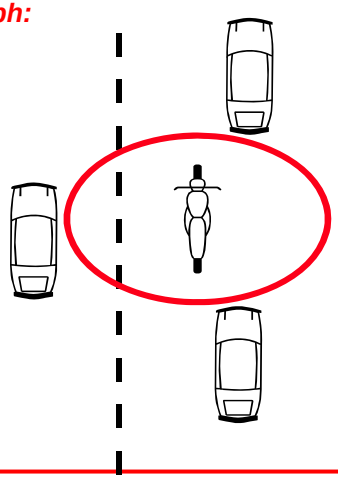
Be aware of following traffic

Speed and distance are the main factors. These need to be varied according to the space available, in front, behind and taking into account following vehicles and to each side.

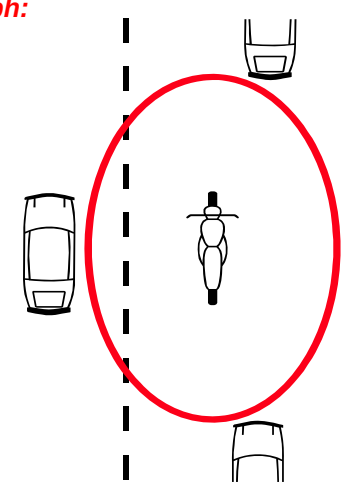
The safety bubble

The following illustrations show how the size of the safety bubble changes in relation to the riders’ speed, the proximity of other traffic and the width of the carriageway.

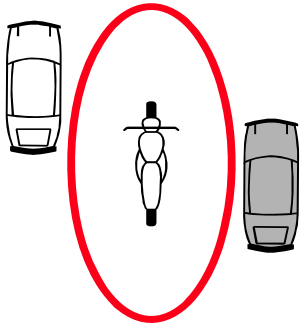
At 25 kph:



At 50 kph:



Passing a parked car



The Initial L Rider Training Project

The size of the “bubble” varies according to speed and traffic conditions. Speed must be reduced not only when traffic ahead slows, but also when a road narrows. (For example as a result of parked cars at the roadside).

Before starting the first ride the Student should be aware of the position the Instructor wants him to follow in.

Explain that there will be stops on the ride where progress will be discussed.

Explain the signals to be used to indicate the need to stop at the side of the road.

Explain the signals to be used if a radio is being used. It is essential that both Instructor and Student spend time practising using and checking radio equipment before riding. Radio is intended to assist safety, not to make riding more difficult for the Student.

Wearing a helmet for the first time is a strange experience. So too is using a radio. Radio communications are a benefit, and in many countries are also used as part of the riding test, so training using a radio is useful.

As with mobile telephones, radio can have serious safety issues if it is not used correctly and communication of instructions starts to develop into a distracting conversation.

Joining Traffic

With the Instructor in the lead, enter the road from a safe location such as a lay-by or driveway. On the first occasion onto a road in the same direction as the passing traffic, using indicators.

Accelerate up to the speed limit, if safe to do so, and continue for a time. When the Instructor sees a suitable stopping point he or she should signal and both should stop.

The exercise can be repeated joining the road in the opposite direction. All these initial exercises should be done when the road is clear of other traffic.

Once confidence is built up the same exercises can be done when there is traffic about, without waiting for the road to clear completely. These exercises are ones where the Instructor can demonstrate judging speed and distance of other traffic accurately, so that traffic can be entered without inconveniencing other road users by forcing them to alter their speed.

The next stage is to reverse position with the Student taking the lead and the Instructor following.

Moving with Traffic

With the Instructor in the lead, the following points can be demonstrated. Road position is affected by speed which sets the distance that must be allowed from the vehicle in front. Riders must always be able to stop with moderate braking if the vehicle in front comes to a sudden stop.

Vans and large commercial vehicles have a restricted rear view. A position where the mirrors of the vehicle can be seen is essential.

If you cannot see the mirrors the driver cannot see you

Following this type of vehicle it is essential to allow more distance to stay within the area covered by the side mirrors of the lorry or van.

If a following a vehicle closes up, the rider should increase the distance to allow the following vehicle to overtake safely.

As the Student gains experience, Instructor and Student can takes turns to take the lead when riding.

2. Distance and speed

This section considers riding in conditions, in town or in a rural area, where the other traffic is light and therefore has less effect on the speed at which a motorcycle is ridden, and speed is down to the choice of the rider.

In planning for this section the Instructor should choose a route with few junctions and bends and where only light traffic can be expected. As the Student's ability and confidence improves the route can be extended in both distance and complexity.

Legal and safety requirements of the rider

This is the same as in the opening section and applies to all sections in this part of the manual. It is essential that the Student is correctly dressed and that the Student and motorcycle or scooter meet all legal requirements. The Instructor must stress that at no time must the speed limit be exceeded.

.**Limit points**

The Instructor should explain the importance of focusing on the furthest point that can be seen on the road. On a straight road this is the point at which both sides of the road appear to join. When the road bends, or rises, it will be the point at which the road disappears from the rider's sight.

This point is often described as the, 'limit point'. A safe speed is where the motorcycle can be brought to a stop, without heavy braking, inside the distance that can be seen. This is why awareness of the limit point at all times is important.

continued

2. Distance and speed

***Limit points* – continued**

After joining the road, with the Instructor in the lead, the Student should try to follow the limit points that the Instructor is using to set his or her speed. After travelling some distance on the route the Instructor and Student can stop to discuss what they have learned.

In discussing the issues the Instructor must be sure that the rider understands the concept of limit points.

When the limit point appears to be moving away, for example when a curve is straightening out, speed can be increased. Again, the speed should always be determined by the ability to stop within the distance that can be seen.

When approaching a bend the rider should recognise that the limit point can also appear to move. This gives an indication of the severity of the bend and speed must be adjusted accordingly.

Limit points are a useful guide - but the road is not a race track- and there is more to be considered. For example if a clear road changes and traffic ahead joins from a side road then clearly the limit point immediately changes and speed must be adjusted to take account of this. The same applies with road junctions and the potential hazards. For example if a petrol station comes into view. Traffic will be entering and leaving it and so it is wise to consider slowing down.

Most national highway codes have a braking chart showing average stopping distances broken down into “reaction time” and actual braking time which must be added together to give the overall stopping distance.

In wet weather allow double the actual braking distance!

Speed and average stopping distances

Light braking

	reaction	+dry	+wet
at 30 kph:	5 m	15 m	15 m
at 60 kph:	10 m	60 m	60 m
at 90 kph:	15 m	130 m	130 m

Firm braking

	reaction	+dry	+wet
at 30 kph:	5 m	9 m	12 m
at 60 kph:	10 m	46 m	36 m
at 90 kph:	15 m	81 m	81 m

Emergency braking (with the rider reacting to a situation he has not anticipated)

	reaction	+dry	+wet
at 30 kph:	10 m	4 m	8 m
at 60 kph:	20 m	14 m	28 m
at 90 kph:	30 m	32 m	64 m

3. Curves and bends

This section deals with riding through curves and bends.

In this manual a distinction is made between a curve and a bend. A curve is considered to be something that does not require a speed reduction of more than 20%. A bend is tighter, and requires a greater reduction in speed.

Preparation and planning

In planning the Instructor should identify a rural or suburban route with a number of curves and moderate bends, with a good road surface. The route chosen should have plenty of safe stopping places where Instructor and Student can stop and discuss progress. Legal and safety requirements must be checked before starting on any exercise.

The Instructor should explain to the Student that the concept of the limit point, explained in the previous section, is essential.

The rider must understand the correct position to be in on the road when approaching and passing through a bend. The Instructor should explain that the limit point can be more easily seen by correct positioning on the road.

This is a good opportunity to explain to the Student that there is a safety problem if a rider is distracted and focuses on a fixed point.

If you look at something then you will end up riding towards it! The golden rule is to always *look where you want to go.*

Control of the machine

With the Student taking the leading position the Instructor should observe the Student's ability through bends. The rider should be able to approach a curve or bend focusing on the limit point and take account of any irregularities on the road surface: for example inspection covers, surface irregularities, etc.

At this stage of riding experience the Student should be taught that using brakes whilst the machine is leant over in a bend should be avoided. Braking to reduce speed for a bend should be done before the bend is reached and with the machine still upright. Once in the bend then gentle acceleration through it will assist in keeping the machine in balance.

continued

3. Curves and bends

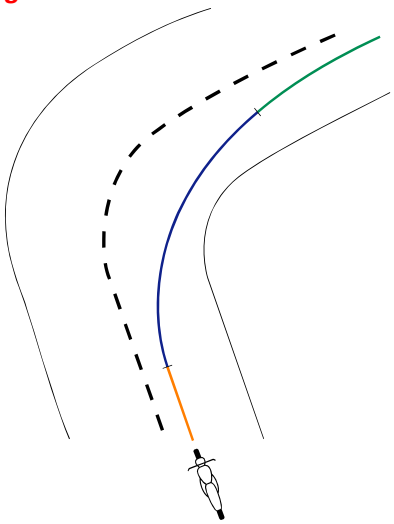
Control of the machine – **continued**

Again, as this is basic training the Student should be taught on the basis that they must always stay on their side of the road. Crossing the centre to gain a greater view of a bend and the ability then to ride through it at a faster speed is an advanced technique beyond the scope of training at this stage.

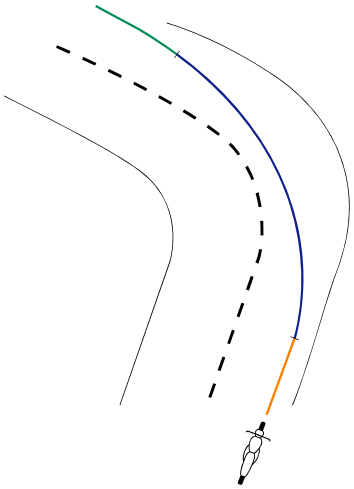
A well controlled motorcycle both when in a straight line, and when banked through a bend, is in fact a very stable vehicle. The problem comes when the rider tenses up and takes too strong a grip on the handlebars. If the Student is having problems and tensing up, teach the technique of breathing out and relaxing the upper body as the bend is entered.

3. Curves and bends

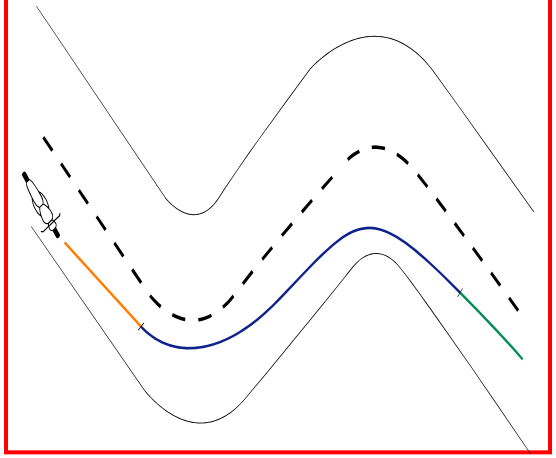
Right hand with enhanced vision



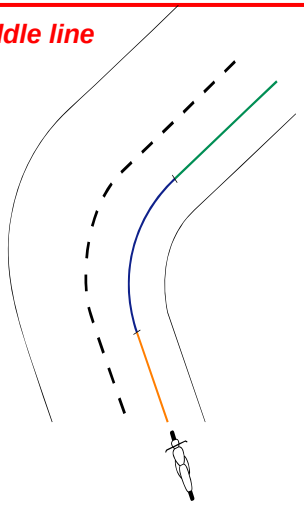
Left hand with enhanced vision



S-bends



The middle line



Legend for diagrams

- accelerate progressively
- constant speed
- decelerate progressively
- STOP brake

The Initial L Rider Training Project

4. Junctions

In planning these exercises the Instructor should choose an urban route with one or two straight forward examples of junctions where it is likely that traffic volume will be moderate. At this point in the briefing of the Student it is appropriate to go through issues concerning road signs and markings at junctions, their legal meaning, etc. For example, some European countries control road junctions extensively by use of a 'Stop' sign. In other countries it is quite common to use a 'Give Way' sign which allows some degree of discretion and there is no legal requirement to bring a vehicle to an absolute stop at a 'Give Way' junction.

Also in some countries pedestrians will be crossing on a "green" light but the rules of the road still allow drivers to enter the same road but they are expected to give way to pedestrians. In other countries the control by traffic lights is stricter, and pedestrians are given a time when they alone have the use of the road.

T-Junctions

Approaching a T-junction the rider should first check for traffic behind and then give a signal for the direction in which it is intended to turn at the junction. At this point the rider should begin to move to the correct position on the road and gradually reduce speed. If this is a junction requiring a compulsory stop then of course it is vital to comply with the instruction given by the sign. Account must be taken of the volume of traffic at the junction, parked vehicles and any other obstructions or hazards.

4. Junctions

Crossroads

Crossroads, particularly when approaching towards a main road from a minor road, need particular care.

The way in which a major road is approached when the rider wishes to turn right or left is the same as at a T-junction. However, when the rider wishes to go straight on there are additional considerations. If there are two lanes the rider should be in the centre of the right hand lane. When crossing the lanes for traffic from both directions the rider should not be tempted to cross in front of oncoming traffic when it is closer to the crossroads than it would be if the rider intended joining the carriageway in the same direction.

It should not be assumed that because another vehicle is not signalling that it does not intend to turn off the main road. If it turns into the road which the rider is leaving it may stop or slow and limit what can be seen. The effect of another vehicle entering the road may also make it necessary for the rider to adjust position on the road.

If another vehicle follows the rider it may close up as a result of travelling at a higher speed so keeping good observation on the behaviour of other drivers is very important at junctions.

4. Junctions

Roundabouts

Traffic on a roundabout has priority over traffic entering.

The only exceptions to this general rule are where traffic lights have been added into the roundabout system, or where a police officer has taken control of the movement of traffic. The size of a roundabout will affect the speed of traffic using it. Small roundabouts that have been put in place of a crossroads will naturally involve riding at slow speeds. Small roundabouts, sometimes called mini roundabouts, are often installed as a 'traffic calming' measure. Sometimes they are no more than circles painted on the road surface.

Some drivers do not slow down very much when coming across traffic controls of this kind. Additionally, the paint used to produce these circles on the road can sometimes be slippery when ridden across on a motorcycle, so particular care is needed by users of motorcycles and scooters.

Traffic Light Controlled Junctions

When approaching traffic lights the rider should also be aware of the sequence and movement of other traffic. Obviously the lights facing the rider are the ones that have to be attended to. However, it can also be useful, if they can be seen, to monitor how the controls are working for other traffic streams as this can assist in anticipating when the lights are likely to change.

National rules and the use of filtering lights for turning left or right do vary across the countries of the European Union. It is important that students are fully aware of the rules that apply in their country.

4. Junctions

Side junctions

It is important the student riders are made fully aware by instructors that side junctions are a major location of motorcycle accidents involving other vehicles that have violated a rider's right of way.

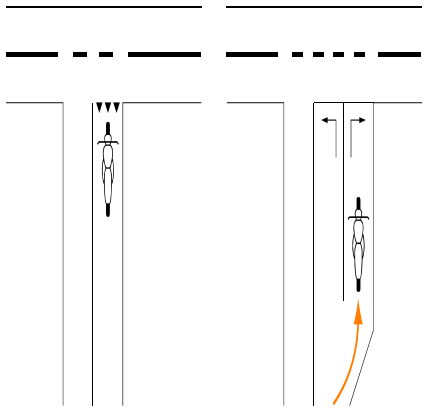
When either a right or left junction is identified the rider should be monitoring it. If other traffic is visible speed should be monitored and controlled and consideration given to the position of the motorcycle on the road.

It is a fact that other road users often misjudge the speed of an approaching scooter or motorcycle, so that even if the car driver has seen a motorcycle it does not always follow that the driver has judged the speed of the motorcycle or scooter correctly.

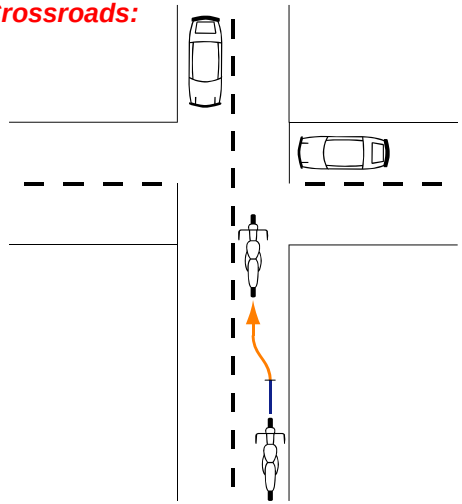
Never use a headlamp flash as a method of warning another road user. Many drivers completely fail to understand the meaning of this warning and always interpret it as an indication that they are being invited to take priority.

4. Junctions

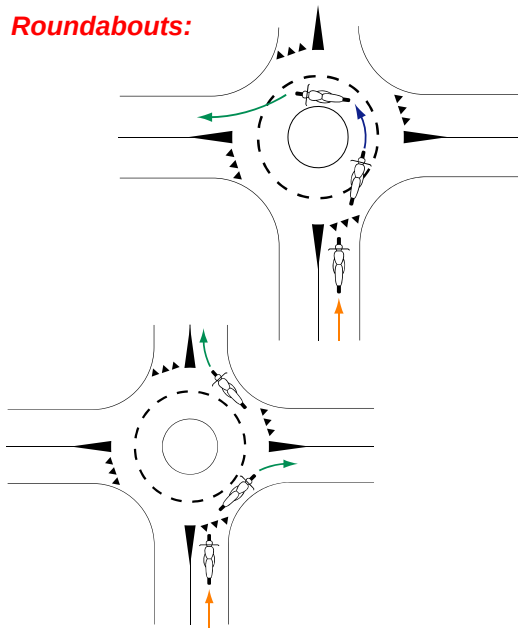
T junctions:



Crossroads:



Roundabouts:



The Initial L Rider Training Project

5. Overtaking

This section looks at how a rider can safely pass other vehicles

For this section the Instructor should find a route on suburban or rural roads which are reasonably straight. Some of these should be dual-carriageway roads where only moderate traffic levels can be expected. These are the places that will provide a safe opportunity for initial practice in overtaking.

To overtake another vehicle the rider must know that it is permitted and can be safely completed within the speed limit. In the briefing process a check should be run on knowledge of relevant road signs, such as painted markings on the road that indicate a total prohibition on passing other vehicles.

As this manual will be read mainly in countries where driving on the road takes places on the right hand side, instructions and advice are given accordingly. Obviously for those countries in the European Union and elsewhere where the rule of the road is to drive on the left the diagrams and comments about lane positioning must be reversed.

After taking up an initial following position the rider should be in the centre of the right hand lane. Prior to overtaking it is necessary to move slightly to the left hand side, but without crossing into the other lane, this maximises the view of the road ahead and also greatly improves the prospect of the driver in the vehicle that is about to be overtaken seeing the rider.

Overtaking a number of vehicles that are travelling close to each other requires particular care.

If there is sufficient space between vehicles to enable the rider to safely return to the right hand lane and maintain correct distance then this should be done.

If there is insufficient space between the vehicles the rider should remain in the left hand lane until the lead vehicle has been passed.

Attention should be paid in case one of the vehicles in a line that is being passed decides to pull out. If this happens, the rider should drop back and allow that vehicle to move ahead.

continued

5. Overtaking

continued

When the Instructor is confident that the Student can safely execute overtaking manoeuvres on a dual carriageway it is time to repeat the exercise on single lane roads where oncoming traffic is also present.

Overtaking another vehicle near to a road junction is something to be avoided on every ride throughout any riding career. As always with road safety, the exposure risk for any particular activity is low. However, riders who persist in overtaking near to hazards such as road junctions will inevitably at some point become involved in an accident, possibly a fatal one.

Other major hazards on the road which should preclude any thought of an overtaking manoeuvre include dips or rises in the road which limit visibility. For example, if there is a dip in the road ahead there may well be traffic that is completely hidden from view..

Other major hazards which preclude overtaking include petrol stations. Any petrol station will result in traffic both leaving and entering the road.

It is sometimes possible on long and very straight roads, where there are no restrictions to vision, to safely overtake a slow moving vehicle when oncoming traffic can be seen in the distance. For example, an agricultural vehicle which is moving at a very slow speed. However the rider should only consider such a manoeuvre after careful evaluation of the closing speed of oncoming traffic and be sure that the distance is sufficient to allow for this with a significant safety margin. In no circumstances should an overtaking manoeuvre be carried out if there is any possibility that the driver of the oncoming vehicle would be obliged to reduce speed or take evasive action. .

continued

5. Overtaking

Turbulence created by large goods vehicles can have a significant effect especially as the vehicle is passed if there is also the effect of strong crosswinds. Unless weather conditions are very extreme these effects will not cause any problems so long as the rider maintains relaxed arms and a light touch on the handlebars. Motorcycles properly ridden are amongst the most stable vehicles on the road. The problem comes when novice riders are taken by surprise by the effects of turbulence and strong crosswinds and try to manage the situation by taking a very firm grip on the handlebars. This has the opposite effect to that which is expected and makes the manoeuvre much more difficult.

Filtering

Filtering, when a motorcycle or scooter is moved through a line of stopped or slow moving traffic, is not permitted in all countries of the European Union. Where it is allowed, it should be explained and experienced by the Student rider. Where national rules or guidelines exist to control filtering they must be followed by the Instructor and Student.

When lines of traffic are moving at speeds of 10kph or more, the rider should stay within the line of traffic. If however the traffic is moving intermittently and when moving does not exceed speeds of 10kph, it is safe to ride between lines. If there are more than two lines of traffic the rider should go between the two furthest lines of traffic to the left (clearly the opposite applies in countries where the rule of the road is driving on the left, such as the UK).

The rider should have dipped headlight on and not travel at more than 5kph faster than the traffic

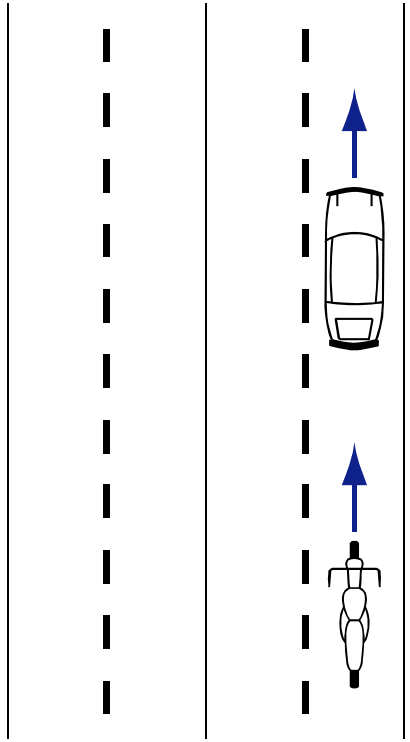
through which he or she is moving.

Anyone coming to this motorcycle course who has any experience of driving in traffic will know that frequently motorcycle and scooter riders filter at speeds far higher than those recommended in this manual. This is a highly risky activity as it offers car drivers and lorry and van drivers no opportunity to avoid an accident if they decide to change lanes and do not see an approaching motorcyclist.

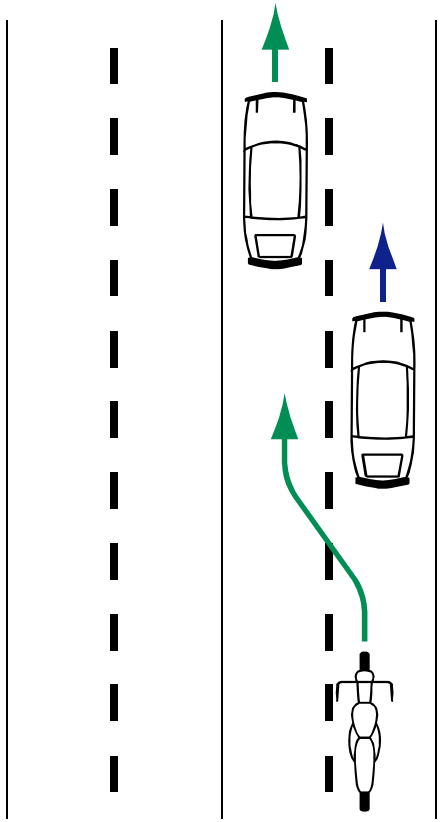
Likewise, it is very common practice to see motorcyclists filtering in towns and cities paying no attention at all to side junctions. It is not safe, as we explained earlier, to make an overtaking manoeuvre near to a junction. Filtering is an **overtaking manoeuvre** and those comments apply equally to filtering as they do to normal overtaking when traffic is moving faster.

5. Overtaking

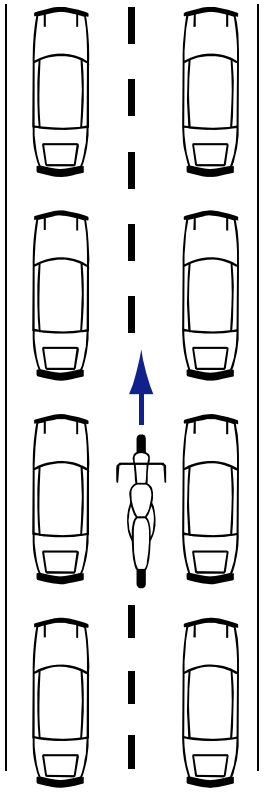
Position and distance:



Overtaking safely:



Filtering:



Rider < 15 kph

Traffic < 10 kph

The Initial L Rider Training Project

6. Motorways

This section considers training on how to safely join, ride on and leave a motorway.

In some countries of the European Union, access to motorways is prohibited to riders who have not passed their test or to riders of machines below a specified engine size or performance.

If this is the case, or where there is no motorway close by, the Instructor should find a stretch of dual carriageway which has features similar to a motorway, in particular one that has access and exit slip roads with acceleration and deceleration lanes and marking. If motorway training is not possible point out that once the test is passed it is worth seeking further instruction specifically on motorway use.

Where training is not immediately available the Instructor can consider taking the Student as a pillion passenger on a motorway to obtain some experience and the opportunity afterwards to discuss what has been seen and learned.

Joining a Motorway

The design of slip roads leading to motorways varies in countries across the European Union. In many countries slip roads leading to motorways often include bends and curves. This means there is less time to get speed up to match that of traffic on the motorway itself. The same problem can be found when leaving the motorway when it is necessary to reduce speed quite rapidly to cope with a short exit or one that has a tight bend in it.

As soon as it is safe when reaching the acceleration lane the rider should check behind, signal and increase or reduce speed to enable the inside lane of the motorway to be joined safely at approximately the same speed as the traffic on the motorway when there is a sufficient gap in the traffic to do so.

Once on the motorway, it is advisable to remain on the inside lane for some time to adjust to the surroundings and motorway conditions, particularly the speed of other traffic.

continued

6. Motorways

***Joining a Motorway* - continued**

The rider should only move onto an outside lane of a motorway when it is necessary to overtake slower moving vehicles, first having checked behind to ensure it is safe to overtake. Additionally motorway conditions across the countries of the European Union vary greatly. Many stretches of motorway are only two lanes. In conditions of heavy traffic on a two lane motorway the following points have to be borne in mind. Much traffic in Lane 2 will effectively be continuously overtaking slow moving commercial vehicles. However, the speed of commercial vehicles themselves varies greatly with some moving very much slower than others. This means a regular occurrence on two lane motorways are overtaking manoeuvres by large trucks and vans.

Added to this there is frequently a need to move back into Lane 1 as a result of traffic which is coming up from behind pushing to drive at higher speeds.

This situation is considerably relaxed on three lane motorways where there are greater choices available to all road users. It is however a mistake to think of Lanes 2 and 3 as anything other than that for which they were designed. The default position for all traffic is Lane 1; Lanes 2 and 3 are designed to facilitate overtaking.

These points are generally not recognised by many road users who often drive for long periods of time in the incorrect lane when traffic is relatively light. Motorway lane discipline varies considerably across the countries of the EU.

Motorways are statistically much the safest roads for all traffic. On a motorcycle or scooter, however, particularly on two lane motorways, riding can be a stressful and tiring experience. It is important to take regular breaks and maintain a very high level of concentration to match the speed of motorway riding.

Overtaking

The same general principles as described earlier apply to overtaking on the motorway. Additional care should be taken as turbulence, spray and crosswinds can all be expected and the effects at higher speeds are magnified. Safely leaving a motorway is a skill of its own. Any ride involving motorway travel means that the exit number to be taken should be known rather than simply relying on what is said on the signs.

continued

6. Motorways

Overtaking – continued

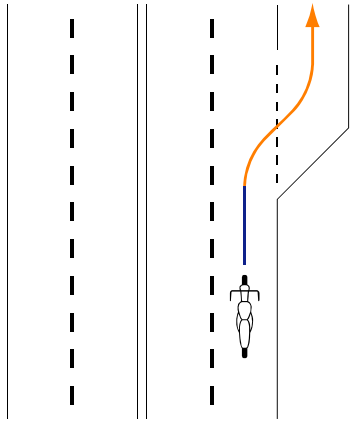
Around large cities there can be a considerable number of motorway exits for different places and just relying on a place name is usually not good enough. The numbering system on motorways is useful as it allows the rider to count down or up to the exit that he wants to leave the motorway at.

The exit lane is the place at which the speed should be reduced, not the motorway itself. Again account must be taken of the design of the exit part of the motorway as frequently these can contain quite a tight bend.

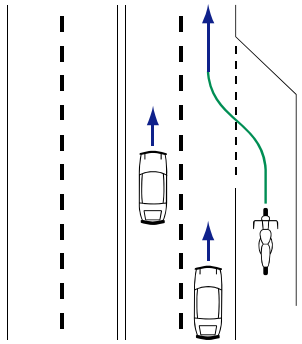
If there are speed indicators the new rider should treat these with caution. Often that speed will be safe for the driver of a motorcar but may prove very testing for an inexperienced motorcycle or scooter rider, and it is often best for the new rider to bear this in mind and not rely on these advice notices about maximum possible speeds that are safe for curves, but to ride at a lower speed.

After a period of riding at motorway speeds non motorway speeds can initially seem extremely slow and it does take time to adjust. This is a time when extra attention should be paid to the speedometer.

Leaving the motorway:



Joining the motorway:



7. Anticipation

This section addresses issues connected with behaviour of other road users including pedestrians and hazards and traffic situations to look out for. The Instructor should choose routes where the road layout, volume of traffic and the mix of traffic and the presence of pedestrians will enable the briefing to be explained and the context to be understood. This part of rider training is likely to involve quite a number of stops on the route to explain points and to evaluate what has been learned.

Riding in towns

Buses and Pedestrians

When following a bus careful attention should be paid to the distance from it and road position so as to make things as easy as possible for the bus driver. Additional lookout must be kept for signals, movement of passengers inside the bus and the likelihood that a bus stop is coming up. When following a bus that is approaching a stop the behaviour of other pedestrians in the street needs to be looked for. Attention should always be paid to the risk that passengers, particularly children, are in the area, and to also be aware that many passengers will immediately start to cross the road having got off the bus, crossing in front of it and maybe not paying attention to traffic that is likely to overtake a bus that has just stopped.

Children

It is absolutely vital to pay particular attention to the behaviour of children. If school signs are seen in the area and it is during school hours this is clear warning that children may soon be present on the road. Junctions that children must cross on their way to school may not be supervised and a child who is late and hurrying to get home will often forget the dangers of stepping onto a road.

Additionally children at play both in formal areas such as school playgrounds, and other places, a ball coming onto the road is likely to be immediately followed by a child intent on retrieving it.

7. Anticipation

Heavy traffic

Heavy traffic increases the likelihood of some road users deciding that they will disobey traffic rules and take additional risks. This should always be borne in mind. For example, a driver who has been waiting for some time to join a stream of almost continuous traffic will sometimes become impatient and try to force their way in. Frequently the best choice for a motorcycle rider coming across such a situation is to reduce speed and allow the impatient driver to join traffic in front of the motorcycle. Such an action not only avoids a potential hazard but will often be seen as a courtesy. Traffic light controlled junctions during times of exceptionally heavy traffic can also pose hazards as some drivers choose not to obey signals and to jump lights. Equally, pedestrians will often not wait for the pedestrian phase of the junction but will take action and cross the road based on some element of risk taking when they see that traffic, for example on the main road, has been halted by red lights, and they will gamble that traffic emerging from a side road will not cause them a problem.

Road Surface Problems

It is essential to safe riding to monitor the condition of the road surface for hazards. Many of these hazards present only a minor problem to car drivers but can be serious for anyone using two wheels. Examples include areas where buses frequently stop and start and there is often oil residue on the road. Other problems include deep ruts in the road surface caused by the weight of heavy vehicles.

Roads that require repair with holes and uneven surfaces together with roads that have been poorly repaired can also present a problem. A particular hazardous road surface is smooth bitumen which is often laid to seal cracks in the road. This material is frequently extremely slippery both dry and wet. Roundabouts used by heavy vehicles, particularly those situated close to a petrol station, require particular attention as spilt diesel fuel is a very serious hazard to two wheeled vehicles.

Wet road surfaces always require care on the part of any rider. Particular problems should be expected when rain has not been sufficient to wash away the residue of oil and rubber on the road, for

continued

7. Anticipation

***Road Surface Problems* – continued**

example, when there has been a short shower of rain after a long period of dry weather conditions the road can be more slippery than when there has been a great deal of rain which has cleaned the road surface.

Riding in Rural Areas

Rural roads frequently have many bends and there is a temptation for many drivers and riders to enjoy themselves on such roads trying to corner at high speeds. It is important to be constantly aware of the potential of other traffic even on a quiet road, both traffic ahead and behind on the same side and oncoming traffic. Looking well ahead can give some guide to the pattern that the road will follow.

However, this is not a guarantee of the conditions ahead on a road which is not known to the rider. There may well be more bends and turns ahead than is expected. Equally in rural areas slow moving vehicles can be expected.

Agricultural Vehicles

Agricultural vehicles require particular care on the part of other road users, especially those on a motorcycle or scooter.

Field entrances through which farm vehicles have to pass are usually very narrow and it is often necessary for the tractor and trailer to be swung very wide using both sides of the road in order to enter a field.

Trailers often have extremely high and wide loads which may completely blind the tractor driver to following traffic as a result of the mirrors being completely obscured.

Heavy loads can also frequently obscure the direction indicators on the tractor leading to reliance only on those that are on the trailer if indeed any have been fitted to the trailer.

Mud on the road left by agricultural vehicles, particularly in wet conditions, can provide yet another hazard.

7. Anticipation

Weather and Road Surface

Road surface problems in rural areas can be just as bad as those found in towns. There are also a number of additional hazards arising from the weather that will be found in the countryside.

These include the effects of heavy rain washing gravel and sediment onto the road. Sometimes the road itself can become flooded due to the absence of an effective drainage system in the area. Leaves and branches blown from trees in autumn and winter provide yet another hazard in county areas. Wet leaves stuck to the road surface are a particular hazard to a motorcycle rider as they affect grip in much the same way as ice or spilt diesel fuel.

When the weather condition is close to or below freezing it is very likely that ice will form on rural roads as they are less likely to be treated than roads in towns.

When stopping and discussing what has been seen the instructor should be careful to ensure that the student has a good ability to recognise potential hazards. If something has been noticed by the Instructor and then later when discussing the ride it is clear that the Student is failing to pick up on these points more time should be spent by the Instructor to ensure that the student is taught to identify them.

8. Riding in Groups

Some motorcycle riders will go through most of their motorcycling life without taking part in group riding. Many riders, including many experienced riders, prefer always to ride alone or only with one or two particular and trusted friends.

Others take a different view and many motorcyclists, especially those who ride mainly for leisure purposes, frequently go out in groups with friends and often fellow members of a motorcycle club.

Additionally carrying a pillion passenger on a motorcycle is something that some people enjoy very much and like to do, and others never do and always choose to ride only solo.

Carrying a Pillion Passenger

Before setting off the rider should be sat astride the motorcycle with the engine switched off and both feet firmly on the ground and the machine held firmly. Getting on and off the passenger seat the pillion passenger may have to take hold of the shoulders of the rider. Sometimes this manoeuvre can be a bit awkward especially if the motorcycle is fitted with a luggage box at the rear which makes getting on to the passenger seat more difficult.

Carrying a Pillion Passenger – continued

Time should be taken to make sure that the passenger has got on and is properly seated before moving away. The same applies when the ride is over and a pillion passenger should be advised that they should not get off the motorcycle until the rider has come to a stop and indicated by speaking to the passenger that now it is safe for them to get off the motorcycle / scooter.

continued

8. Riding in Groups

Carrying a Pillion Passenger – continued

Just like riders pillion passengers who are not themselves riders need a bit of training and this is best undertaken in an off-road area. The passenger needs to have some practice in feeling what it is like when the motorcycle is being braked even moderately. Motorcycles and scooters today generally have handholds for a passenger to use, and these are important. The balance and feel of the machine is affected by the extra weight of a passenger.

Additional power may be needed when moving off and gear changes will generally need to be changed to take account of the additional load on the machine. Likewise, braking will need to be adjusted with more pressure being used to get the equivalent braking performance to that when the machine is ridden solo.

Riding in a Group

The overriding principle is that every rider should continue to make decisions based on his or her own judgement regarding what is a safe speed at which to travel, especially through curves and bends. Obviously it is important to focus also on the riding of those in front and behind but under no circumstances should this result in any rider depending on the speed, position and judgements of others being correct and simply follow them..

If the rider feels that the group is moving at a speed where he or she ceases to feel completely competent and comfortable it is necessary to slow down and maintain his own pace. If the group as a whole is not willing to respond positively then this group is simply not worth riding with.

In the case of large groups of the kind that often are arranged by motorcycle clubs there is usually a high level of discipline. One rider will be nominated to take the lead and another to take the rear-most position.

continued

8. Riding in Groups

Riding in a Group - continued

Riding in groups of this kind there are usually guidelines set out by the leader before the group sets off to take account of the need of the group to stay reasonably well together, for example where part of the group has been delayed by a red traffic light. Experienced group riders understand this and will stop and wait for others to rejoin them. If taking part in large group rides of this kind it is important to pay attention to the guidance given by the group leader before the group sets off.

Whatever is agreed by the riding group there is no excuse for anyone to try and break traffic rules, for example by continuing through a red light in order to keep a group together. Well organised safe motorcycle clubs understand this very well and if group riding is something that a rider is interested in the advice is always to do so with an experienced club that knows how to manage a group ride safely.

9. Route planning

Once a full motorcycle licence has been obtained the opportunities for riding will expand dramatically beyond those experienced in the training stage.

Most people know their home area very well and are able to find their way around without using maps or resorting to extensive planning.

However, it is important to understand that if you do not take care to plan when going to a new area you are likely to be distracted by a last minute looks at road signs and directions. This can provide a new hazard all of its own. Looking out for a street name at the last moment should not be accompanied by a sudden stop that is going to cause problems for other road users. Even if it means stopping and turning around and going back it is important to bear in mind the needs of other road users.

Most of these problems can be minimised or avoided by proper planning.

If a new location is being visited in addition to looking at a street plan or map it is always worth considering doing an internet search on the postcode of the location to be visited.

This makes it easy to download and print a detailed map of the area which can be studied before setting off.
For longer journeys the benefits of careful route planning are considerable. This allows time to consider whether a motorway route should be chosen or if it is possible reduce the amount of motorway travel and take a more scenic route which will be more enjoyable.

Sometimes for long journeys a route plan can be written out and placed into a plastic envelope which can be easily carried or attached to part of the motorcycle, such as a petrol tank bag.

9. Route Planning

Satellite Navigation

More riders today are equipping their machines with satellite navigation systems. To be effective these are more expensive than the basic models that can be used in a car as they require a vibration proof mounting and must be waterproof. The best ones also have large controls that can be operated with a gloved hand. An additional expense is a Bluetooth headset in order to be able to hear the navigation system. Before choosing to buy such equipment it is important to take advice from other riders who use a SATNAV.

Satellite Navigation - continued

Modern technology can be of assistance. At the early stage of riding it is probably not a good idea to start using equipment of this kind. Another feature of SATNAVs and many other mobile devices is the ability to listen to music or radio whilst riding. Opinions differ on this but again at this stage of riding we advise that all distractions of this kind should be avoided. Safe riding requires a high level of calm concentration.

Mobile Telephone

Most EU countries forbid the use of hand held devices by drivers but allow “hands free” communi-cations. The same technology is available now riders with a head set. We advise against any use of a mobile telephone whilst riding, better to switch it off. Research shows that the level of distraction is just as bad with a hands free device. It is a good idea to have a mobile telephone when out riding – but stop and park up first before using it.

CONCLUSION TO THE COURSE

Social attitudes are generally formed early in life. Undergoing a course of instruction to obtain a driving licence or a licence to ride a motorcycle is most unlikely to have any effect on the basic attitude or personality of an individual.

At the conclusion of the course, it is worth the Instructor and Student discussing how he or she sees themselves. Do they have a strong and forceful personality? Or are they a more reticent and shy individual? These personality traits are likely to have a strong influence on attitude and behaviour on the road just as they do in other aspects of life. Naturally over the training period the Instructor will have formed some views on the character and personality of the Student. It is worth asking if as a result of what has been seen this concluding discussion seems accurate to the Instructor. If the Instructor thinks that the Student is lacking a little in insight on their own attitude and behaviour and that this is relevant to the risk of having an accident, now is a good time to talk about it.

To just give one example, the Instructor could ask if once a licence has been obtained the rider is likely to use their motorcycle or scooter to go out to bars or clubs to meet with friends. If this is likely to be the case it is worth discussing the sort of social pressures that could arise regarding the use of alcohol.

continued

CONCLUSION TO THE COURSE

Likewise, if the licence is being obtained mainly for the use of a motorcycle for leisure activities this is also a good time to discuss the potential risks. Equally, if the Student's personality is a little shy and hesitant then these character traits are highly likely to materialise when out riding in traffic. It is a good time to explain the dangers inherent in being too reticent and not assertive enough when that is important for safety.

All of us are affected by our moods and emotions. Riding a motorcycle or a scooter, or driving a car or any other vehicle, can be affected by emotions. Developing good riding and driving habits on a systematic basis can go a long way to counter the effects of negative emotions.

Research undertaken by the insurance industry in The Netherlands proves that many accidents occur near the start or end of a journey when there is a risk of concentrating on something else. The most effective way of countering this risk is to adopt an approach similar to that of professional road users in the emergency services. Think a bit about the weather, the route; check the machines controls before setting off. Adopting this systematic approach every time will increase concentration on what matters – the ride ahead.