



## Guidance Note No. 6: Brake-Gear Overlap

A subject worthy of hours of discussion is the 'brake gear overlap.' It is often described as using both the brakes and changing gear at the same time. Whilst there are some who still condemn this, the average motorist might be staring blankly at you as you try and describe something to them that seems perfectly normal and a sensible operation of their car's controls. However, those of us who are aware know that this phenomenon is only to be used in 'certain circumstances' – right?

I went looking for advice, casting my eye over Roadcraft 1960. It makes absolutely no mention of 'brake gear overlap' but says: "With the exception of the combined use of the accelerator, clutch and gear lever during the operation of gear changing, it will be seen that a systematic driver may use different controls in quick succession but need never use two at any one time." There you have it, clarity. However, crash gearboxes, maybe some early synchromesh, cars with a mind boggling 40 brake horsepower and puny drum brakes were on the roads. Interestingly there was no mention of automatic gearboxes. That modern trickery was yet to come across the pond.

Again, searching for guidance, I moved on to Roadcraft published 1983. On page two it only says that the "features of the system must always be in the correct sequence." This is interesting as I clearly remember it being discussed by my instructor on several occasions. "Heel and toe okay then Sergeant?" Okay I'll get my coat. Hurrah for the new Roadcraft dated 1994. Suddenly the publication grew in practical content and IPSGA appeared as the system of car control.

The big revelation of 1994 edition was that brake gear overlap was now openly being discussed in print and no longer in hushed tones rather like an advert for Schweppes Tonic. It even proclaimed that: "Sometimes it is helpful to overlap braking with the gear change." Roadcraft went on to develop even further in later editions (2007 and 2013) stating that brake gear overlap was indeed acceptable. Other than a few suggestions It provided no definitive list of when and where allowing the thinking driver to decide. However, the overriding factor was that it must be "part of a planned approach to a hazard" and further that "applied carefully in certain circumstances, brake gear overlap takes less time." May I ask then why do people still tell me I must not overlap my brakes and gears even at low speed?

Moving on to 2016 and IAM RoadSmart released the updated training material for the advanced driver course. We now have cars on the road with modern synchromesh gearboxes, clutch systems that are light and leg friendly, remote gear linkages that are both smooth and precise and ABS braking systems that are simply superb. On the subject of brake gear overlap the course material says simply: "Understand when a planned overlap is appropriate. At slow speeds for simple junctions it will be safe to overlap brakes and gears. The gear change needs to be finished and the clutch engaged before steering."

Hopefully that is clear, applying all the principles in the evolution of Roadcraft and condensing it to a succinct statement. So no longer shall we speak of 'brake gear overlap' now we will talk of 'brake steer overlap.'

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## And from Approved Driving Instructor Handbook

### Brake Gear Overlap

It is not my intention to give a history of Advanced Driving here, or to talk too much about advanced techniques, but a few words about brake gear overlap may be of benefit to some trainees.

Brake gear overlap refers to the technique of braking to the correct speed, and at the same time selecting the appropriate gear for the speed. This is carried out by using the foot brake, and just as the car comes down to the right speed, but before the brake is released completely, the driver selects the correct gear. The braking is usually finished and the foot off the pedal before the gear change is fully completed. So, the gear changing is commenced just at the end of the braking.

The old 'traditional' method of Advanced Driving (Roadcraft) used to insist upon clear separation between braking and selecting the correct gear. You had to brake completely, take your foot off the brake, and then commence the gear change. Many Police Force driver training units argued (successfully) that this was not flexible, took no account of advances in vehicle design, and actually created the situation that the vehicle was at the correct speed but in completely the wrong gear, even momentarily.

This led to the acceptance of brake gear overlap as an advanced technique.

Practice block changing and brake gear overlap in your driving. Think about applying acceleration sense to smooth out your driving, but only use it where it's possible to do so safely.

ADIT Team.