

Digital Speed and Red Light Cameras

November 2009

As part of the government's commitment to improving road safety, the Department of Transport and Main Roads and the Queensland Police Service are introducing new digital imaging and detection technologies, including combined red light/speed cameras and point-to-point speed cameras.

What are digital speed and red light cameras?

Digital speed and red light cameras are very similar to existing speed and red light cameras. The difference is they use digital imaging technology and can utilise different detection technologies such as in-road sensors, as opposed to radar devices.

Digital technology will introduce two new types of cameras on Queensland roads – combined red light/speed cameras and point-to-point speed cameras (more information about these new cameras is provided on page two). New digital fixed speed and mobile speed cameras will be installed at new locations, expanding on the current wet-film fixed speed and mobile speed enforcement program.

Why is the Queensland Government installing digital cameras?

Digital cameras are being introduced to improve the existing Camera Detected Offence Program that catches and penalises motorists speeding and running red lights.

Current wet-film cameras are becoming out of date. The new digital cameras are more efficient, require less maintenance and do not require film to be changed or developed.

Digital images will also improve infringement processing time as the images and information are loaded directly into the infringement processing system.

As well as being more efficient, digital cameras will expand the scope of the Camera Detected Offence Program by allowing new enforcement techniques to be used, such as point-to-point enforcement and combined red light/speed cameras.

How many cameras are being tested? Where will they be tested?

Seven cameras will be tested in locations across South East Queensland. These will be:

- two combined red light/speed cameras
 - Waterworks Road and Jubilee Terrace, Ashgrove
 - Beaudesert Road and Compton Road, Calamvale
- three spot-fixed speed cameras
 - Pacific Motorway, Loganholme
 - Gateway Arterial Road, Nudgee
 - Clem7 Tunnel, Woolloongabba to Bowen Hills

- one point-to-point speed camera system
 - Bruce Highway, Caloundra Road to Wild Horse Mountain, Beerburrum
- one mobile speed camera (used at varying locations).

How were these locations chosen?

The locations for digital fixed speed and red light cameras were identified by analysing lengths of road with a history of speed related crashes or intersections with red light related crashes. A strong emphasis is placed on identifying locations with a history of crashes that have resulted in death or hospitalisation.

This ensures that speed and red light cameras target and treat areas where speeding or red light crashes are an issue.

Why just South East Queensland?

These first digital cameras will be installed in the South East corner to enable the project team to test, closely monitor and evaluate the performance of the cameras.

Once the testing is complete and the cameras are proven to accurately operate under Queensland conditions they can be rolled out across the state.

When will the new cameras be tested? Why are they being tested?

The seven cameras will be tested from November 2009 until mid-2010. Testing will make sure the new technology works properly to accurately measure and capture offending vehicles.

It is not just the cameras that are being tested but a new infringement processing system as well. Testing will ensure that the new cameras are compatible with this system.

When will the new cameras become operational?

The cameras will begin issuing speed and/or red light infringement tickets when the project team is satisfied that the cameras are fully operational. This is expected to be mid-2010.

Is the new digital technology accurate?

The digital speed and/or red light cameras must comply with the appropriate Australian Standards for accuracy or they will not be used. All cameras are calibrated and certified to be accurate on an annual basis to provide proof that the speed detections are accurate.

Will the new digital cameras replace the current wet-film cameras?

The current wet-film cameras will eventually be replaced by digital cameras. However, as the current wet-film cameras are still effective, there is no reason to replace them immediately. The wet-film cameras will continue to operate until they have reached the end of their operating life.

Will the new cameras be signed to advise motorists of their presence?

Yes, as with current wet-film fixed speed cameras, all new digital cameras will be signed once they become operational.

Combined red light/speed cameras

What is a combined red light/speed camera?

A combined red light/speed camera is placed at a signalised intersection and is able to detect both failure to obey the red traffic signal and speeding.

The speed detection component of the camera can operate on the red, amber and green signal.

Will the cameras be able to detect someone who is both speeding and running a red light, or only one or the other?

The camera will be able to detect both red light running and speeding at the same time.

Do other states/territories in Australia use this technology?

Combined red light/speed cameras, are also used in Victoria, South Australia and the Australian Capital Territory.

Point-to-point speed cameras

What is a point-to-point speed camera system?

A point-to-point (or average) speed camera system uses a number of cameras over a length of road to measure a vehicle's average speed. The system uses the time it takes for a vehicle to travel between the two points to calculate the average speed of the vehicle:

Speed = Distance/Time.

How does this system work?

Point-to-point speed camera systems use a number of cameras mounted at staged intervals along a particular route.

Point-to-point camera systems, like fixed speed cameras, are monitoring traffic 24 hours a day, 7 days a week. However, unlike current fixed speed cameras, point-to-point systems are not activated when a vehicle violates the speed limit at a given point in time measured by a speed detection device.

Rather, point-to-point camera systems apply a mathematical calculation based on the time it takes for a vehicle to travel from one camera to the next and the distance between the cameras.

The point-to-point camera system determines the average speed between the two points and compares this speed to the speed limit of the road to establish if an offence has occurred.

Have point-to-point speed cameras proven to be effective?

Point-to-point cameras are used widely overseas and have proven to be very successful in slowing down drivers and reducing the number and severity of crashes.

Victoria currently uses point-to-point enforcement for all vehicles on the Hume Highway, and New South Wales uses such systems for heavy vehicle monitoring and enforcement. Other states are actively planning to introduce point-to-point enforcement.

What length of road will the point-to-point detection be over?

The first length of road that the point-to-point speed camera system will cover is approximately 13km.