
There has been a lot hype around the new VF Commodore and for good reason. For many years foreign cars showed the way with innovation and it seemed as though local cars were always playing catch up. This made sense because the technology cost more and we demand affordable cars.

Holden has changed the game with a brand new VF Commodore that is not only full of advanced tech it is also well priced.... very well priced.

VF delivers more advanced-technology features than any vehicle in Australian automotive history – making it the most technologically advanced car ever created in Australia.

Holden Director of Electrical Engineering, Jo Markham, said the new architecture contributed to VF Commodore's exceptional safety and security.

"When it comes to safety, Holden is committed to providing protection before, during and after a collision, but the best scenario is to avoid that collision in the first place. Much of the new technology we've added is designed to help drivers do just that – to prevent an accident from happening," she said

"To make Commodore even easier to drive and manoeuvre, we've also made cutting-edge features like Auto Park Assist and a rear view camera standard across the range. It's all about convenience, visibility and awareness.

“Some models feature rear radar alerts to warn about cross traffic when you’re reversing into a roadway, or to show you what’s in your blind spot, or forward cameras to warn if you start to stray out of your lane, or are in danger of a collision.

“And for easy walk-up, start-up convenience, it’s hard to beat a sensor system which lets you unlock and start the car without having to touch the key.”


**Auto Park Assist**

The cutting edge capabilities of Auto Park Assist make it one of the most advanced systems in VF Commodore’s formidable new armoury.

Like Holden’s new *MyLink* infotainment system, Auto Park Assist is included as standard across the VF range so every buyer can appreciate the benefits of this efficient parking assistant.

Auto Park Assist takes the guesswork out of reversing into tight spots.  It’s a great tool for drivers who may be hesitant about trying to squeeze into a narrow slot or who are reluctant to attempt challenging parking manoeuvres on busy streets.
Using ultrasonic sensors, Auto Park Assist accurately detects viable parking spaces, determines approach angles and neatly parks the vehicle by taking over the steering.

The driver manages throttle, braking and transmission but effectively the vehicle steers itself into any suitable reverse parallel or reverse right angle (90-degree, or perpendicular) parking space.

Advanced parking mode is activated by pressing a control on the centre console, the ultrasonic sensing system then determines if a space is large enough.

It measures the depth and width of a possible parking space as the vehicle drives past (parking slot searching speed is up to 30 km/h).

With the space identified and the driver notified via an audible alert and on the Driver Information Display, Auto Park Assist  then handles all the steering inputs required to park the car, simply and safely.  The driver remains in control of the vehicle, applying the accelerator or brake and making gear changes in response to instructions displayed in the Driver Information Centre in the instrument cluster.

The 10-sensor system (six sensors on the front bumper and four on the rear) is facilitated by Commodore's all-new Electric Power Steering system. It operates at speeds below 10 km/h and can be instantly de-activated if the driver takes over the steering or brakes to a stop.

The Holden Commodore is among the first GM vehicles in the world - and the first large GM car - to offer buyers the benefits of Auto Park Assist.

The successful application of this complex technology to a range of different body styles reflects great credit on the skills of the specialist Holden engineering teams responsible.

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**Colour Head-Up Display [HUD]**

Head-Up Display projects important cluster information on the windscreen, allowing the driver to view it without looking away from the road.

The transparent, coloured display (Calais V and SS V Redline) features four screens, selectable by the driver, which show information including digital speedometer, tachometer, infotainment and turn by turn navigation.

“Head-Up Display is an underestimated technology,” said Ms Markham.

“We’re implementing a feature that has been present in military aircraft for many years, and it provides information to the driver in an intuitive manner.

“The safety advantages of this feature are tangible – it keeps the driver from glancing away from the road.  We generally find that once drivers have experienced the Head-Up Display, they won’t want to drive without it.”

Key information featured in Commodore’s HUD include:

- Vehicle speed
- Tachometer
- Turn signal indicators
- High beam indicator
- Selected gear
- Forward Collision Alert indicator

- Turn by turn navigation display
- Audio functions
- Outside air temperature
- Phone information
- Vehicle messages
- Lateral Acceleration
- Up-shift lights

The HUD system uses a series of mirrors to display the information on a specific high-technology windscreen. The HUD-enabled windscreen incorporates wedge lamination to provide excellent optic focus for the delivery of clear, sharp images.

Drivers can adjust the brightness and location of the image, or turn it off via a switch located next to the headlamp control.

Head-Up Display is based on technology originally developed in the US for military fighter jets. It enabled pilots to view vital information with the head positioned ‘up’ and looking forward, instead of looking down at lower instrument readouts.

General Motors began using head-up displays in 1988 - the Australian designed Chevrolet Camaro, for example, is a benefactor - and remains a leader in the field.

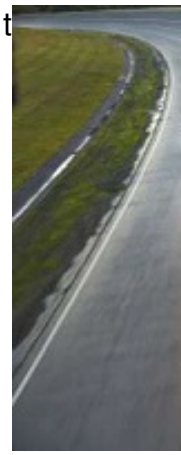
**Forward Collision Alert (FCA)**

This advanced and all-new active safety system is standard on Calais V-Series and SS V-Series models and uses a digital camera to help drivers avoid front-end collisions.

Along with Lane Departure Warning, FCA is designed to help minimise the risk of collisions

commonly caused by driver error, distraction and drowsiness.

The high-resolution digital camera is mounted on the windscreen ahead of the rear view mirror. It looks for vehicles ahead and uses the vehicle's Head-Up Display (HUD) to warn drivers if t



hey are approaching another vehicle too rapidly and a collision appears imminent.

If the HUD function is turned off, the collision warning system will override this setting.

"Digital image sensors are used in just about everything from cameras to mobile phones to computers and this has made them a more affordable alternative for use in vehicles," Ms Markham said.

"Studies suggest that people can use changes in object size as they approach to estimate how long until they collide.

"Holden's digital camera detection system works much like a human eye, using state-of-the-art image processing software to decide if the changes in the size of a vehicle ahead suggest a crash may be just a few seconds away."
FCA operates at speeds above 40 km/h. The HUD shows green 'vehicle ahead' and amber 'vehicle tailgating' icons and a flashing red 'forward collision alert' icon, which is accompanied by warning chimes.

When the system predicts a crash threat, it anticipates hard braking by increasing hydraulic pressure in the brake lines. This helps to reduce response times and decrease stopping

distances. It can be adjusted to near, medium and far timing settings using the system's steering wheel-mounted control.

**Lane Departure Warning**

The same digital camera used for forward collision alerts, mounted on the windscreen ahead of the rear view mirror, can also help combat driver error, distraction and drowsiness by providing lane departure warnings.

This practical active safety feature helps reduce the risk of collision from drivers straying over lane markings unintentionally or departing a lane without signalling first.

The system's digital image processor looks for lane markings to provide lane departure alerts at speeds above 56 km/h.

A 'lanes detected' icon located in the cluster shines green when at least one lane marking is detected to indicate the system is tracking. It will not always track lines on both sides of the lane.  If the vehicle drifts out of the lane without turn signal indication, the Lane Departure Warning lamp switches to flashing amber and a warning tone will sound from the vehicle side affected.

A steering wheel angle sensor is designed to pick up a gradual rate of lane departure and will not react with a warning if the vehicle swerves quickly into an adjoining lane.

The Lane Departure System is activated by a control on the steering wheel. It may be deactivated by the driver, according to preference and circumstance.

**Blind Spot Alert**

This clever collision-avoidance technology operates via radar sensors located on both sides of the vehicle's rear fascia.

The system's first purpose is to caution drivers when a vehicle enters a specified 'blind spot' zone in an adjacent lane. The second imperative is to alert drivers to the danger if an attempt is made to change lanes.

The system 'looks' for other vehicles in both rear side blind spots and alerts the driver to their presence via cautionary illuminated amber icons in the left or right side external mirror, depending on which side the object is detected.

If the driver indicates to move into that blind zone, the visual alert on the affected side will flash.

**Reverse Traffic Alert**

This technology uses the same set of radar sensors that operate the Blind Spot Alert feature. It warns the driver of vehicles approaching behind the vehicle when reversing out of a parking space (including angled parking) or a driveway.