

# UNDER THE HOOD

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## UNDER THE HOOD OF THE INFINITI M

**A**mong its technology goodies, the 2007 Infiniti M has a lane departure warning (LDW) system, pioneered on the 2005 Infiniti FX, and a rear-view monitoring (RVM) system that was initially offered on 2006 models. Both active safety systems have seen increased availability on other Infiniti models since their introduction.

### LANE DEPARTURE WARNING SYSTEM

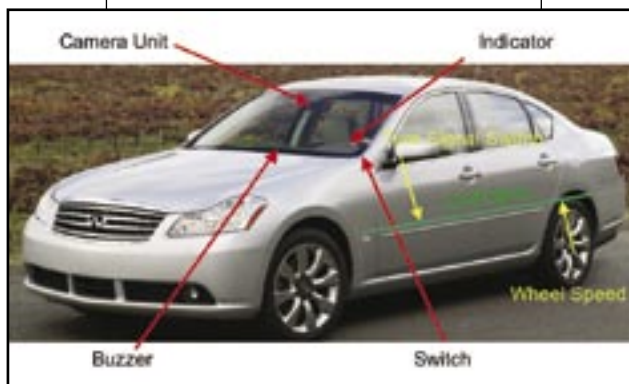
The LDW system consists of a small camera, a system operation switch, a warning buzzer, and an indicator connected by a controller area network (CAN) bus to the vehicle's turn signal switch and wheel speed sensor. The system alerts the driver if the vehicle drifts out of the traffic lane. Mounted behind the rear-view mirror, the system's camera recognizes the lane markings in the vehicle's path. The control system uses this signal along with input from wheel speed sensors to calculate the distance between the vehicle and the lane markings and the lateral velocity to the lane markings. Based on these measurements, if the system determines that the vehicle is moving out of the intended lane, it activates the buzzer.

The driver's use of the vehicle's turn signal conveys the intended lane change to the system's control unit that temporarily disables the LDW system. A manual cancel switch on the instrument panel allows the driver to turn the system off. Restarting the vehicle automatically resets the

system. In addition to the M and FX models, the LDW system was extended to the Q45 in 2006.

### REAR-VIEW MONITOR SYSTEM

The RVM system uses a small charge-coupled device (CCD) cam-



A CAN bus connects existing turn signal switch and wheels speed sensor inputs to the lane departure warning system.

era mounted near the rear license plate. Selecting reverse activates the camera and displays its output as a color image on the LCD display in the instrument panel. The driver has an improved view of the situation behind the vehicle, but the system does not provide a warning of any obstacles. For 2007, Infiniti extended the availability of the rear-view monitor to the G35 coupe.

### EVEN GREATER VISION AND VISIBILITY

The M has three other vision-related systems: Birdview imaging, an adaptive front lighting system (AFS), and light-emitting diode (LED) taillights.

As part of its DVD-driven GPS-based navigation system, Infiniti's Birdview imaging system provides the driver a 3-D aerial perspective.

The unique view is certainly interesting on a long trip and potentially very helpful in unfamiliar territory. Since the system has the entire United States map on one disc, changing CD-ROMs is not required to see territory or terrain changes.

The AFS helps drivers see better during nighttime driving, especially on mountain or switchback roads. The system adjusts the light pattern of the xenon headlamps based on steering wheel angle and vehicle speed. A switch on the instrument panel also allows the driver to adjust the lights up or down up to 1.93°.

A final vision enhancement for the M involves its LED taillights. LED taillights activate 100 times faster than conventional bulbs providing the drivers behind the vehicle increased time to react. Infiniti has offered

LED taillights on all models since 2006. ■



Mounted near the rear license plate, a CCD camera in the Infiniti M's rear-view monitoring system projects a color image onto the LCD display in the instrument panel.