

Vehicle Tracking Systems

According to the FBI a motor vehicle is stolen *every 40 seconds* resulting in an estimated 800,000 cars being stolen each year in the United States. This causes *property losses of \$5.2 billion*. Of the cars stolen, an estimated 12.4% are cleared by police through arrests or other means. In the United States, the most frequently stolen vehicles include Toyota Camry (best-selling car in the USA), Honda Civic, Honda Accord and Acura Integra because they are easiest to resell with the highest profit. The most common methods of stealing a car are either by breaking a window or using rod and hook toolkit to slip between the car window and the car frame (also known as a Slim Jim) to gain access to the vehicle followed by hotwiring the car (connecting the ignition wire to the starter wire) or by towing the car. Both take only moments to complete.

According to the National Insurance Crime Bureau (NICB) **Vehicle Tracking Systems** are “very effective” and should be included in a layered approach to preventing motor vehicle theft. The more layers of protection on your vehicle, the more difficult it is to steal. First, lock your car; make sure you take the keys with you and park in a well-lighted area. The second layer of protection is a visible or audible device which alerts thieves that your vehicle is protected by Audible alarms, steering column collars or a theft deterrent decal. The third layer of protection is a device which prevents thieves from bypassing your ignition and hot-wiring the vehicle include - smart keys, kill switches, starter, ignition and/or fuel disablers. The final layer of protection is a car tracking device which emits a signal to police or a monitoring station when the vehicle is stolen. Tracking devices have been found to be very effective in helping authorities recover stolen vehicles. Some systems employ “telematics” which combine GPS and wireless technologies to allow remote monitoring of a vehicle. If the vehicle is moved the system will alert the owner via a computer or, more recently, a smartphone.

Vehicle tracking systems are also popular in consumer vehicles as a theft prevention, monitoring and retrieval device. Police can simply follow the signal emitted by the Vehicle Tracking Systems and locate the stolen vehicle. When used as a security system, a Vehicle Tracking System may serve as either an addition to or replacement for a traditional car alarm. The shortcoming with traditional car alarms is that they simply sound the car horn. We have become so de-sensitized to hearing car alarms as a society that most people will ignore a horn blaring even when a theft is in progress so it has limited benefit as a deterrent. Some vehicle tracking systems make it possible to control vehicle remotely by disabling the engine in case of emergency. Some vehicle tracking systems integrate several security systems by sending an automatic alert to a phone or email if an alarm is triggered or the vehicle is moved without authorization. The existence of vehicle tracking systems then can be used to reduce the insurance cost because the loss-risk of the vehicle drops significantly.

What are **Vehicle Tracking Systems** and what does it include?

Most **Vehicle Tracking Systems** include a *car tracking device* that is installed in the vehicle itself. The car tracking device is typically self-powered with a battery or wired into the vehicle’s power system. The car tracking device is either enabled by a person/event (passive) or continuously reports broadcasting the car’s status (active). An active-style car tracking device transmits the information in real-time via cellular networks to either a server or a phone. **Vehicle Tracking Systems** also require a *car tracker service plan* to monitor the car’s activities and to be able to take appropriate action when needed.

The car tracking device will accomplish tracking by using either a Global Positioning Satellite (GPS) technology or some other radio signal technology. For example, LoJack®, a popular car tracking device installed by new car dealers and offered as a service to new car buyers, uses a short-range (3-5 miles) radio signal. The car tracking device transmitter is “turned on” by police who have a signal receiving unit installed in their police vehicle. One major drawback to this technology is that it requires a police department to have specialized equipment installed in their vehicle. With city budgets as tight as they are, a majority of police departments have not installed this equipment in their vehicles so the vehicle tracking system can’t work. A second disadvantage is the radio signal range of 3-5 miles which requires the police vehicle to be in close proximity to the stolen car. A final disadvantage to this car tracking device technology is that the owner has to realize their car has been stolen. For example, if a car owner goes to a shopping mall or movie, they won’t realize the car has been stolen until they return to the car several hours later, in that length of time the car could have changed hands several times or arrived at a chop-shop and been disassembled.

Another example of **Vehicle Tracking Systems** which began operating in 1995, is the General Motors’ OnStar® car tracking device which uses GPS technology. The car tracking device is available to General Motors vehicle owners only. This service also relies on the vehicle owner to report the car stolen, potentially adding hours of delay before action is taken to retrieve the stolen vehicle. Because it uses the universally available GPS technology it does not suffer from the LoJack shortcoming of short radio signal range. Nor does it require specialized equipment in the police vehicle. It does, however, rely on a GM call center that fields the initial car owner call, potentially adding a layer of complexity and cost. The OnStar service offers other services not related to car theft that may be useful to a GM car owner.

In mid-2013 a new technology example of **Vehicle Tracking Systems** became available from 911Tracker (link to 911Tracker website). The 911Tracker uses the proven and universally available GPS technology in its car tracking device to track a vehicle continuously. An owner can send a text message (protected by a personal PIN number) to the vehicle’s car tracking device from their cell phone or smartphone and the tracker will report the car’s location, speed and direction. The 911Tracker car tracking device is an active technology which will instantly notify the car owner with a text message if the vehicle is moved without the ignition key or if an existing vehicle alarm is triggered. The 911Tracker car tracking device also has a patented three-party calling feature that allows the car owner to remotely call the 911 Call Center nearest the vehicle to immediately begin the vehicle theft prevention process even if they are thousands of miles away. For example, let’s say that the owner parked their car in an airport parking lot and flew to a distant city. As soon as the car is moved or stolen a text message is sent to the owner’s smartphone or cellphone alerting them to the car movement. The owner, through the Vehicle Tracking System’s car tracking device, contacts the 911 Call Center nearest the vehicle and the police can now both talk to the owner and see the vehicle’s location speed and direction instantly. No specialized equipment is needed. No intermediate Call Center is needed resulting in a very cost-effective vehicle tracking system and vehicle recovery system. Some models of the 911Tracker also make it possible to control vehicle remotely by disabling the engine starter in case of emergency or unlocking the car in the event the keys were accidentally left inside the car.

According to the Insurance Information Institute, the average car owner has a 1 in 270 chance of having their car stolen costing the insurance company or the owner \$6,500. The use of a **Vehicle Tracking System** is a “very effective” way to prevent motor vehicle theft and minimize the losses. Typical vehicle tracking systems include a car tracking device and a subscription plan to report on a car’s activity. Several vehicle tracking systems technologies are available including limited radio signal used by LoJack, customer call center-based OnStar service for GM cars, and modern technology GPS systems that utilize cell phone technology and three-party communications like the 911Tracker. Whichever vehicle tracking system you prefer, using one will increase your peace of mind and provide a layer of security in protecting your car from loss or theft.