

Convenience at a Cost:

Keyless Entry Systems Open the Door to Car Theft



Did you know cars equipped with keyless entry and push-start ignition make life easier not only for drivers but also criminals? Car thieves are using a technique called a communication protocol relay attack to open and start a car by intercepting the signaling between a vehicle's security system and its key fob.

How Does a Relay Attack Work?

Typically, a pair of thieves work together to launch an attack.

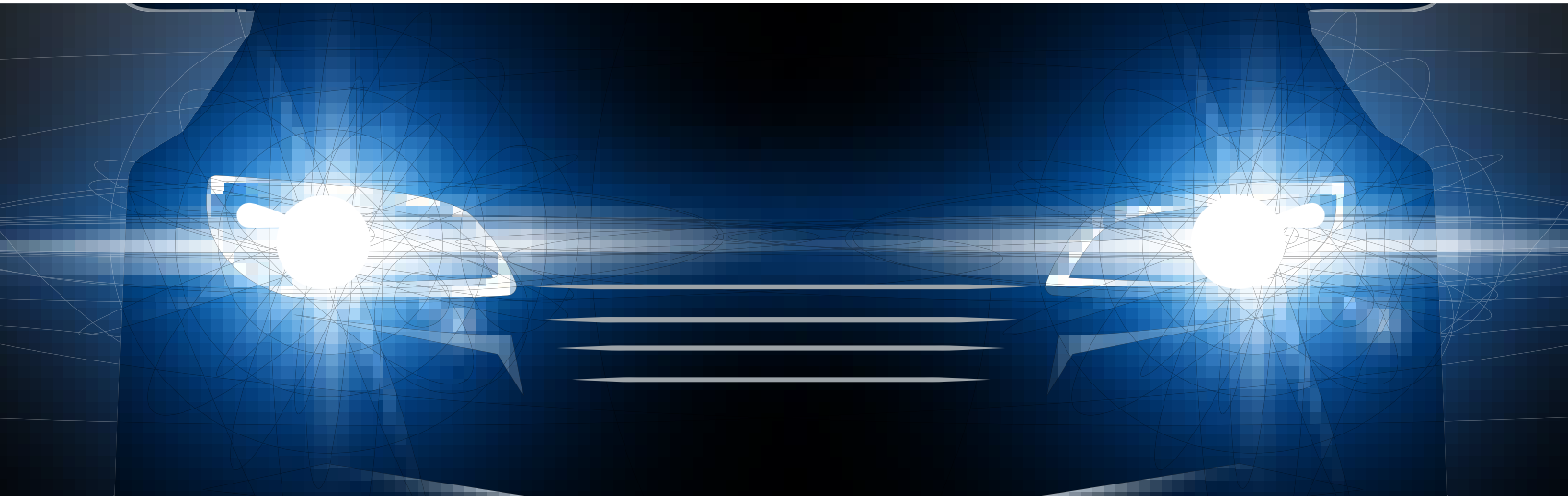
Suppose you have parked your car for the night and put your key fob on your kitchen counter. To get inside your vehicle...

- 1. Thief 1 triggers your car's security system** by pulling on the door handle. Your vehicle responds by transmitting an authentication challenge to check if your car's key fob is present.
- 2. Thief 1 uses a device to receive the authentication challenge** and relay it to

a device held by Thief 2, who stands next to your home and within range of your key fob.

- 3. Thief 2 uses his device to transmit the authentication challenge** to your key fob. Your key fob responds with its credentials to Thief 2's device.
- 4. After Thief 2's device obtains the credentials** from your key fob, it transmits that response to Thief 1's device, which responds to your car's security system... and your vehicle unlocks.

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Are Headlights Brighter These Days?

Many car manufacturers are installing LED headlights instead of halogen and HID lights in their vehicles. LED bulbs offer some advantages: longer life, energy efficiency, and increased visibility at night. However, many people complain they are blinding to oncoming drivers and those who are directly in front of LED headlight-equipped cars.

But are LED headlights really brighter? While brightness regulations are the same for all headlights, LEDs do seem brighter to the human eye. Our eyes are more sensitive (especially at night) to the blue color temperature of LEDs than the yellow of halogens and the white of HIDs.

So, even though LED, HID, and halogen headlights may produce the same amount of light,

LED headlights seem brighter in the dark, causing oncoming motorists discomfort and potentially putting them in danger. Also, it's common for headlights to be misaimed, and if LED headlights are pointed too far up they can emit light directly into other drivers' eyes.

Fortunately, the National Highway Traffic Safety Administration (NHTSA) now allows carmakers to use adaptive driving beam headlight (ADB) systems that automatically change the direction, brightness, or shape of headlights when there is oncoming traffic or if another vehicle is directly ahead.

Here's hoping that will make the road more comfortable and safer for all drivers.

Our eyes are more sensitive (especially at night) to the blue color temperature of LEDs than the yellow of halogens and the white of HIDs.

SOURCES:
<https://verifythis.com/article/news/verify/science-verify/car-headlights-brighter-than-before-headlamps-not-too-bright-blinding-glare/536-5e1a281b-1c69-41e1-8a7b-bf694615b554>
<https://www.axios.com/2023/02/26/car-headlights-too-bright-led>
<https://www.nhtsa.gov/press-releases/nhtsa-allow-adaptive-driving-beam-headlights-new-vehicles-improving-safety-drivers#:~:text=%E2%80%9CNHTSA%20is%20issuing%20this%20final,more%20light%20on%20unoccupied%20areas>

(Continued from page 1)

Next, the thieves launch a second attack to start your car...

1. **After Thief 1 is inside your car**, the vehicle initiates an authentication challenge to verify your key fob is there.
2. **Thief 1's device receives the challenge** and transmits it to Thief 2's device.
3. **Thief 2's device transmits the authentication challenge** to your car's key fob.
4. **After Thief 2's device receives the correct response** from your car's key fob, it sends it to Thief 1's device, which responds to the security system...and your vehicle starts.

If you fall prey to this crime, not only will the offenders have your vehicle but they might also gain access to data on devices you connected to your car.

How to Protect Your Vehicle

Some key fobs let you control signaling to and from your car's security system. So, when you want to get in your vehicle or drive, you can turn the key fob's signaling on, and when you won't be driving, you can turn it off. Also, some car manufacturers allow you to manually turn off a vehicle's keyless entry system when it's not needed.

Several companies offer products to avert relay attacks. For example, Secure-A-Key by NAV-TV electronically disconnects the key fob's battery (turning off the radio frequency communication) after several minutes of inactivity. It then reactivates the battery when it detects the key fob is on the move again, presumably because the car's driver picked it up and is ready to roll. Another way to help prevent relay attacks is to use a signal-blocking pouch or box that blocks the key fob from broadcasting its code to the car's security system.

SOURCES:
https://www.youtube.com/watch?v=D_3lgxMwrWI
<https://identitymanagementinstitute.org/relay-attack-risks-and-prevention>
<https://navtv.com/products/category/32/secure-a-key.html>



MYTHS & FACTS

- **MYTH: If your car is stolen, your insurance will make you whole.**

How much damage a car incurs while stolen and how long a car is gone before being recovered can affect its value. If your vehicle is given a salvage title, you'll probably end up losing 20% to 40% in value, according to automotive authority Kelley Blue Book.

- **MYTH: Stolen Vehicles Are Usually Found.**

Although about one-half of all stolen vehicles are recovered, the first few days are critical. Even if the vehicle is recovered, it may be completely totaled.

- **MYTH: Insurance Always Provides a Rental Car.**

Many insured drivers have the common misconception that auto insurance automatically covers the cost of a replacement rental car. In reality, you need to select this coverage and apply it to your auto policy. Comprehensive coverage does not pay for a rental vehicle as part of your stolen car claim.

From
<https://www.roadandtravel.com/safetyandsecurity/cartheft.htm>

<https://www.grangeinsurance.com/tips/common-insurance-myths-busted#:~:text=A%20common%20misconception%20is%20that,it%20to%20your%20auto%20policy.>

JACKIE'S KORNER KITCHEN

Chicken Tetrazzini with Mushrooms and Spinach

Yield 6-8 Servings

Ingredients:

- 1/4 cup olive oil
- 1/3 cup all-purpose flour
- 2 cups chicken broth
- 1 1/2 cups 2% milk or whole milk
- Salt and freshly ground pepper
- 1/4 teaspoon nutmeg
- 2 tablespoons cooking sherry
- 4 cups cooked chicken cut into bite-size pieces
- 8 ounces mushrooms, sliced
- 5-6 ounces fresh baby spinach
- 8 ounces spaghetti

Instructions:

1. Preheat the oven to 400 deg F
2. Heat the 1/4 cup olive oil in a large saucepan over medium-low heat. Add mushrooms and cook until golden brown.
3. Add the flour and whisk or stir until smooth, about a minute. Add the chicken broth and stir until smooth again. Pour in the milk, increase the heat to medium, and bring the mixture to a simmer, stirring constantly. Simmer for 1 minute, then remove from heat and stir in the optional sherry and nutmeg, chicken, and salt and pepper to taste.
4. Add spinach batches if necessary, and toss until just barely wilted. Season with salt and pepper to taste.
5. Meanwhile, cook the spaghetti in salted water according to the package directions and drain, reserving 1/2 cup of the cooking liquid.
6. Stir the cooked spaghetti into the turkey mixture and toss until just combined. Add reserved cooking liquid as needed.



7. Transfer the mixture to a 9 X 13 in. baking dish and sprinkle with Parmesan cheese. Bake for 20-25 minutes or until the mixture is bubbly and the cheese is golden brown. (Make-ahead tip: you may prepare up to the baking point, and then cover and refrigerate. In this case, you will need to add approximately 30 more minutes to the baking time).

NOTE: also works well with leftover Thanksgiving turkey.

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