

Think Your Car is Safe From Thieves?

The easiest way to thwart these guys is to wrap the key in aluminum foil or put it in a signal blocker bag.

You would think that with the proliferation of keyless ignitions and security features, the statistics for stolen cars would be on the decrease. After all, that was the goal of the manufacturers when they came up with the idea. However, you would be wrong. The crooks are just more sophisticated now. Kurt Roberts explains how they do it: In 2015, security researchers and police departments began identifying car thefts by thieves using electronic devices to unlock and start vehicles. NY Times Tech Columnist investigated this trend after having his Prius stolen this way 3 times in the same month (<https://www.nytimes.com/2015/04/16/style/keeping-your-car-safe-from-electronic-thieves.html>). He describes catching the thief near his car with a small black box that allowed her to unlock it; when he ran outside, he chased her away. Through further study, he concluded she was using a radio amplifier, essentially extending the distance that the car could search for a key.

to 50 feet. But wait, there's more—in 2016, the German General Automobile Club, or ADAC by its German initials, released a study they'd conducted in which they were able to extend the range by over 300 feet in some circumstances, essentially using two devices. They didn't release the circuit diagrams, but claimed that the system they'd developed cost only \$225 in parts and could be easily built by a second-year electronics student. Their device worked against 24 models of cars they tested, including models by Audi, BMW, Citroën, Ford and others.

While it's in German, you can see a dramatization of the process in the video on this page (https://www.adac.de/infotestrat/adac-im-einsatz/motorwelt/test_keyless.aspx) around the 1:00 mark, and there's a diagram, also in German, further down the page showing how the attackers send the signal through a radio relay system.



The premise behind a keyless entry system is pretty simple—the car uses a low-power radio to poll for the key, sending out a challenge, and waiting for the key to send in the correct response. Think of this like the old spy movie trope, where Bond meets his new contact; they exchange a pre-arranged set of phrases letting them both know they've got the right person, and not an enemy agent or impersonator. The keyless entry system does the same thing, except using a math problem that's rotated, and sometimes affected by the time, so that the response is different each time and it can't be easily recorded and replayed.

Finally, there's the internet-of-things angle—using apps and SMS messages to control our vehicles, opening up a new range of vulnerabilities. In addition to reporting on the previously mentioned 2016 ADAC study, this article (<https://www.wiwo.de/technologie/keyless-go-systeme-mit-funkschlueseln-haben-autoknacker-leichtes-spiel/13337808.html>) outlines a method in which some BMW models could be unlocked using a spoofed text message to fool BMW's servers into thinking the owner requested it be unlocked.

By using an amplifier, researchers (and thieves!) were able to extend the range of this key from 5-10 feet

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The Ultimate seafood comfort food . . . perfect seasoned cheesy macaroni full of shrimp and crab meat!

Ingredients:

- 1 (16-oz) pkg elbow macaroni, cook 2 min. less than al dente, drained and rinsed with cold water
- 5 tbsp. butter, divided
- 3/4 lb. medium shrimp peeled, deveined and chopped into 1/2 in. pieces (or a combination of shrimp and scallops)
- 1/2 c italian seasoned panko bread crumbs
- 1 c diced onion
- 1 heaping tsp. minced garlic
- 1/3 c all-purpose flour
- 3 c whole milk
- 1/8 tsp. ground nutmeg
- 1 tsp. Old Bay Seasoning
- 1-1/2 tsp. kosher salt (more or less, to taste)
- 3/4 tsp. ground black pepper (more or less, to taste)
- 1-1/3 c shredded parmesan cheese
- 1-1/3 c shredded swiss cheese
- 1-1/3 c shredded sharp cheddar cheese
- 1/2 lb. cooked lump crab meat
- Optional fresh chopped parsley, for garnish

- Preheat your oven to 400 degrees.
- Melt 1 tbsp. of butter in a large skillet over med/high heat. Add shrimp and scallops. Cook, stirring constantly, just until pink (about 3 mins). Remove from heat and set aside.
- In a large saucepan, melt the remaining 4 tbsp. of butter. Transfer 1 tbsp. of the melted butter to a med. bowl and toss with panko bread crumbs.
- Add diced onions and garlic to melted butter saucepan and cook until softened, about 3-4 min, stirring constantly.
- Add flour and cook for an additional minute, stirring constantly.
- Add milk and whisk until smooth and there are no lumps.
- Bring to a gentle boil, reduce heat to maintain a simmer and cook until thickened, whisking constantly.
- Season with salt, pepper, nutmeg and Old Bay Seasoning.
- Remove saucepan from burner. Add cheeses and stir until smooth. Fold in macaroni, shrimp, scallops and crab meat.
- Transfer to a casserole dish (sprayed with cooking spray).
- Top evenly with buttery panko bread crumb mixture.
- Bake for 15-20 mins, or until bread crumb topping is golden brown and sauce is bubbling around edges.
- Sprinkle with fresh chopped parsley for garnish if desired.



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