

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

The easiest way to thwart these guys is to wrap the key in aluminum foil or put it in a signal blocker bag. [PJ](#)



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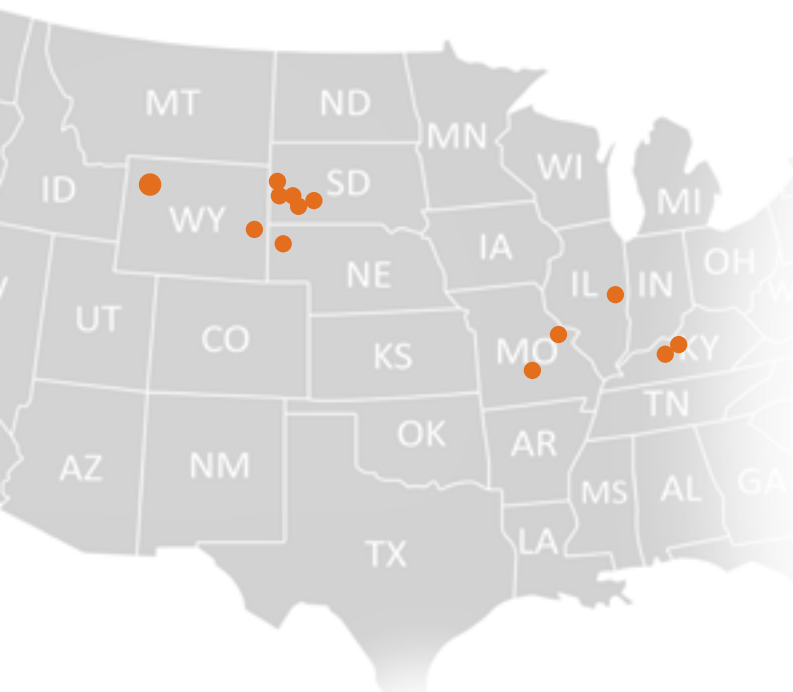
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Road Trips



Recently, my best friend and I embarked on a 6200 mile motorcycle trip to **Yellowstone**

National Park and back, and got to see some really interesting sites along the way. Our spouses and two other friends flew to Rapid City, SD to meet up with us so we could tour around the Black Hills and Yellowstone with them for a couple of weeks.



If you've never seen it, Yellowstone is well worth the trip as it is otherworldly with a widespread smell of sulfur from all of the volcanic activity going on in the park.

To tour the Black Hills we stayed in a house rented through VRBO. It beats hotelling it and is cheaper to boot. Some of the points of interest we saw on our way out were **Abe Lincoln's birthplace**, which is in Kentucky, **Mammoth Cave**, **The Arch at St. Louis** (the ride was closed due to high water), **Truman's home**, and a place



The Arch at St. Louis

called **Brick Street Furniture Company and Wine Lounge** in Sabetha, KS. After a long day of riding, we were told by another hotel guest that a band was playing there that evening. So we hopped back on the bikes, and found a really good band, one of



The Minuteman Missile National Historic Site

whose members was a contestant on American Idol. It's certainly a unique place in the middle of nowhere. In the Black Hills we saw



Mammoth Cave

Mt. Rushmore, Crazy Horse, Wind Cave, and the Minuteman Missile National Historic Site. If you like to visit caves, Wind Cave is awesome and nothing like any other cave I've ever seen. Unique to this cave is the boxwork and some narrow

passages only shoulder width apart. If you are into Wild West history,

take in the **reenactment of the assassination of Wild Bill Hickok** in The Number 10 Saloon in Deadwood, SD. Get there an hour early because it is always packed. On the way home,



Wild Bill Hickok

Fort Laramie is well worth a stop as well as the **Agate Fossil Beds**. One of my favorite places, though, was **Casey, IL**, the home of the world's biggest of everything – biggest knitting needles, biggest rocking chair, biggest golf tee, biggest mailbox, etc.

While there, be sure to eat at **Richards Farm Restaurant**, serving great food in a wonderful atmosphere. Believe it or not these weren't all of the places we took in, just some of our favorites. If you use



Mt. Rushmore

our road trip strategy, even in your car, don't worry about booking hotels in advance. Just do it by about mid day the day of, or the day before, and book through the hotel website or call them directly to get your AAA discount. If you use the booking sites, you won't get it. Get off the interstates and traverse secondary roads west of Indiana for great siteseeing. The speed limit is usually 70 mph with no traffic. **PJ**

HUMOR
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How to Handle Junk email – do a search of your email program using the word “unsubscribe”. All of the potential junk email will come up in one search and you can unsubscribe from those you never wish to see again.

According to Science
The reason birds don't get electrocuted when they perch on power lines is not because the wires are insulated, which they are not, but because they don't touch the ground. As a result, there is no charge imbalance that would create a shock.

Matching Game:
Match the song to the band/musician

1. Mama Said (There'll Be Days Like This)
 2. Your Mama Don't Dance
 3. Mother and Child Reunion
 4. Take Your Mama
 5. Motherly Love
- a. Scissor Sisters
 - b. The Shirelles
 - c. Frank Zappa & The Mothers of Invention
 - d. Paul Simon
 - e. Loggins and Messina

Answers: 1.b, 2.e, 3.d, 4.a, 5.c

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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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