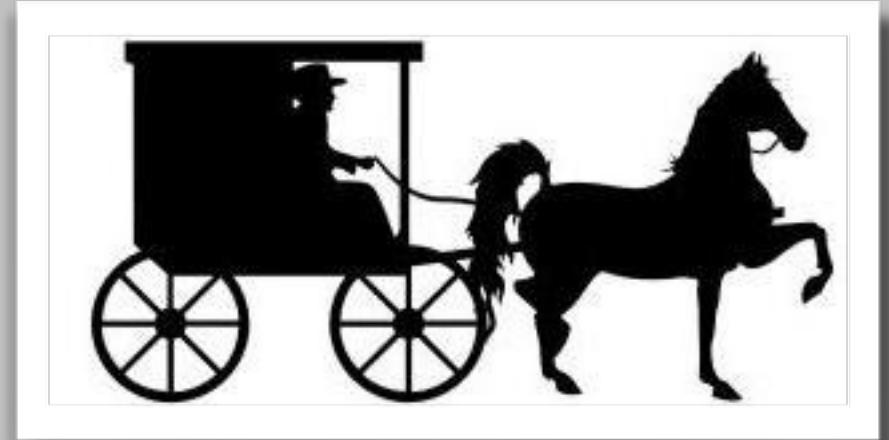


Apple iOS



&

Your
Vehicle



Topics:

- OnStar
- CarPlay

I'm going to talk about two products available on vehicles now: OnStar and CarPlay.

My truck:

2017 GMC Canyon



A little background information: last October I traded in my trusty old Dodge Dakota for a 2017 GMC Canyon. When I test drove it, the salesman pointed out that it came with OnStar and Sirius and that it was CarPlay compatible. OnStar and Sirius both had free trial periods.

After I bought the truck I let the free trial of Sirius expire without subscribing. I didn't use it enough to justify the monthly fee. Be warned about Sirius: To get the free trial period, you have to give them your contact information, and they will pester you to subscribe. I'll bet I've received more than 20 phone calls and a dozen or more mailings wanting me to subscribe. If you listen to music and sports and talk shows a lot—and I mean A LOT—then you might enjoy Sirius. I didn't get that much from it.



OnStar, on the other hand, appealed to me more. They offer different levels of services, and of course, the cost is commensurate with how many services you opt for. I stayed with the most basic level. Some of the features duplicate what CarPlay also provides, such as hands-free phone calls. But OnStar had several features that appealed to me, so I went ahead and subscribed.

OnStar

A few of the basic services:

- Emergency services
- Security



This is a shot of the OnStar buttons in my truck. They are located on the bottom edge of the rear-view mirror. One button is for making phone calls, one for non-emergency assistance, and one for emergencies.

If you're in an accident, OnStar can tell if your airbags deploy or if your vehicle is hit hard enough to set off sensors. When that happens, an OnStar Advisor **automatically connects** to your vehicle and asks if you need help. An operator will speak to you and tell you they detected a crash or your airbags deployed. They will find out if you're injured. If you say you need help, or if you're unable to respond, OnStar will call the nearest police and emergency service.

The **red Emergency button** on the right that has "SOS" lets you call for help yourself if you are in an accident that OnStar did not detect.

You can also push the **blue OnStar button** in the center if you need roadside assistance, such as help with a flat tire, or if you're out of gas—situations of a non-emergency nature. You can even call for help on behalf of another motorist.

If you tell OnStar your vehicle has been stolen, they will use its GPS to locate it and work with local police to help recover it. Here's the spooky part: OnStar can even slow down the vehicle and prevent it from restarting.

OnStar

A few other basic services:

- **Vehicle manager**
(includes “Smart Driving”)
- **Diagnostics**

OnStar will tell you when your vehicle needs maintenance and where your vehicle is located. It will also compile a “Smart Driving” report of your driving habits, such hard braking and acceleration, late night driving, speeds over 80. Your car insurance may give you a break in your premiums if your OnStar report shows you have good driving habits.

OnStar compiles a monthly diagnostics report that shows the status of your vehicle’s operating systems, such as transmission, emissions, air bags, ABS, when you need an oil change and tires rotated, and tire pressure. The monthly report will also tell you if there is a recall on your vehicle.

OnStar also lets you know if your vehicle needs immediate service. For example, in March, I apparently drove over a nail that punctured the right rear tire, and I got an alert when the tire pressure went below a certain level.

OnStar app

OnStar App for iOS



Here is the fun part of OnStar—the features on the iPhone app.

OnStar App for iOS

A few of the features:

- Call for assistance
- How Things Work
- Parked location
- Owners manual
- Key Fob . . .

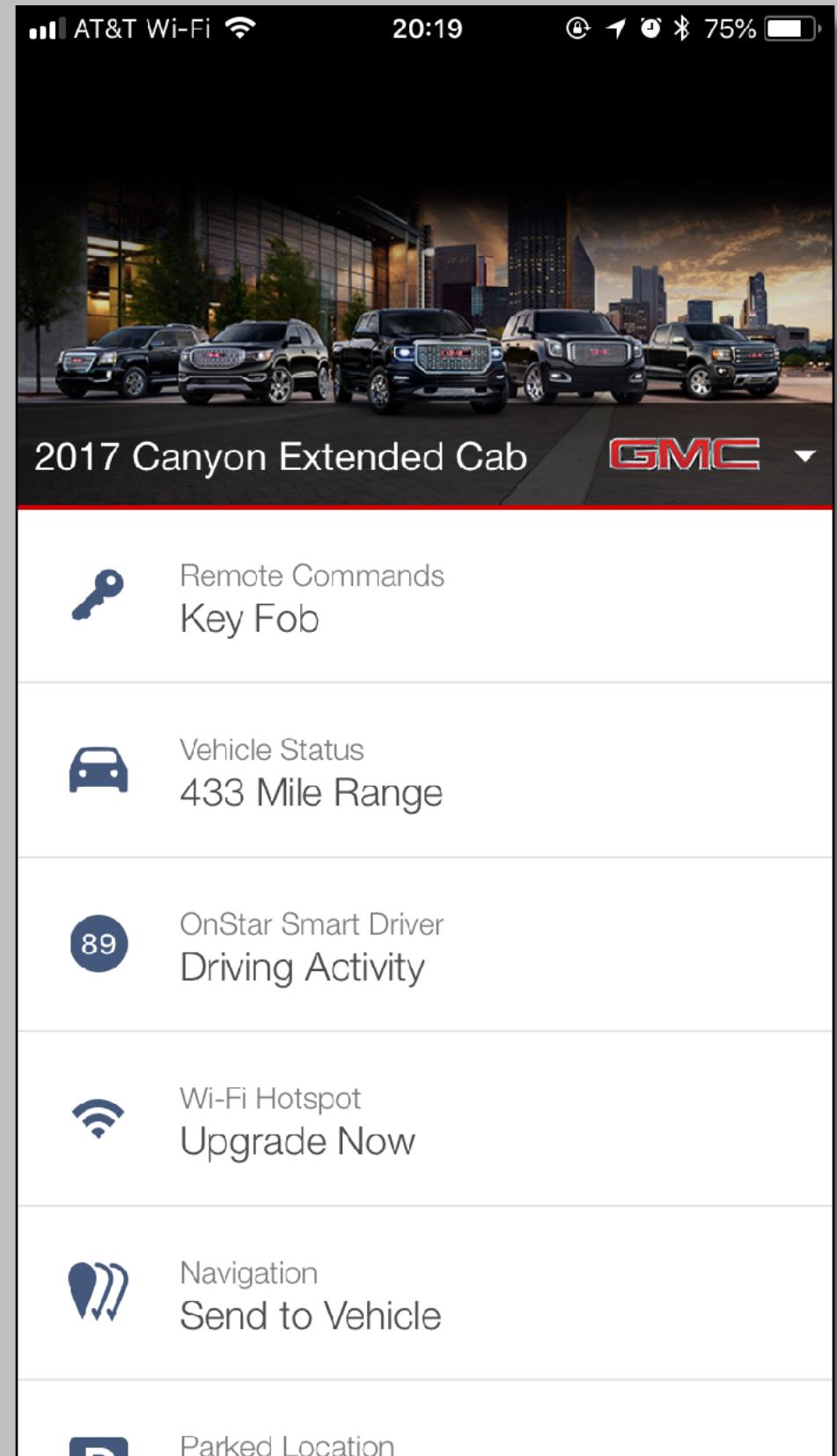
There are fourteen functions on the app. The **Call for Assistance** functions serve the same purposes as the Blue and Red OnStar buttons in the vehicle.

Of the other features, these are the ones I have used most:

“How Things Work” is a tutorial on how OnStar interacts with your vehicle.

Another menu item is **Parked Location**. It brings up a map. You press Locate Vehicle, and it uses GPS to put a pin on the map. If you go someplace with a huge parking lot, Parked Location could come in handy if you can't find your car. Also, when we were out of town last Christmas, I checked the location of my truck every once in a while to make sure it was still where I had left it. You can also add notes and a photo to the pinned location to help you find your vehicle.

And last, you can open your vehicle's **Owners Manual** on line, or you can download it to your iPhone in case you need it when you're out in the middle of nowhere.



OnStar App for iOS

Key Fob

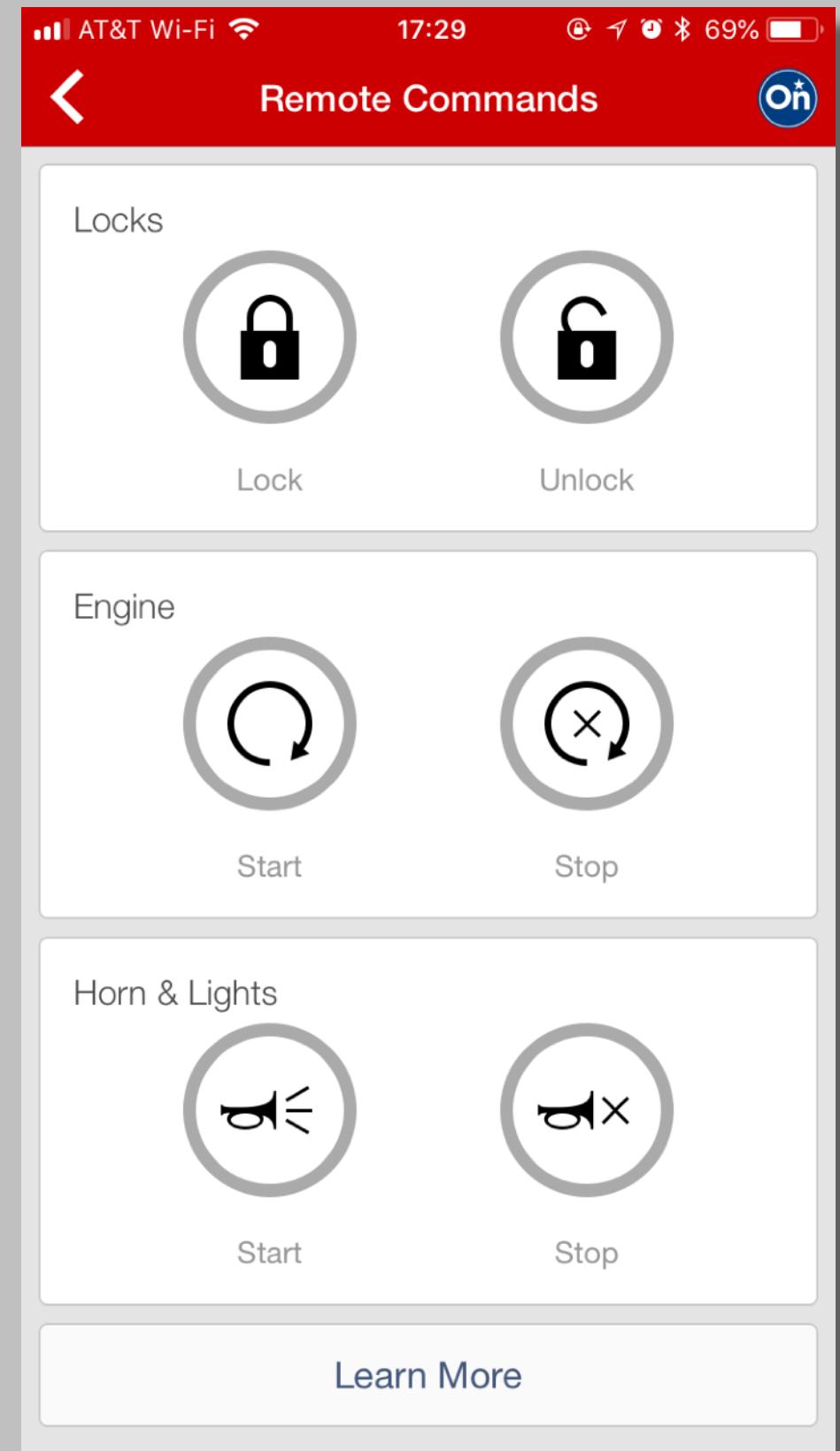
The **Key Fob** function is the one I've used most. Most vehicles anymore come with a set of remote controls either on the ignition key or as a separate device for your key ring. With that remote you can lock and unlock the doors, sound the horn and flash the lights, and in the case of my truck, I can start the engine. But the remote control on your key ring has a limited range and has to be within a hundred feet or so of the vehicle.

The OnStar **Key Fob** feature works much the same way as a remote control, only it works over the Internet, so it has a nearly unlimited range.

I have used the **Key Fob** when I wasn't sure if I had locked my truck.

I have also started the engine from my phone. Last Christmas we took the train to visit my sister, and I left my vehicle in the station lot in Alton. While we were gone, it snowed. So on our way home, as the train got close to the station, I used my phone to start the engine. I had left the truck with the defrost and fan set to max, so by the time I got to it, the engine was warmed up and the windshield was almost clear—very handy. Just make sure you don't start the engine in a confined space.

The bottom Key Fob function activates the horn and lights. It's to help you find your car if you are out of range of your remote control. If you push the Start button, the horn sounds and the lights flash for one minute, or until you press Stop, or until you open the driver side door.



 **costs:**

- Six months free
- Basic package is normally \$20/month
- Two months free if you pay for a year in advance
- \$20 senior discount

Total for basic package = \$180

- **WiFi Hotspot for an extra \$10/mo**

The basic package is \$240, or \$20/month. They discount 17%, or two months worth, if you pay for a full year in advance. And then they gave me a senior discount of another \$20. Total charge was \$180 for a year. The introductory package included making my truck a private WiFi hotspot for three months, but I didn't use it enough to think it was worth another \$10/month. On the whole I thought the \$180 was still a little steep, even after all the discounts, but I used it enough during the trial period that I thought I'd go ahead and spring for it.

How works:

<https://www.lifewire.com/gms-onstar-service-534811>

If you want to read more about how OnStar works, here is a link.



Apple CarPlay

Part 2 is about Apple CarPlay. CarPlay is not an app on your vehicle; that is, it's not stand-alone. It's more like an extension of certain apps on your phone. One writer described it as a stripped-down version of iOS. When CarPlay is active, what you do on certain apps on your iPhone will also happen on your vehicle's touch screen—and vice versa.

CarPlay

History:

- “iPod Out” app in iOS 4
- Apple - BMW joint project
- iPod audio and displays on the car
- Control the iPod from the car

First, a little history—Before CarPlay, Apple tinkered with a feature called “iPod Out.” iPod Out was a joint development between Apple and BMW. The app was included in iOS 4 but it didn’t get much attention because it only worked with a few models of BMW. Apple needed the cooperation of a carmaker who was willing to add a touch screen to a dashboard. That’s where all those cutting edge German engineers came in.

iPod Out gave certain models of BMW the ability to display and play the video and audio of an iOS device. A user could also control the iOS device from the vehicle's touch screen. Apple revealed iPod Out in 2010 and first shipped it with a limited number of BMWs in early 2011.

CarPlay

iPod Out display



This is the only picture I could find that showed what the iPod Out display looked like. It appears the speedometer is around the perimeter, but the display is in the center of the dashboard because you can see an edge of the steering wheel there on the left.

In March of 2014 Apple launched CarPlay—and actually called it CarPlay. Ferrari, Mercedes-Benz, and Volvo were the first cars to have it. CarPlay was different from iPod Out in that it came with a larger touch screen that made it look a lot like an iPad, which was a slick marketing strategy.

CarPlay

. . . currently available
on more than 300
models of vehicles.

Apple says CarPlay is now available on 55 different brands of vehicles and 300 models.

It's becoming nearly universal in American cars because I counted 22 models of Chevys, 15 models of Fords, and seven models of Chrysler-Dodge that now come with CarPlay.

On most vehicles CarPlay becomes active when you connect your iPhone to a USB port with a charging cable, though there are a few models that connect with BlueTooth. And I understand that ability will be available on more cars in the future.

There is a link at the bottom of this slide that will take you to the complete list of all the vehicle makes and models that are currently come with CarPlay.

More than 300 models to choose from.

Every major automobile manufacturer currently offers models that support CarPlay or is planning to introduce them. Check this list for the latest information.*



2017 - 2018 Abarth 595
2017 - 2018 Abarth 695



2017 - 2018 NSX
2018 MDX
2018 TLX



2018 Giulia
2018 Stelvio



2017 - 2018 Vanquish
2017 Vantage
2017 Rapide
2017 DB9 Volante



2017 - 2018 A3
2017 - 2018 A4
2017 - 2018 A5
2017 - 2018 A6
2017 - 2018 A7
2017 - 2018 Q2
2017 - 2018 Q7
2017 - 2018 R8

<https://www.apple.com/ios/carplay/available-models/>

CarPlay

Compatible iPhones . . .



5, 5s, 5c

SE

6, 6 Plus

6s, 6s Plus

7, 7 Plus

8, 8 Plus

X

These are the iPhones that work with CarPlay. Basically it's iPhone 5 or newer. I have a 6, and it works very well, maybe a little slow to respond at times. I also have a good iPhone mount for my truck that makes it easy to plug in, bring up apps, and so on.

<https://www.apple.com/ios/carplay/>

CarPlay

On-board USB charging port



Anymore almost all new cars have at least one USB port. My truck has two. I keep a charging cable plugged into each of them almost all of the time. My wife uses the one in the console, and I use the one under the dashboard.

Whichever phone is connected first is the one that activates CarPlay. So if she's riding with me and wants to charge her phone, but I want to use CarPlay, then she has to wait until I've connected my phone first. So I wish they would add a feature on the touch screen that detects when two phones are connected at the same time and then give the driver the choice of which phone to interact with.

CarPlay

Activating CarPlay



Here I am connecting my iPhone to one of my trucks USB ports. And, no, I was not driving at the time. Notice the icon called Projection, second from the right on the top row. When I connect the phone, it changes to CarPlay.

Bluetooth and CarPlay will not work at the same time. That's why you saw my phone's Bluetooth connection disabled. When I disconnect my phone, the Bluetooth connection is re-established.

I can back out of the CarPlay screen without disconnecting my phone by pushing the truck's Home button. CarPlay continues to work in the background. Then I can always go back to CarPlay by tapping on it again.

One feature CarPlay does not display, but I wish it did, is the outside temperature. I have to go to the truck's home screen to see that. It's no big deal—just an extra step.

CarPlay

Maps & Navigation



Maps is the CarPlay app I use the most. The display is large and easy to see. You can tell Siri to decrease the scale of the map if you want to see more of the surrounding area.

When I open Maps, it finds my location. In daylight the map is against a bright background, but after dark, the background goes dim to make it easier to see.

For navigating, I can tell Siri to give me directions to a location. If the location is in my Contacts, then I just ask her how to get to the location by the name of the person or business.

CarPlay

Messages



I've used Messages a few times. It reads text messages to me, then asks me if I want to reply. Apple is working toward complete hands-free use of our phones, so CarPlay Messages is a step in that direction.

CarPlay

Music



You can use Siri in the same way to play a particular song or playlist of songs.

If you should get a phone call during a song, the music pauses, then picks up again after you've finished your call.

CarPlay

To activate Siri: “Hey Siri” or use the voice control button



If you get tired of saying, “Hey, Siri,” you can also press and hold the voice control button on the steering wheel. I’m finding myself using it more.

CarPlay

Default apps on my truck's CarPlay home screen

To rearrange the icons go to Settings > General > CarPlay



CarPlay comes with this default set of apps.

You can rearrange the order of the apps by connecting your phone, then going into the Settings for CarPlay. I use Maps, Music, and Messages the most, so I put them on the top row.

CarPlay

... 22 other CarPlay apps are available

Besides the default apps, there are currently 22 other CarPlay apps you can download to your phone, and they will automatically appear on the CarPlay screen. Most of them have to do with entertainment, such as Sirius, Disney, and MLB broadcasts, and to get full usage you have to subscribe. I downloaded Pandora and got the free version. It plays some ads, but the music is great.

Invite more apps along for the ride.

CarPlay supports other apps on your iPhone — like your favorite audio, messaging, and voice apps.

Apps developed by car manufacturers are also supported, so you can control more of your car's features without ever leaving CarPlay.¹ You can personalize your experience by rearranging exactly how your apps appear in CarPlay through settings on your iPhone.



Podcasts



Audiobooks



iHeartRadio



WhatsApp



Spotify



Stitcher



CBS Radio



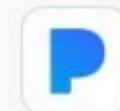
Overcast



Audiobooks.com



Audible



Pandora



Slacker Radio



VOX



NPR One



Clamrr



Downcast



Radio Disney



Amazon



Google Play Music



SiriusXM Radio



Tidal



At Bat²

<https://www.apple.com/ios/carplay/>

Retrofit CarPlay with these “infotainment” systems . . .

You can add CarPlay to your current car with an aftermarket system.

The logo for Alpine, featuring four slanted parallel lines to the left of the word "ALPINE" in a bold, blue, sans-serif font.The logo for Clarion, consisting of the word "Clarion" in a white, sans-serif font inside a blue rectangular box.The logo for JVC, with the letters "JVC" in a bold, red, sans-serif font.The logo for Kenwood, with the word "KENWOOD" in a black, sans-serif font.The logo for Pioneer, with the word "Pioneer" in a red, italicized, sans-serif font.The logo for Sony, with the word "SONY" in a bold, blue, sans-serif font.

If you have a vehicle that did not come with CarPlay but has one of these sound systems, you can add CarPlay to it. I couldn't find any recent articles on the subject because so many new cars have CarPlay factory installed. But if you're curious, I included a link to a Popular Mechanics article from four years ago.

Also, if someone wanted to install a new sound system in his car, there are complete packages available. For example, on Amazon you can buy a Kenwood Excelon system with CarPlay for \$600. There's also a Sony kit for \$450, and a Pioneer kit for \$240.

<https://www.apple.com/ios/carplay/>

[Kits available from Amazon](#)

Questions/comments?

So there's a quick introduction to how your iPhone works with a vehicle. This technology is still very new. We're already seeing the first awkward steps of driverless cars. Who knows what things will be like in the future?