



Automotive

Supplement to Locksmith Ledger International

May 2019

# LOCKSMITHING

# 2019

**Q&A: Automotive  
Specialist  
Locksmith**

**What's New  
from Ilco?**

**STRATTEC  
2019 Update**

**Understanding  
Aftermarket  
Vehicle Alarms**

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PUBLISHED BY ENDEAVOR BUSINESS MEDIA, INC



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*Locksmith Ledger International* (USPS #0587-900), (ISSN #1050-2254 print) is published monthly with an additional issue in December by Endeavor Business Media, LLC. Periodicals postage paid at Fort Atkinson, WI 53538 and additional mailing offices. POSTMASTER: Send address changes to *Locksmith Ledger International*, PO Box 3258, Northbrook, IL 60065-3258. Canada Post PM40612608. Return undeliverable Canadian addresses to: *Locksmith Ledger International*, PO Box 25542, London, ON N6C 6B2.

**Subscriptions:** One-year subscription prices (13 issues): U.S. \$47; Canada \$57; all other countries \$77, payable in U.S. funds, drawn on U.S. bank. Call: 888-556-2272. Single issues available \$10 prepaid. Single copies Locksmith Ledger International Security Register, \$15 prepaid. Canadian GST#R42773848. Printed in USA. Copyright 2019 Endeavor Business Media, LLC.

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## CONTENTS

- S4 Q&A: Automotive Locksmith Mike LaBar**  
Automotive technology is so advanced that making the actual key to many cars has become a secondary operation
- S10 What's New At Ilco?**  
Annual reference guide, Futura Auto, Smart4Car™ and Look-Alike® remotes and Smart Pro™ software updates
- S18 The Future of Automotive Locksmithing**  
As the industry becomes more high tech, demand increases for new tools and new techniques.
- S20 STRATTEC Update**  
If your customer owns a GM, Ford, Toyota, Nissan, Infiniti, Honda or Subaru vehicle, then STRATTEC has the fob
- S24 Understanding & Bypassing Aftermarket Alarms**  
Many aftermarket alarms will not go out by cycling a key in the door or turning a programmed key in the ignition

## » Advertisers Index

Company Name	Page	Web Site URL
American Key Supply	S21	www.locksmithledger.com/12369841
Herbert L Flake	S2	www.locksmithledger.com/10173907
HPC, a Hudson Lock Co.	S17	www.locksmithledger.com/10172692
International Key Supply	25	www.locksmithledger.com/12441370
Jet Hardware Mfg. Corp.	S28	www.locksmithledger.com/10172326
JMA USA	S23	www.locksmithledger.com/10172333
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STRATTEC Security Corp.	S27	www.locksmithledger.com/10173503
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# Q&A: Automotive Locksmith Mike LaBar

**Automotive technology is so advanced that making the actual key to many cars has become a secondary operation**

BY STEVE KAUFMAN

**L**aBar's Lock Shop in Pemberton, N.J., is owned and operated by Mike and Diane LaBar. When it was suggested that I interview someone who was doing primarily automotive locksmithing, I immediately thought of Mike. Although his business isn't exclusively automotive, he's known locally as the automotive key guy and go-to guy for help with anything car related. I sat down with Mike and had the following conversation.

**Q. Mike, you didn't start off doing automotive locksmithing only, correct? How did this all begin?**

I started working for dad shortly after high school just doing normal locksmithing and naturally the need for car keys came up often. I grew up working on and being around cars and it naturally fell into place -- removing locks and working on them, etc. It all came together and became a specialty of mine.

**Q. Was automotive locksmithing much different when you began?**



Diane and Mike LaBar

Absolutely, there was no manual to tell you how to do anything. Mike Hyde wasn't yet writing his how-to books. You had to figure it out yourself and make things work. I began in 1984.

**Q. When I began working as a locksmith the issues involving car work were things like "is it single or double sided, pin or wafer, could it be impressioned?" Do you remember the big changes back in the 80s? I remember when GM started**



More needed high-tech programming equipment

**using the hardened screw to hold ignition cylinders in.**

Yes, my dad found that out the hard way. He went out to change an ignition; you'd be able to take your ignition puller and pop it out then clean out debris and that was it. He was there for literally hours and couldn't get one out. A friend of his was the service manager at a Chevy dealer and told him after checking a service manual that there was a screw that had to come out. Then GM began using the VATS system. Back then everyone was convinced that was the end of automotive locksmithing.

**Q. Why was that not the end? Was it just a natural fear that typically comes with change?**

I think it was the fear. GM had been using the sidebar lock since the 50s/60s. Now there was a new twist to it.

**Q. How long have you been in business at this location?**

Being here for 30+ years has been a bonus. We still do a little bit of everything but primarily automotive.

**Q. Is that your decision? Do you promote yourself with that in mind?**

Well we've gotten to the point where we no longer do any advertising. We still do the local community support type things like a sign at the ballfield, fundraisers, etc. Besides that, we don't spend money like we used to



with Yellow Pages, for example. For a long time, my wife Diane had a sheet on the front counter asking customers how they heard about us. 99 percent of the time, the answer had something to do with word of mouth from a friend or family member. I wouldn't tell others to stop advertising but that's how it's worked for us.

**Q. When things changed substantially, did you ever wonder how and if you'd be able to continue with cars and the advanced technology?**

One of the dealers we did some work for had a car up at the local car auction that nobody had keys for. I went to do it and visited with the general manager. I wanted him to know I'd be available to help him in the future. One winter night during a snow storm, he called me because they desperately needed keys made for a car. He tried his regular guy at the time and was told he wasn't going anywhere in the snow. That was the last time he ever set foot on the auction property. I got that account just by saying yes.

Now we had a customer with many cars that would need to have keys made or locks changed. Figuring out how to do this was our approach; not can we do it. What tester or other equipment is needed? This was a sink-or-swim situation. There was no question about whether it was worth it to make whatever investment was needed.

**Q. What did you need to invest in to make this work?**

Well that was pre-transponder; one big thing I remember was when the Lexus was first introduced with the four-track laser cut key. It was an overseas thing that arrived and not many had ever seen it before. Nobody had blanks. You had to special order them and then it was basically a do it by hand job. It



*Key machines and keys on the ready*

was a variation of the Mercedes. Mike Hyde had been making the guide keys and that was all, no automated anything.

My first machine was the HPC Laserpoint, the old hand guided one. If I couldn't get it done, then the auction would be going to the dealer. Nobody wants them to do that.

**Q. It seems like this auto auction served as a big playground for you to play and learn, true?**

It was. We don't do as much with them anymore due to corporate changes. It's still a place to go with the guys from Advanced Diagnostics and others to test their equipment. It's a good testing ground for this stuff.

**Q. Looking back, is there anything you would've done differently? Anything you came away from thinking you never want to do that again?**

There are always those jobs you'd rather not get into but there's nothing I'd say no to. I've made some mistakes

since there was nobody around to learn from. So much of what we did had to be figured out as we did it.

**Q. Why do you think you've wound up becoming the auto specialist around here and are you willing to share information with the others?**

We've always been willing to help. When Just Cars started up, we'd go there and teach classes and take part in the fellowship. My door is always open; there's a terrific network here. If I need help with a safe, I know who to call, etc. Yesterday I had a car here that I'd never electronically programmed. A buddy of mine knows a lot about automotive electronics. I'm familiar with the lock part but it needed something immobilizer related. Help was a phone call away fortunately.

**Q. How would you go about teaching someone who wanted to learn today?**

Today with all the electronics it's

totally different than when I started. Technology in general is so far advanced that the automotive locksmith is not really a locksmith but more of an automotive security technician. There's the immobilization, the remotes, all the different systems in the car. Making the actual key to many cars now is a secondary operation. The lock's function now is like a key override in case all else fails.

My approach to teaching someone is from beginning to end. Pull the lock out, take the steering column down. Break the lock down, decode it, etc. Now that you know how to do it the hard way, I'll show you the easy way. You can impression; these days you can call for a key code. I'm always asked why we just did all that if it wasn't necessary and my response is that some day you may not have the luxury. The key code may not be there

or maybe the lock is damaged. Now you can still do the job.

I've noticed with the new generation of locksmith I see at the auto auction for example, it's great they can buy a made in China programmer for \$500 and log into a website and get a key code. The problem is what to do when that doesn't work; they're done.

## **Q. Is automotive locksmithing worth getting into now if you want to make money?**

We've done very well with it and have been extremely fortunate. We picked it up at the right time. We've been able to keep up with the rapid changes and move along. I'd hate to be a 20-year-old starting out now with all the equipment needed.

## **Q. For a new automotive locksmith, what equipment would you recommend investing in? Where does one start?**

I'm still old school and like the machines I've had sitting here forever. There are nice new machines now that Keyline's making, the

*Labr's Lockshop, Pemberton, NJ*

Ninja and the 994. There's cheaper Chinese stuff out there, but for good quality you're looking at making a \$8,000 investment and you're getting something that does it all. You can do edge cut keys, laser cut keys and it'll have all the key codes built in. That's nice but it's a big chunk at once.

I had a pick set and some files and the old Curtis Clipper. When a new keyway came out and we had to spend \$100 on a new insert that was a big deal!

## **Q. For someone like me who deals with lots of part numbers daily but doesn't have the hands-on experience, what's the difference between cloneable and non-cloneable? A PT versus a PT5 blank for example?**

When they first came out, PT5 meant it was a valid transponder, but you could write a value to it so instead of having test equipment to go to the car to program the key you'd have the equipment read the original key and be able to originate one. If it's a PT then it has its own value that was written to the chip and not changeable, so the only way to program is at the vehicle.

## **Q. Have things progressed or is that it now? Do you have to be well versed in electronics to do this successfully?**

Things have progressed. Now you have 100 different style of chips and different levels of encryption for example. In my opinion you must be more of a jack of all trades. You may have to take down a steering column and get the lock out, but you also may have to pull the computer from the car and reflash it.

## **Q. Are you still pulling steering wheels off?**

Yeah, those cars aren't gone yet. We still have all kinds of cars showing up. The basic rule for my son



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who's working here is that he won't work on a car that's older than he is since he's never seen it before. He's been working here a while now, but I don't think he's ever seen a Dodge five-pin tumbler lock. Occasionally, someone will show up with a lock out of something they're restoring, and he'll look at it like it's a foreign object.

## **Q. How do you handle customers who are price shopping and make their decisions based on price only?**

People will call about a duplicate car key and tell us what the dealer just told them. We explained that they called the parts department and got a price of let's say \$100 and I'm quoting you \$125. Did you talk to the service department about programming the key, so it works your car? Now call the service department and find out the real cost for leaving there with a working key. In addition, when you set up a time with me, I'll have you out of here in ten minutes. You won't have to leave your car for hours.

## **Q. How do you set your prices? Are you considering your investment in equipment or what the market seems to be in the area?**

It's a combination of both. Of course, you want to maximize your profit. We know the highest price typically is what the dealers are charging. You always have competitors that seem to be racing to the bottom and will charge \$5 less than us. We try to be fair and don't want to be viewed as ripping someone off. Occasionally we'll call the dealerships to see what they're quoting. Someone might tell us we're charging almost as much as the dealer and then we explain that we're coming to you instead of you having the car towed to the dealer. We're giving you two keys for the price, etc. You must sell yourself and the superior service you're providing.

## **Q. Some locksmiths seem to be in a hurry to make back their investment on equipment when figuring out what to charge. Does that enter the equation for you?**

You can't be in a hurry and must view it over a period. We do enough of the work with the T-Code or the Smart Pro after buying the software for \$500. Others who don't own the software will consider that it cost them \$15 each time in tokens.

I had a locksmith visit us once who I had to ask nicely to leave. He stopped in for a blank and our conversation turned to what we were charging to make a car key, just comparing notes. He said he charged \$25 to do a Ford duplicate transponder key. I had just called the dealer and was told they charged between \$125-\$145 for the same key. Other locksmiths I knew were in the \$65-\$85 range. Why are you at \$25?

He told me he bought the tester, the old NGS Star tester. There was a promotion where you got 40 free blanks with the tester. He did the math and figured out what it took to pay for the equipment. Now that the tester is paid for, I buy a blank for \$10 and charge \$25 and I've more than doubled the cost of the key, he told me.

I wouldn't care if you went \$5-\$10 less than me but at least be reasonable so you don't screw up the market for the rest of us!

## **Q. If you were going to do a brief overview of automotive locksmithing like we spoke about for the association, what would you want to talk about?**

The big thing now is all the Prox keys and Transponders. There's very little happening locksmithing-wise as far as key generation. We're getting a new vehicle here shortly and the only lock on it is a key cylinder on the driver's side door -- no glove box or trunk or console lock and no ignition lock. The one key cylinder is just a key override in case of emergency.

What's needed these days is knowledge of basic electronics and good computer skills. With newer cars now you can lend the key to your car via cell phone. A whole another mindset is needed now.

From the time I started locksmithing we've gone from pin tumbler and wafer locks to laser cut emergency keys only with all electronics in a span of 30 years. Back when my dad started, the big change was having to deal with the GM sidebar. Remember



Mike LaBar at work in the shop





when the big concern was about the police department opening cars? Who cares now? You can make a call and have the car opened by someone at a call center in another country.

**Q. If every locksmith was doing automotive work, would there be enough for everyone to do well?**

(Diane LaBar responded to this question.) Yes, because each one will have their own specialty. If we network, we don't have competition. If we network and send each other customers, then we keep the customers and make them happy, so they don't go back to the dealer.

(Mike LaBar) The other day someone called who needed help with a FireKing file cabinet. We could've gone out but that's not what we do. We referred someone who did the job and the next day the lady called to say thank you. She'll still call me in the future but it's a reflection on us.

**Q. Who is your competition?**

As our interview came to an end, Mike asked if I had heard about what was discovered about a well-known manufacturer. Mike said: There was an automotive show, and somebody was there from the well-known manufacturer spending time in the Auto Zone booth. Someone was able to purchase a popular piece of equipment from the well-known folks for less than a distributor would buy it for normally, below distributor cost. Supposedly the pricing was in error, but the fact remains that now Auto Zone is going to have this equipment. Programming the key without cutting it won't work so they'll be selling Auto Zone the key cutting machine as well. More competition from non-locksmiths.

**Q. Just like a Home Depot having trouble duplicating keys that aren't a perfect**



Sign advertises transponder keys, "dealer-only" keys

**Schlage or Kwikset, what do you see happening with an Auto Zone diving into this market?**

This conversation came up between my son and I since he's thinking of taking over the business eventually.

**What's needed these days is knowledge of basic electronics and good computer skills. A whole another mindset is needed now.**

After hearing about this, he's wondering about who his competition will be and if it's worthwhile. Many of us have been doing this for years. We've researched and know what works based on much experience. You can see the bank of testers we have here. With

aftermarket testers there's nothing to warn you that maybe you shouldn't plug into this car because you're going to break a module in it. So, I don't know how the minimum wage guy at an Auto Zone is going to handle it when he plugs into the wrong car and it results in a \$2,000 repair because you burned up a computer. With the network we're a part of there's always info circulating that warns us not to do certain things.

(Diane LaBar:) That Home Depot or Auto Zone guy doesn't have a network of knowledge the way we do. Every week we have someone tell us the Home Depot sent them to us. We don't know him but want to go thank him.

(Mike LaBar:) It's like the Geico commercials circulating now about things being done halfway or okay but not very good or even correctly. In the old days we'd say "do a good job and they'll tell a friend but do a bad job and they'll tell two or three folks." Now with social media things instantly go viral and reach hundreds of people instantly. ■

# What's New At Ilco?

Annual reference guide, Futura Auto, Smart4Car™ and Look-Alike® remotes and Smart Pro™ software updates available

BY STEVE YOUNG

When I first went to work as a locksmith, in the 1970s, it was at a shop that was already over 50 years old. I began my training using some tools that should have been considered antiques even at that time. Some of those old machines had the name Independent Lock Co. on them, and others had the name Ilco. I soon learned that the two were essentially the same. Even as a newbie, I soon realized the Ilco was one of the major players in the industry that I had decided to work in.

In 1988, when I started Tech-Train Productions, making training videos on VHS for locksmiths, I forged a relationship with the Locksmith Ledger and its editor at that time, Bill Reed. I soon began traveling with the Bill Reed Seminar Group, also known as the “Frank and Bill Show” which was sponsored by the Locksmith Ledger. At almost the same time, the Locksmith Ledger was purchased by “Ilco Unican,” and Bill Reed went from editor to publisher. Suddenly, I found myself dealing with a lot of people from Ilco Unican. At one time, Ilco even considered buying my business and during the negotiations, I got a great guided tour of the Ilco facilities located in Rocky Mount, North Carolina. The plans

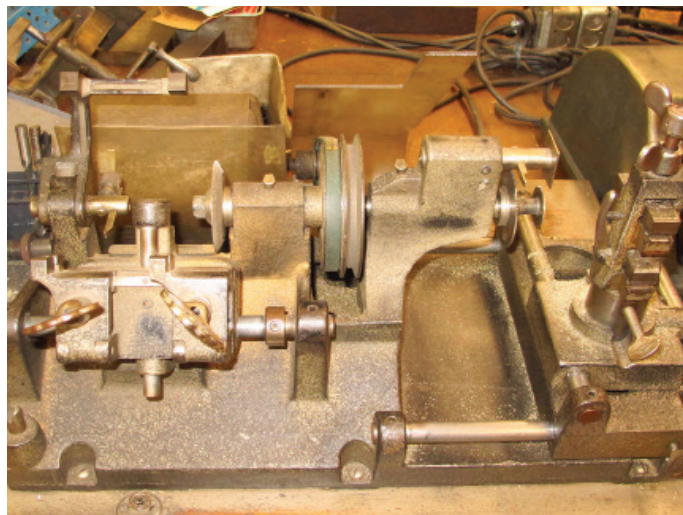


Photo 1. Just one of the antique key machines that I grew up operating

for Ilco to purchase Tech-Train fell through and Ilco sold the Locksmith Ledger to a publishing company in 2000.

In short, I've been involved with Ilco at various levels since the day I cut my first key. I've used the products, met the people, and watched as the industry has grown and evolved. In my experience, Ilco has been one of the moving forces behind the evolution of the security industry. In the Ilco Unican days, they helped and supported the cause of locksmith education with the “Ledger World” free seminars while pioneering keyless locks. When the transponder revolution began, Ilco merged with Silca to produce transponder keys, tools, and educational resources. And recently, Ilco merged with Advanced Diagnostics to further enhance their dominance in automotive transponder technology.

Of course, during that same time, Ilco has changed as well. What started out as the Independent Lock Company, became Ilco Unican, then Kaba Ilco, and now Ilco is a part of the dormakaba Group, which makes them a part of a multi-billion-dollar world-wide industry leader. When it comes to security and security hardware, locksmiths have always been a small part of the total industry, but at the same time, we are important because we service what the big players sell. Just as the local electronics stores have been replaced by the “Big Box” retailers, and local hardware stores have been replaced by giant “Home Improvement centers,” locksmiths have had to adjust to the times.

We are fortunate that corporations like Ilco realize the contribution that we make and support our relatively small industry. I've been in the locksmith industry for almost 50 years and Ilco is one of the few names that was important when I started and is still important now. As an automotive locksmith, I'm especially grateful because I know that automotive locksmithing is quickly becoming a separate – and even smaller – field of locksmithing. Yet, I use Ilco products,



Photo 2: The 2019 edition of the Ilco “Auto Truck Key Blank Reference”

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Photo 3.  
Futura Auto

reference guides, and resources daily.

I feel that the Ilco “Auto Truck Key Blank Reference” is one of the few indispensable items in my truck. In fact, I have pdf copies of it on all my computers and even on my phone. When you think about the fact that this book is updated annually and provided free of charge, it becomes a truly amazing resource. I know that it is not perfect, but then again, nothing is. It is true that it generally lists just Ilco part numbers, but that is why I have several key blank cross-reference resources. And in most cases, since Ilco is the largest key blank manufacturer in the world, other companies often base their part numbers on the Ilco part numbers anyway.

I know that locksmiths are just a small part of Ilco’s business, and I am truly pleased that Ilco gives us as much support as they do. Let’s take a quick look at some of the new products that Ilco has introduced in the last year.

## KEY MACHINES

As the largest key blank manufacturer in the world, Ilco naturally is on top of all the new keys being introduced. In addition, they manufacture a line of key machines that are sold worldwide. One of those machines that has

intrigued me recently is the line of “Futura” machines. As an automotive locksmith, I need a machine that is capable of cutting both edge-milled and side-milled keys. It must be able to cut both types of keys from code as well as duplicate. Since I also operate out of a small van (Ford Transit Connect) space is at a premium, so I want the smallest machine that I can get. The basic Futura machine fits that bill pretty well, but recently Ilco has introduced a version of the Futura specifically for automotive locksmiths called the “Futura Auto.”

The Futura Auto shares the same basic design as the other three Futura machines. All of these machines are controlled by a removable 10” tablet with an intuitive interface. (Having broken the screen on my current machine, which has a built-in screen, I can really appreciate the importance of this feature!) The tablet can be held in place on top of the machine with the included tablet stand, or used hand-held or on the workbench. The tablet connects wirelessly to the machine via a built-in Wi-Fi connection or via a USB cable if the user prefers. The rear of the machine has two USB ports that can be used to connect the tablet, charge the tablet and update the software.

For easy updating, a USB flash drive is included. (The built-in Wi-Fi connection is used only for communicating with the tablet and does not have Internet capabilities.)

The Futura features a single “cutting station” that uses interchangeable cutters of various types. There is even a handy rack built into the face of the machine for storing a variety of cutters along with the necessary tools for changing cutters. The Futura uses an innovative modular clamping system for securely holding the key that is being cut. The base clamp (01RA) can be used with a variety of different jaws that can be swapped out quickly and easily. In addition, there are two optional clamps that expand the capabilities of the machine for cutting tubular keys such as those used by Harley Davidson motorcycles, and Tibbe keys like those used on older Jaguar vehicles and the Ford Transit Connect from 2010 – 2013.

The Tubular key option intrigues me, since every time I make keys for a Harley Davidson that uses that system, I have to use a friend’s machine to actually cut the key after I have decoded the lock. I don’t do enough of that type of work to justify the purchase of a dedicated tubular key machine, and I certainly don’t have room for one



Photo 4: The Futura line of automated key machines



in my van. The Tibbe option is also something that I would use, since I have built a local reputation for working on vehicles that most of the local guys don't want to tackle.

The Futura Auto has a number of features to make it easy to learn and operate. The color-changing LEDs are just one nice touch. When the machine is ready to be used, the LEDs are white. While cutting a key, the LEDs change to yellow, and once the key is complete, the LEDs change to green.

The Futura Auto also has a database of specifications for a huge range of vehicle keys. With this database, you can produce keys that are precision cut to factory spacings and depths. The included Instacode® and Kreate-A-Key™ software make cutting keys from code fast and easy. Firmware updates are provided free of charge for the life of the machine. Software updates which include updates to Instacode® and Kreate-A-Key™ are provided free for six months. After six months, software updates will require a software subscription. Software subscriptions are sold in 1, 3, 5, and 10-year terms. All subscriptions expire on December 31st so you should purchase your subscription as close as possible to the first of the year. Updates are normally provided quarterly.

About the only thing that the Futura Auto won't do that its big brother the Futura Pro does is cut dimple keys and do engraving. The Futura Auto also does not include software for residential / commercial applications that some of the other Futura machines come with. But, at less than half the cost of the Futura Pro, the Futura Auto seems like a bargain to me.

**For more information on the Futura line of key machines go to: [www.ilco.us/products/key-machines/1523084/futura-series.html](http://www.ilco.us/products/key-machines/1523084/futura-series.html)**

## REMOTES

When Renault introduced the world's first remote-entry system in 1982, they



*Photo 5. Ilco Smart4Car™ Remote Programmer and remotes*

started a revolution in vehicle technology. Today, it is very difficult to find a new car or truck that is not equipped with remote entry. Once the technology was made available, the public embraced it to the point that many cars now have hidden door locks that are only intended to be used in the case of a malfunction, or if the battery in the remote or the car is dead.

Remote keyless entry has become a big revenue stream for both the manufacturers and the dealers. In order to drive business back to the dealerships, the manufacturers change the specifications on a regular basis to try to discourage competition and allow the dealers to charge premium prices for remotes. But that strategy has backfired to a certain degree, alienating customers and forcing dealerships to only stock the most popular remotes and make the others "special order" items.

Ilco has only recently ventured into the arena of vehicle remotes, and now has two different options for locksmiths to sell and program vehicle remotes. Let's take a few minutes to look at both of these options.

## ILCO SMART4CAR™

The basic idea of this system is very simple; stock a few multi-purpose remotes that can be programmed to fit hundreds of different vehicles. This is not a new idea, but Ilco has approached the problem from a novel direction that also includes transponder programming and/or cloning. Most of the programmable remotes on the market also use a wired connection to the programming device. The Smart4Car™ system uses "Near Field Communication" (NFC) that allows the remotes to be programmed wirelessly. You may already be familiar with NFC as used on some smart phones that allow you to swap files and perform financial transactions by holding your phone close to another device.

There are two basic types of remotes in the Smart4Car™ system: Flip-Key Remotes, and a modular remote that can be used with any Ilco "Modular System Blades" (Horseshoe key blades) to produce an Integrated remote head key. Some of the remotes are supplied with transponders for programming to specific types of vehicles and some come without a

Photo 6. Just a few of the new Ilco Look-Alike® Remotes



transponder so you can add the appropriate transponder as needed.

The Smart4Car™ device is powered by either a USB cable, or 4 “AA” batteries. It can be connected to a PC via either the USB cable or Bluetooth, or to a smartphone via Bluetooth. (The phone apps are available in the Google Play store for Android devices, or in the App Store for iOS devices.) Updates are free after the initial purchase.

To build a remote for a specific application, you would begin by looking up the vehicle in the Smart4Car™ database. Once you have located the correct application, you would send the programming information to the programmer. After choosing the appropriate Smart4Car™ remote, you would place the remote on the programmer where the NFC programming will take place. When the programming is complete, you will then fit the remote with the correct transponder (if necessary) and the appropriate blade. From that point on, you can treat the new remote just as you would a factory remote. Cut the key and program the device into the customer’s vehicle just as you would an OEM remote.

According to Ilco, with the Smart4Car™ system you can cover over 450 vehicles by stocking just five remotes.

This system is designed to work seamlessly with the new Smart Pro™ multi-vehicle transponder programmer. In fact, there is a spot specifically made for the Smart4Car™ programming unit to fit into in the Smart-Pro hard case.

**For more information on the Smart4Car™ system, go to: [www.ilco.us/products/automotive-key-tools-equipment-and-remotes/remotes/1415854/smart4carTM-vehicle-remotes.html](http://www.ilco.us/products/automotive-key-tools-equipment-and-remotes/remotes/1415854/smart4carTM-vehicle-remotes.html)**

### LOOK-ALIKE® REMOTES

The newest remotes from Ilco are new “FCC Certified” remotes that look just like the OEM remotes, but without logos. These are new aftermarket remotes, NOT refurbished, priced to compete with refurbished remotes. Ilco announced the first of these Look-Alike® remotes in November 2018 and added many more in March 2019. At the time that I am writing this, there are already 50 different part numbers available and more are on the way. Not all Ilco distributors have begun stocking them yet, but most soon will.

Look-Alike® remotes are now available for most popular vehicles, including: GM, Ford, Chrysler, Toyota, Nissan, Honda / Acura, and Fiat. Proximity Remote fobs are also available for many GM, Chrysler, Ford, and Nissan.

**For more information on the Look-Alike® remotes go to: [www.ilco.us/search-results.jsp?query=look-alike+remotes&language=en](http://www.ilco.us/search-results.jsp?query=look-alike+remotes&language=en)**

### THE SMART PRO™ FROM ADVANCED DIAGNOSTICS AND ILCO

The Smart Pro™ is the successor to the T-Code Pro and the MVP Pro. It

went on sale over a year ago, but despite trade-in programs and a marketing blitz, many MVP Pro and T-Code Pro owners have still not made the switch to the Smart Pro. I must admit that I am one of those. I was reluctant to trade in a tool that I depend on daily for a new unproven tool that had just hit the market.

On paper, the choice is a “No-Brainer.” The Smart Pro offers the same capabilities (more or less) as the older tool, but has a sleeker design, built-in Wi-Fi, USB connectivity, built-in “Help” features including a database of vehicle information, and the ability to operate with or without “Tokens” as a “Hybrid” machine. But, like many of us, I rarely work on brand new vehicles and need the ability to program older vehicles much more often than the ability to program something brand new. I have also learned that “early adopters” are often just one step away from being “Beta Testers” and are the ones who usually find and have to deal with the bugs in new technology.

As things turned out, I was more or less correct. There were bugs that had to be worked out on the early units, particularly with the Wi-Fi system. But, at this point those issues seem to have been solved. I get a lot of calls for tech-support, and for a while I was getting a lot of calls from early adopters of the Smart Pro™. I heard a lot of complaining at first, but gradually those calls tapered off until now I hardly hear anyone complaining about the capabilities of the machine or its ease of use. As a result, I’ve decided to pull the trigger and update to the Smart Pro™ in the next few weeks, depending on my budget.


Ilco and Advanced diagnostics have been working very hard to work out the bugs in the Smart Pro™ and to enhance its capabilities. That is obvious in the number of updates that they have produced in just the last year that require the increased capabilities of the Smart Pro™. Let’s



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# AUTOMOTIVE



Photo 7. The Smart Pro™ from Advanced Diagnostics

look at some of those updates.

**June 2018 – ADS2261:** This update provides new software for servicing Volvo® vehicles that use “Slot Keys.” This software is a major break-through for most locksmiths. I personally am sick and tired of turning down customers who own Volvos. Previously, I considered making keys for modern Volvo vehicles cost-prohibitive. Even though I live in a area with lot of Volvo vehicles, I just haven’t had that many calls for them. In the past, I’ve looked into what it would take for me to service these vehicles, but the cost of a subscription to the Volvo website, and / or EEPROM equipment just wasn’t worth the potential return, so I usually referred Volvo customers, who needed anything more than a cloned key, back to the dealership. This update is one of the reasons that I have finally decided to upgrade.

**August 2018 – ADS209 & ADS2209:** This update provides the capability to deal with the new 20-Byte Ford systems and with an active alarm system. Programming a Ford product in an “All Keys Lost” (AKL) situation can be a real nightmare if the alarm has been activated. You MUST turn the alarm off before you program the new key. Some of the ways that I have dealt with these situations in the past is to program a new remote into the

vehicle and then use it to turn off the alarm, or to pull the code for the door keypad and then use that to turn off the alarm. However, for many of the newer Ford products that is either not an option or requires a lot of work. (I recently had to pull a door code for a newer Fusion

that had been repossessed. I had to get under the dash, dismount the “Smart Interface” (fuse-box) and use a mirror to read the code off the back of the smart interface – backwards!) This new software allows the user to turn off the alarm by way of software over the OBD port, which should be a huge time saver. Unlike most of the new updates this one is also available for the T-Code Pro and the MVP Pro, but the Smart Pro is required for some of the newest vehicles.

**February 2019 – ADS2282:** This update is only for the Smart Pro™ and provides the ability to pull the “pincode” on many new GM products using both bladed keys and proximity keys. This software pulls the pincode directly from the vehicle BCM module, which improves reliability since it eliminates variables caused by different engine sizes and types. Although on-board programming is still available on these vehicles, use of the pincode greatly speeds up the process in an AKL situation. Keep in mind that as of the 2017 model year, two keys or prox-fobs must be programmed in an all keys lost (AKL) situation.

**February 2019 – ADS2272:** This update gives the user the ability to deal with all key lost situations on many new Chrysler, Dodge, and Jeep vehicles that use the new Fiat based software. These vehicles also

require the use of a new cable to access the “STAR” connection which is located in various places on the vehicle depending on the model. This update also eliminates the need to obtain the PIN. This update works on both bladed and proximity keys. The PIN is automatically bypassed in the background as you use the software, requiring no actions on the part of the user. Once again, Advanced Diagnostic and Ilco were the first in the world to offer software for many of the vehicles covered in this update. No working key is required, this software can be used in an all keys lost situation.

**February 2019 – ADS2286:** This update allows the user to add keys and remotes to Subaru vehicles that use the “H” bladed keys. The pincode is bypassed in the background requiring no input from the user. A working key is necessary for key programming, and the software allows for erasing all keys (except for the one in the ignition) and adding keys, up to a total of four keys. A working remote is not required for remote programming.

**March 2019 – ADS2269:** This update is the first aftermarket solution in the world for 2018 and 2019 Ford products that use proximity keys. In addition, it will allow the user to program earlier model Ford proximity key equipped vehicles that have received the new “Security Update” at the Ford dealership. The pincode is bypassed in the background, requiring no input from the user. The key and remote are programmed at the same time. This software can be used in an all keys lost situation, and there is also an option for adding a key. Proximity keys can be programmed even if the alarm system has been activated.

**For more information on the Smart Pro™ or software for the Smart Pro™ go to: [www.ilco.us/products/automotive-key-tools-equipment-and-remotes/programming/1454410/smart-pro.html](http://www.ilco.us/products/automotive-key-tools-equipment-and-remotes/programming/1454410/smart-pro.html) ■**



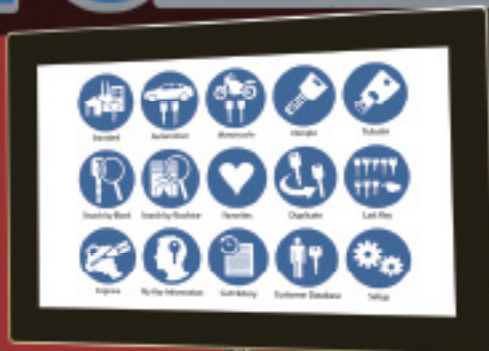
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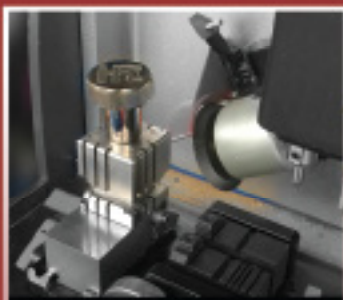
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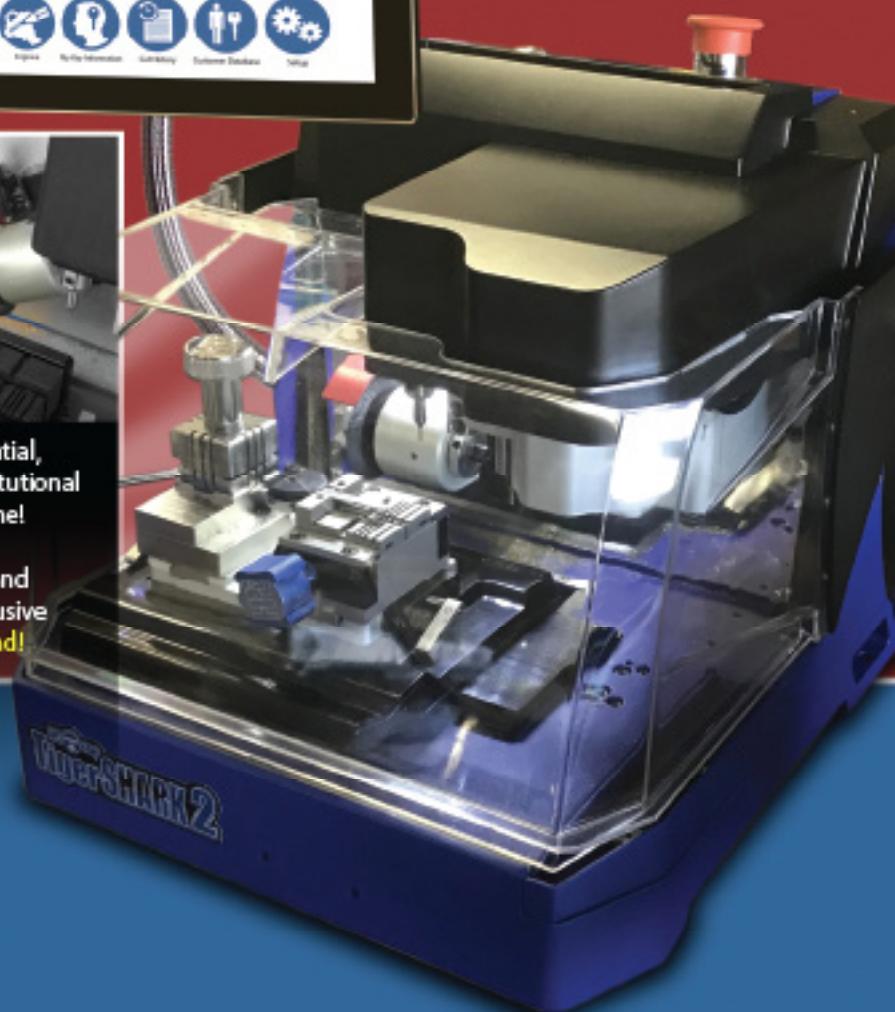
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# The Future of Automotive Locksmithing



*Car of the future? Toyota's TRI-P4 automated driving test vehicle*

Locksmith Ledger asked several automotive-specialist distributors this question. All agreed that the industry is becoming more high tech and that there will always be a demand for new tools and new techniques. Below are the detailed answers. We thank American Key Supply, Midwest Keyless and Transponder Island for their thoughtful answers.

## AMERICAN KEY SUPPLY

Modern automotive locksmithing is equal parts traditional locksmithing and computer programming. Most security systems are engineered with the intention of only granting access to dealership technicians because the auto manufacturers do not want outsiders tinkering with their software. However, they must also acknowledge that most locksmiths provide mobile assistance 24/7, which is a service that they presently do not offer. This forces our industry to constantly innovate and find creative ways to circumvent security protocols in order to insert our own key programming data. Mix that in with rolling pin codes, rolling access codes and evolving physical security upgrades and you will see how much higher the barrier to entry in this profession is now, than it was even three years ago.

As far as what the future holds, I'll defer to arguably the most brilliant mind in our industry, Brandon "The Saint" Tucker, owner of Expert Key Solutions in Warrior, Alabama:



*GM Orion Assembly - Bolt EV and Sonic environmentally friendly vehicles on assembly line*

"Automotive security systems are becoming more advanced every single year, and the ability to 'hack' them is becoming increasingly difficult. Take the newest Chrysler systems, for example. The Secure Gateway prevents even their own technicians from writing to the various control modules via OBD by mitigating data to 'read only' instead of 'read and write.' Newer proximity keys are also experiencing similar security upgrades by implementing end-user data encryption, as developed by NXP. The modern automotive locksmith probably has a good ten years left before having to defer to dealer-only tools and NASTF rules. Why? Because the auto manufacturers want to know who, what, when and why a new key was programmed. The job criteria will change, becoming far more complicated and expensive and will force alignment with dealership prices."

## MIDWEST KEYLESS

In the last decade, locksmithing as a profession has consistently progressed. According to a U.S. industry market study, in the past five years alone, the number of locksmithing businesses has increased by about 2 percent. To put that into perspective, there are approximately 24,000 more businesses than there were in 2013. As a result, just over 35,000 new locksmithing jobs were created in the automotive and residential industries combined.

In the automotive locksmith industry specifically, much of this growth is sourced from ever-changing technology. Not only has the number of vehicles on the road increased, but the major changes in automobile safety and security has increased the demand for locksmiths.

From key duplication, identification, programming, lock-picking, ignition replacements, to understanding foreign automotive locks, there is a great deal of training and continuing education behind becoming a successful automotive locksmith. Fortunately, there are many resources for education and hands-on training available through locksmith associations, trade shows and distributors.

If we look at the evolution of the automotive industry, it can be predicted that automotive locksmithing has a promising future. As long as people are driving cars, there will be always be a demand for automotive locksmiths!



## TRANSPONDER ISLAND

Automotive locksmithing is a very technological field in today's world. The car key is no longer a metal key blade that starts the car. Every day manufacturers are coming up with new ways to enhance their car security system. New smart keys today can have features that control the cars' speed and the cars' control units. With all these technological enhancements, it may be difficult to keep up. That's why we recommend a reliable source for everything you need to know about new automotive security systems. As new smart keys, programming machines and software's are constantly being updated, it is recommended that you have a portal to all the newest tools and software -- a place where all the research has been tested to guarantee that all smart keys, cutting machines,



Glow in the dark Nissan Leaf

software and locksmithing tools are available for immediate use.

In today's locksmithing world, it is beneficial to have multiple options when it comes to programming a key for a vehicle. As most locksmiths are aware, there is larger than ever market of programming machines and ways to program a key for use. Having multiple tools available will set you up for success in the future. You will never know what issues you may encounter with any vehicle so having that "backup machine" or "backup Key" will come in handy when

you come across an error with programming. This not only gives you a greater chance of having a successful programmed key for your customer but will keep them coming back for future calls.

The locksmith market is constantly growing across the country. In today's market having low-price high quality is a plus to attract customers. This will give your company an advantage in a competitive field. Staying updated with all the newest tools and keys will create a beneficial advantage for your company. This will ensure that you will not turn down any calls due to lack of information on the vehicle. The future is bright in the locksmithing world as Research and Development teams across the nation are working every day to make automotive locksmithing more reliable, profitable and efficient than ever before. ■

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# STRATTEC Update

If your customer owns a GM, Ford, Toyota, Nissan, Infiniti, Honda or Subaru vehicle, then most likely STRATTEC has a fob for that vehicle

BY GALE JOHNSON

At the ALOA convention two or three years ago a meeting was scheduled on the “State of the Industry.” One memorable moment occurred for me when a locksmith described how well his business was doing by impressing vehicle keys. But what if vehicles no longer have locks to impress?

STRATTEC Security Corporation has a new brochure available showing the wide variety of remotes which they offer. The brochure headline states, “Covers Over 90% of the Vehicles on the Road.” The time for impressing is quickly passing as remotes become commonplace on even the most inexpensive new vehicles.

Opinions in an e-mail sent to Locksmith Ledger by Mo Ali from American Key Supply states in part, “... The modern automotive locksmith probably has a good ten years left before

having to defer to dealer-only tools and NASTF rules. Why? Because auto manufacturers want to know who, what, when and why a new key was programmed.”

With the exception of Chrysler, almost every vehicle is now equipped with laser-cut sidewinder keys which generally only operate an emergency cylinder for gaining entrance to a locked vehicle. Most drivers routinely unlock their vehicles and start their engines with an electronic push button or proximity fob.

If your customer owns a GM, Ford, Toyota, Nissan, Infiniti, Honda or Subaru vehicle, then most likely STRATTEC has a fob for that vehicle. STRATTEC is a licensed supplier for GM, Ford and Mopar.

Beginning in approximately 1990 vehicle security consisted of electronics located in the keybow and corresponding electronics surrounding the ignition cylinder. ‘Transponder’ became the name for the interaction between



key and ignition electronics. STRATTEC has a full line of original equipment transponder keys available but the use of metal transponder keys is diminishing as proximity fobs corner the market.

If you are a beginner to vehicle lock servicing, you will immediately find that there is very little standardization. Each vehicle manufacturer uses their own technology and that technology is often changed. Knowing the year, make and model is very important before beginning any transponder key or fob programming. Many keys and fobs can only be programmed once, so if the programming is done incorrectly it can be a costly mistake.

Depending on the vehicle age, a car may use a transponder key, a transponder key with push buttons in the keybow, or a fob which operates locking, unlocking and starting wirelessly. The wide variety of possible choices is beyond the scope of this article but that is where STRATTEC is prepared to assist you.





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—Maher Eld  
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 San Francisco, California

*"The AutoProPAD is so easy to use, and the programming is super fast."*

—Dennis Macri  
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 Lake City, Florida

*"No se le iguala a ningún programador de 'alto nivel' ni en precio, sencillez para usar y rapidez!"*

—Jorge Narvaez  
 Auto Dynamic Services  
 Las Vegas, Nevada



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# Automotive Locksmithing 2019



Each model year STRATTEC publishes a catalog showing available STRATTEC lock parts, keys and other information usually for a 10-year period. A STRATTEC website (aftermarket.STRATTEC.com) simplifies the search process even



further. Searches by year, make and model quickly provide STRATTEC part numbers for that particular vehicle.

There are many different sources for obtaining transponder keys and key fobs. Some sources refurbish used



fobs and keys. Some sources import new, non-original transponder keys and fobs from outside the country. Any cost savings there might be between licensed STRATTEC products and secondary refurbished or imported products will be quickly forgotten when an off-brand

key or fob fails at some crucial time. If you value your reputation, think of STRATTEC products first.

**For more information, contact your local STRATTEC locksmith distributor or visit [aftermarket.strattec.com](http://aftermarket.strattec.com)** ■



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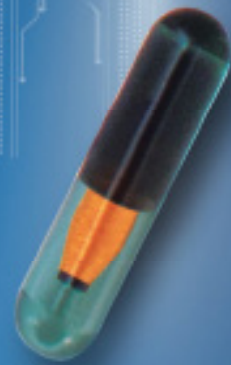
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# Understanding and Bypassing Basic Aftermarket Car Alarms

BY CHRIS LIRA

In my time as a locksmith involved in support groups, forums, and just working with less experienced guys, I've seen my fair share of people getting tripped up by aftermarket alarms, especially when they're coupled with immobilizers. Unlike most factory-installed systems, the aftermarket alarm will not usually go out by cycling a key in the door or turning a programmed (if applicable) key in the ignition. Unfortunately, the job from here is dependent on the vehicle, the system that was installed, and the skill of the installer.

## IDENTIFYING AFTERMARKET SYSTEMS

Many aftermarket systems will use a fairly common alarm siren while others will tap into the OEM horn but play different intervals than if it were the OEM system. Other giveaways often include a flashing surface mount LED mounted somewhere in the dash/knee bolster area, an antenna module attached to the windshield, or an integrated LED/Antenna/Valet button mounted to the windshield, A-pillar, or dash.

### OPTION 1: VALET BUTTON/SWITCH

Once again, this is going to come down to whichever system was installed, but most systems will have some

kind of manual emergency system in place to disable the alarm in the way of a valet button/switch. The valet button will often be a surface mount momentary push button, LED push button, switch, or integrated into a single LED/Antenna/LED unit.

Operation of the valet button is usually as simple as turning a key in the ignition and pushing/switching the button once. This will disable the alarm until it is rearmed. Without knowing if there's any kind of passive arming (where the system automatically rearms itself after a set amount of time), it's usually safest to inform your customer of the procedure to turn it off, if only as a precaution to protect yourself against callbacks.

Most systems are programmed in a way where a single button push will deactivate the alarm, though there are some that are configurable. If a single push doesn't deactivate, you can experiment with multiple presses.

Standalone valet buttons/switches are often mounted in the knee-bolster or lower dash area if they are mounted at all. Some installers will either get lazy when it comes to the installation or believe that it's more secure hide the valet button elsewhere in the dash or omit installing them entirely.

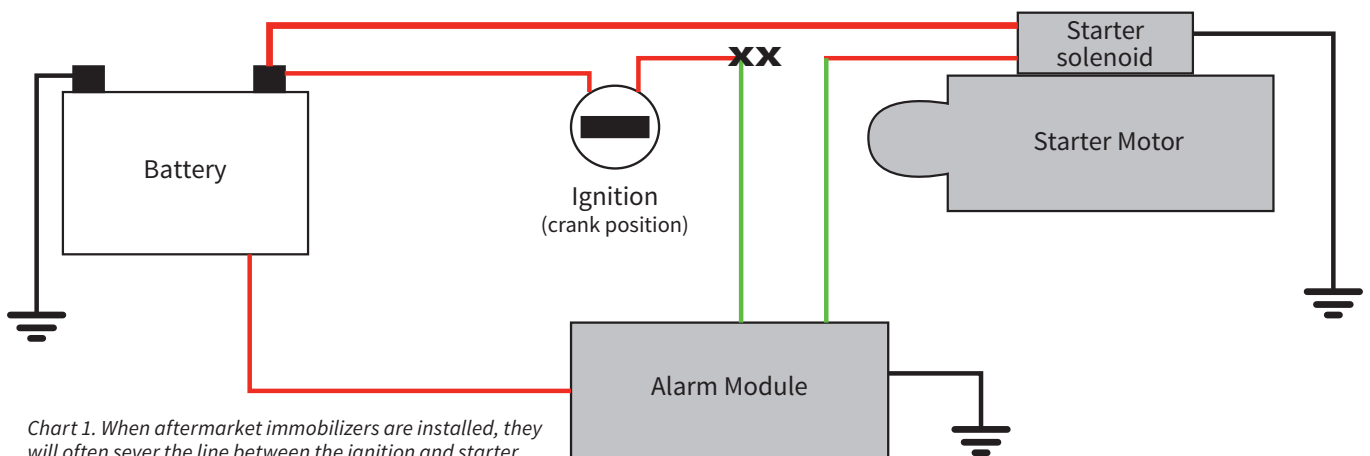


Chart 1. When aftermarket immobilizers are installed, they will often sever the line between the ignition and starter



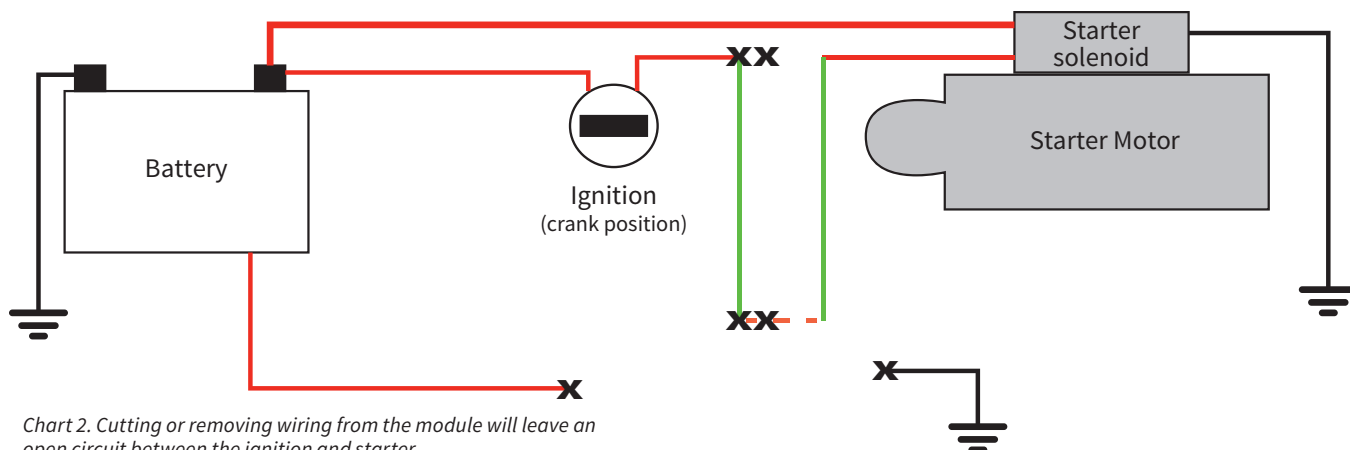


Chart 2. Cutting or removing wiring from the module will leave an open circuit between the ignition and starter.

**OPTION 2: DISABLING THE SYSTEM ELECTRICALLY**

I've long heard of people telling others or being told to just 'pull the harness to the brainbox' or 'pull the box out.' In many systems with

immobilizers, this just is not a valid solution. To explain the process of why this doesn't work and why the alternative I'm suggesting does, see the diagram of the stock starter wiring in the vehicle. When the key

is turned, the ignition switch puts power to the starter and the vehicle will crank.

When aftermarket immobilizers are installed, they will often sever the line between the ignition and

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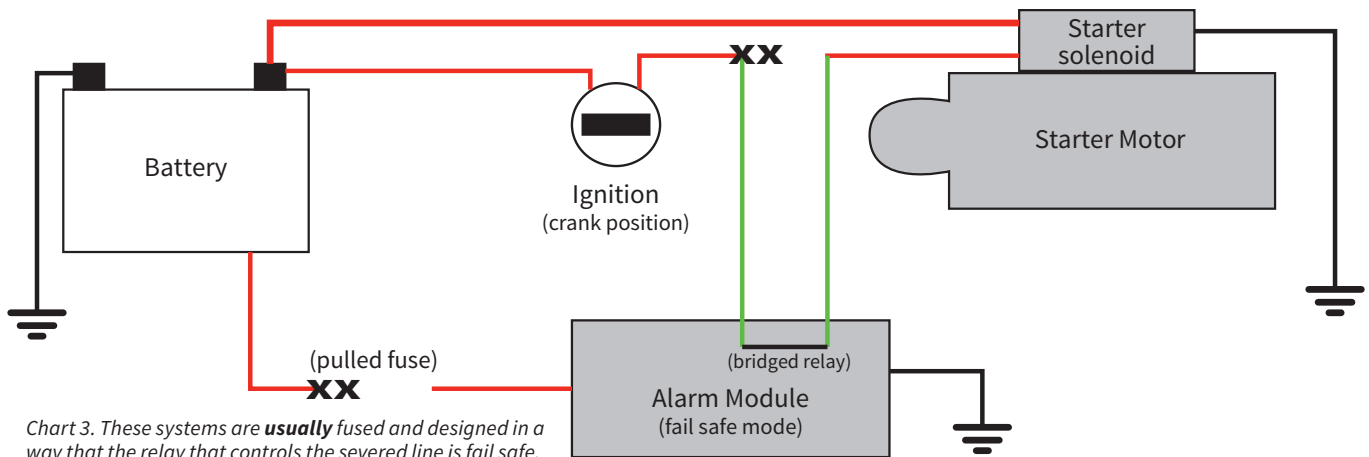


Chart 3. These systems are **usually** fused and designed in a way that the relay that controls the severed line is fail safe, so pulling the fuse from the wiring will allow the vehicle to start normally.

starter and insert wiring from the module to both ends. At this point, the alarm will then electronically switch the circuit open and closed depending on whether the alarm is active or not. I've long heard people just advocate that

you just start cutting wires or remove the wiring harness from the module and it will be automatically disarmed, but doing so will just leave an open circuit between the ignition and starter. At this point, there is no physical link between the starter and the ignition switch and there is 0 percent chance of this vehicle starting. Fortunately, these systems are usually fused and designed in a way that the relay that controls the severed line will fail safe, so pulling the fuse from the wiring will allow the vehicle to start normally.

### OPTION 3: CUT IT OUT

Alternatively, the more permanent solution (or alternative if pulling the fuse doesn't disable it) is to completely cut the module out completely and reconnect all of the ignition wiring that was previously severed. Doing this will often marry you to any potential ignition wiring issues in the future and is only recommended for those that are comfortable with proper wire splicing techniques. Soldering with proper heatshrink is best, but there are effective butt connectors on the market that can work just as well in the hands of those not skilled at soldering or when the work area is too tight for it to be a viable option. Hopefully this brief look at common aftermarket alarm installation will allow you to alleviate these issues when you come across them. Luckily, transponders and remote keyless entry becoming standard options really seem to be making them a less common occurrence. ■

*Chris Lira is a seasoned automotive locksmith with nearly a decade of experience in the field. He can often be found in any number of locksmith forums, dispensing advice, support, and wisecracks. Recently, he relocated to Las Vegas, Nevada, to provide his expertise to American Key Supply as product manager and industry consultant.*

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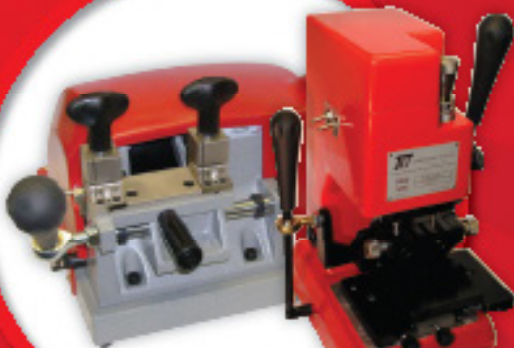
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