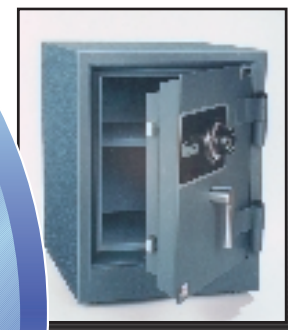
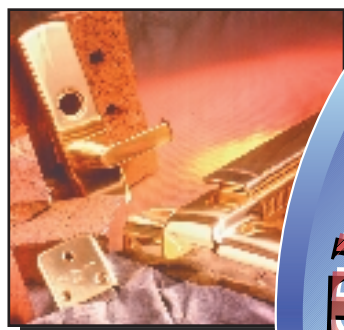
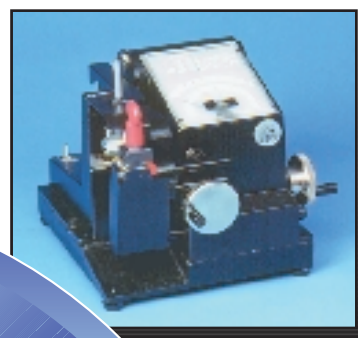


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**CODES  
MOTORCYCLE**  
— page 118 —

# The National Locksmith®

June 1995  
Volume 66, No. 6



The National Locksmith

**READER'S  
CHOICE**

**TOP 100**

**1995**

**BEST OF THE BEST!**

See page 32 for the  
**REST OF THE BEST!**

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The National Locksmith

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**CODES** MOTORCYCLE

**READER'S CHOICE**

**TOP 100**

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**BEST OF THE BEST!**  
See page 32 for the  
**REST OF THE BEST!**

### On The Cover

The top five winners of the Reader's Choice Awards pictured left to right: Von Duprin, Inc., Simplex Access Controls, Medeco Security Locks, Inc., HPC, Inc., & Gardall Safe Corp.



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# COMMENTARY

## ***The 1995 Reader's Choice Awards & News about the AutoSmart Manual***

**W**e've done it for you again! *The National Locksmith* covert operations team has uncovered a new General Motors column to be released this fall. Check out page 11 for Tom Mazzone's expose on this new GM high tech ignition lock and security system. And remember, it was brought to you first by *The National Locksmith!*



**Marc Goldberg**  
Editor/Publisher

**T**his month marks another 'first' for *The National Locksmith*. In this issue you will find the results of our Reader's Choice Awards for which you voted back in January.

The rationale of our idea was simple. We printed a ballot in the January magazine, and invited you, the locksmith, to choose your favorite companies manufacturing products for our industry. The basis of the award is quality, design and application of the product, and we asked for your votes in a variety of categories.

Well, the results are in! Although we had decided to permit you to confer the Reader's Choice Award on as many as 100 companies, only 87 received enough votes to qualify. That shows that this is a select group of winning manufacturers. Furthermore, we have decided that next year we will make the Reader's Choice Award even more exclusive by further decreasing the number of possible winners.

So, enjoy this issue's profiles of award winning products! And we'll alert you as to when you'll be voting for next year's candidates. But be ready to sharpen your pencils. The 1996 decisions will be hard to make since you will only be able to vote for a few selections!

Congratulations to all the winners of this year's Reader's Choice Awards!

**N**ot too long ago I received a call from a locksmith in New England. He told me that at a locksmith seminar he was approached by another locksmith who was selling copies of our new

## ***America Online: NATL LOCK***

Use the above address if you are on AOL.

## ***Internet: natlock@aol.com***

Use the Internet address if you are not on AOL.

AUTOSMART manual out of the trunk of his car.

It was clear to the man who called me that the locksmith selling the books had copied them on a photocopier, and that they were not legitimate copies. I appreciate the fact that he called to warn me of this situation. In fact, he gave me the names and phone numbers of several witnesses who told me the same story.

So, as a reasonable person, I decided to call the copy machine artist as a first step. All I wanted was to ask him to admit that he had been violating our copyrights, and to agree to halt his illegal activities.

**W**ell, this "gentleman" totally denied everything even after I told him about the eyewitnesses! So my next step was to initiate legal action, and file a grievance with the Ethics Committee of ALOA since he is a member as am I. Clearly, this is a violation of the ALOA Code of Ethics.

The locksmith quickly rolled over, admitted his crimes, and has agreed under threat of severe penalty never to violate our copyrights again. He asked us to agree to a confidentiality clause, so no one would ever learn what he had done. This I refused to agree to. When you commit a crime, you have to pay the price. The ALOA grievance will not be withdrawn.

Why am I telling you all this? Because if you happened to be one of the people who purchased a copy of the AUTOSMART from a locksmith based in Maine, chances are you may have an illegally copied book. If that is the case, I am sorry to tell you that you will not be able to purchase updates for your book. That means you, too, are a victim, and for that, I am sorry.

However, we can only sell updates to owners who purchased their books through legal means, either from *The National Locksmith*, or a legitimate distributor. If you have any questions, please give me a call. And stay tuned for a whopping, big update for the AUTOSMART on sale in July!

*Marc Goldberg*

# LETTERS

## Comments, Suggestions and Criticisms

*The National Locksmith* is interested in your view. We do reserve the right to edit for clarity and length. Please address your comments, praise, or criticism to Editor, *The National Locksmith*, 1533 Burgundy Parkway, Streamwood, IL 60107. (Or E-mail us at the E-mail address below.)

### **America Online: NATL LOCK**

Use the above address if you are on AOL.

### **Internet: natllock@aol.com**

Use the Internet address if you are not on AOL.

## More Than Schlage

Dear Marc:

The article on locks was great. But why did you choose Schlage? Let's see some further reporting on how Arrow, Kwikset, Medeco stand up.

I'm just now getting used to using E-Mail. It's the greatest thing since vanilla ice cream. With E-Mail, why do we need fax anyway?

Please put me on your E-mail mailing list.

Bill Paroby  
Via E-Mail

## Get Real!

Dear Marc:

I was glad to finally see someone do an article on the differences between deadbolts. However, I was deeply concerned that this article was so biased towards the products that locksmiths sell that you would compare a direct manufacturers product, namely Faultless, to a doctored up Schlage product. This was a gross example of comparing apples to oranges.

Why not compare both locks on equal terms installed with only factory parts just like in real life or at least with the same non factory parts. Why would anyone buy the extra stuff when they can buy an Abloy for about the same price and get key control and drill resistance as well. In the future please conduct such tests, but please at least conduct your tests on

equally matched products that would normally be seen in real life. Not conducting tests fairly only degrades the whole industry.

Jeff N. Hartsell  
North Carolina

*Editor's Note: Jeff, You missed our point! As some locksmiths have sent similar letters, let me try to answer all of your concerns.*

*First, you are correct in saying that we compared apples to oranges. That was the point. The general public doesn't know the difference between an apple and an orange. When a customer walks into a home builders supply store they don't understand the difference between the apples - Schlage, Kwikset, Lori, Master Lock locksets - being sold and the much less expensive oranges - imports. That's why it's important for you as a locksmith to show them the difference.*

*Another apple/orange comparison can be drawn by what most homeowners (and, judging by most American neighborhoods, many locksmiths) consider adequate security for a door. From the apple sack, adequate security requires a quality deadbolt plus appropriate reinforcements. From the bag of oranges, adequate security is any deadbolt placed on the door.*

*Our test, in a fun way, simply illustrated what the industry has been preaching for years - Proper security works, improper security doesn't! The test and subsequent article now give the locksmith clear, impressionable and indisputable evidence that this is true.*

*In other words, apples aren't oranges and we proved it.*

*Second. Why didn't we compare locks on equal terms?*

*Because we weren't comparing locks. We were comparing a properly secured door and an improperly secured door.*

*Third. Why would anyone buy the extra stuff when they can buy an Abloy for about the same price and get key*

*control and drill resistance?*

*Most residential doors are composed of wood or wood/steel with wood frames. Roughly 85 percent of the unauthorized entries made, are made through the front door. Of that 85 percent, a vast majority are forced entries. This leads me to believe that for most unauthorized entries, the violator is not overly concerned about key control or retaining the door's appearance. Whether Abloy, Medeco, Schlage Primus, ASSA, etc. are used, a door and frame not properly reinforced is not secure.*

*While there are applications for using drill resistant and key controlled systems, when placing the odds on my home security, I'd probably put my money on the less expensive extra stuff.*

*(It should be noted that there are areas where pick resistant locks are preferred and necessary for residential use. Art Paholke, retired Chicago police officer and forensic locksmith, states that the incidence of surreptitious entry in areas like New York city is prevalent, requiring the use of pick resistant locks!)*

*Finally, conducting tests on equally matched products seems a little senseless. I like apples. My wife likes apples. I like Delicious Apples. My wife prefers Macintosh. Can I compare the two and state that one is better than the other? Not really.*

*Likewise, there are many fine, equally matched locks from which to choose; Abloy, Schlage, Medeco, Kwikset, ASSA, Titan, Lori, Master Lock, etc. Each has strengths and weaknesses and will appeal to different locksmiths per their varying applications.*

## Locksmith Tool Legislation

Dear Marc:

In reference to your commentary in the March 1995 *The National Locksmith*, I personally have not seen

any of the advertisements on the Internet for locksmithing supplies, but just the very idea scares me whether it seems harmless or not.

Our company does a lot of automotive locksmithing and we service several auto clubs. In doing so, we have learned that the towing industry does much more automotive unlocking than any locksmith even dreamed of. They are being educated by many of the suppliers that locksmiths buy tools from. As much as I don't like it, I have to admit that there is a need for towing companies to do some lock-outs. But for them to be supplied with automotive locksmith manuals, pick sets, key codes, etc., is going too far!

I used to think that I was in favor of locksmith licensing, because I thought it would prevent this kind of thing. Now I do not. I would like your opinion.

J. Tate  
Via E-Mail

*Editor's Note: At this point, there is no legislation that properly dictates the sale of these tools and the effects of well written legislation cannot really be judged.*

### New to AOL

Dear Marc:

I own and operate Owens Locksmith Co., in Pittsburgh, Pennsylvania. I am new to AOL. I was searching through the members file and I hit -locksmith- as a search parameter and I was stunned. There are quite a few of us on here. Have you done this search? If not give it a try. I am a subscriber to *The National Locksmith* and I always find some little tidbit that helps me out each month. I have been a professional locksmith for 14 years and I am damn good at my job. Is there a bb or forum on AOL for us? I'll look for you on here.

Rob Owens  
Via E-Mail

*Editor's Note: We operate an interesting mail list service for locksmiths. To register, E-Mail us at natlock@aol.com.*

### Info Technology On-line

Dear Marc:

Glad to see you on-line and coming into the information age. Nice to see quite a few locksmiths are also on-line. The news group alt.locksmithing is

sort of interesting. We all need to keep up with the advancements in technology to survive.

Hope to hear more about this soon.

Robert Duncan  
Via E-Mail

### E-Mail from New Zealand

Dear Marc:

It's great to see that *The National Locksmith* has gone on line. This is the best way for locksmiths in the other parts of the world to keep in touch. I think you'll know a lot more about us here in New Zealand because of

what's happening off San Diego.

I have only just received the January 1995 edition of the magazine, so we are a little bit behind. I am hoping that we will be able to get a bit of info about the odd bit of product made in the USA: i.e. codes or suppliers, etc.. Would this be possible? A lot of product you review does not apply to us down here but we still find it very valuable for other things. At the present we are not able to access AOL because this can only be done by Compuserve and we're still working through their prices. I hope to be able to change this policy soon. So I'd love



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to get any info on your forum so as to join.

Zane Weyde  
Via E-Mail

### Looking For Help

Dear Marc:

I am the lead locksmith for Tucson Unified School District #1 in Tucson, Arizona. We have 122 schools and support sites located within Tucson and the surrounding areas. I am in the middle of retrofitting all locking devices (a \$1.2 million project involving approximately 50,000 locks) to ASSA High Security Locks as part of a bond funded project. At present there are five locksmiths involved in the retrofit, and I have been cleared to hire two more.

These are currently temporary positions, meaning they do not at present have any benefits (medial, dental, etc.....) This bond is funded until May 1997, which means a steady job until that date. There is a possibility of a permanent position coming open any time soon, so the chance of coming on full-time is good.

I have looked locally for a locksmith with some experience in high security but, of course, any locksmith worth his (or her, I have two female locksmiths) salt are already in steady positions. If you could put me in touch with anyone that would like to come to the "Sunshine State" (it was 80 degrees today), I will sure appreciate it. If you know someone, please have them contact me and send a resume to Tucson Unified School District #1, Facilities Management, ATTN: Tracy Andersen, Locksmith, 530 S. Norris Ave. Tucson, AZ 85719.

Tracy Andersen  
Via E-Mail

### Locksmiths In Year 2000

Dear Marc:

I just finished reading a letter in your March 1995 issue titled "About Face."

It would seem that Mr. Seager is unaware of the changes that are affecting the locksmith industry.

In Dade County (Miami), Florida, the automotive industry attempted to regulate only one portion of the locksmith industry. After months of negotiation and the hiring of a professional lobbyist we were able to win an exemption from this ordinance.

Furthermore the alarm industry has been nibbling away at our industry for many years. Until about seven years ago it was lawful for a locksmith to install hardwire alarm systems. Overnight the alarm industry passed state statute requiring alarm installers to be licensed by the State of Florida. Not even one locksmith was informed prior to or even after enactment of this law. From that day on any locksmith who had been installing alarm systems as part of their daily business transactions could no longer do so. Companies that were exclusively alarm installers were grandfathered in ... but not locksmiths.

How long are we supposed to sit on our hands and watch this happen to our industry? Well, I can tell you we have sat still long enough.

Last month the locksmiths of Dade County were successful in passing an ordinance that will regulate the profession, institute testing that will make certain that all locksmiths will be proficient in their skill, and it will prevent other industries from taking bits and pieces from our industry. The ordinance outlines the specific areas of our field and that will ensure the Profession of Locksmithing a future beyond the year 2000.

I think that it is important to remember that locksmithing is a profession and not a part-time industry.

The customer that calls out a part-time locksmith should have the confidence that although he/she is a part-timer they meet the criteria of a professional locksmith... If the customer is paying for a professional job they are entitled to a professional job.

Marc, at first when I saw that you changed your mind I was somewhat taken aback. I commend you for having the courage for changing your mind in an open forum such as *The National Locksmith*. Your support is integral to assure the future existence of our industry.

Jeffrey S. Nunberg  
Via E-Mail

### We Want Licensing

Dear Marc:

Here in Georgia there is no legislation concerning locksmiths. This means that anybody can walk into a local auto parts store and buy car opening tools, rocker picks (the

part folks call them "wiggle keys") and pick sets. One local store in my home town even sells pick guns. I believe that licensing is a necessary evil in order to protect the trade and the general public. Sure everybody has to start somewhere, but there needs to be some sort of checks and balances.

I also believe that the installation of alarm systems should be regulated as well. I have heard many locksmiths complain about being cut out of this business and, frankly, I have no sympathy for them. The process to obtain a low voltage license is not that difficult.

The way electronics are growing in our business the license is going to be a necessity anyway, if you don't want to be left behind.

Simply get the license hang it on the wall and keep on working. I quite enjoy walking behind the local alarm company and taking the job away from them because I can handle ALL of my customers security needs.

I agree with Mr. Nunberg, it takes a lot of courage to do an about face on a subject like this. We appreciate you.

Jeff Statham  
Via E-Mail

### Protecting The Public

Dear Marc:

Every once in a while I get the notion to take pen in hand and write about something that bothers me. I'm referring to the license issue and the locksmith. So far all I've read about is how one group is trying to shut out another group, per se, the alarm installers locksmith problem. I could fill this page with what I've read and heard but so can most of us in regards to licensing.

One area untouched so far seems to be "what about what is good for the public interest"? For example, I'm a rural locksmith in Wisconsin. Recently I was called by the Postmaster of a small town near by because the locks, newly installed, just didn't work right! Didn't work right? I found a B162 installed upside down and backwards. One of the tail pieces was short and didn't connect properly with the latch. The door closer, new, didn't close the door, nor did the new surface door insulation insulate. Surely, this is an amateur, not a locksmith, Surely it occurred just this once, wrong. So far five post offices have been reworked. I can hear some "hard liners

commenting" So what your making money." The faucet can be shut off!

Have we forgotten what this is all about? Our jobs? Our futures? The well being of our families? Being a locksmith is much more than money. It's trust! The buck stops here and it's stopped with the locksmith for 5,000 years! Good work and reasonable prices brings more work. The public aren't stupid!

Yes, licensing will protect us from the alarm installers etc., but who protects the public from us. A license should not be a purchased piece of paper. It should be earned by examination and state regulated by the Department of Licensing and enforced by Department of Industry, Labor and Human Relations. We must remove the butchers and tinkerers from our midst or require them to gain knowledge through education so that all locksmiths can receive the same status before the public, our customers, will receive knowledgeable and well qualified professionals.

There's an old saying "Everyday I learn something!" Let's all learn! Let's get licensing, then educate from within our ranks. Together we can be here for another 5,000 years. If you are still reading this I thank you!

Tom Perkins  
Wisconsin

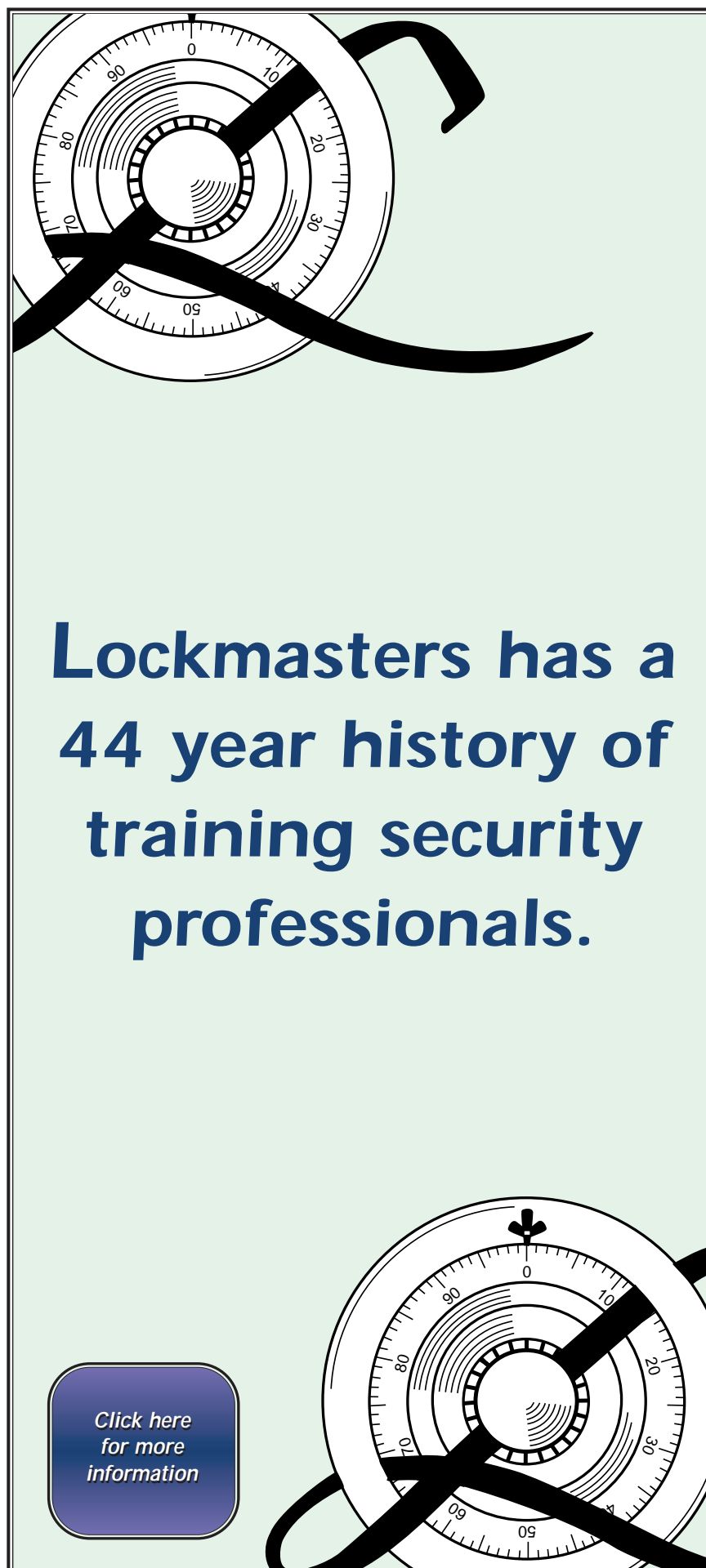
### Locksmiths Already Licensed

Dear Marc:

Everywhere you look someone is complaining about the possibly having to get a license to do lock work. I believe most of us already have a license, its called a business license. Its a shame that millions of dollars worth of what used to be our business is now shared by so many others. I guess if we just sit around arguing about things we can look forward to more of our services being eroded.

I wish ALOA would concentrate on preserving our profession instead of testing our knowledge. The only test that counts is the one your customers give you. If you pass that then you are a locksmith.

Keypros  
Via E-Mail



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# VIEWPOINT: LOOK, LEAP, LOOK OUT



**D.F. Mowery**  
Turlock, CA

**T**he enactment of legislation affecting the art and craft of locksmithing should be carefully considered before support is given to any legislation.

In California we bought the idea that it would be beneficial to require fingerprinting before the issuance of a state permit. The legislation that was drafted gave that authority to the California Department of Consumer Affairs. It was to assure the public

(and those in the trade) that there were no burglars, etc., practicing locksmithing.

But then something happened. The department of Consumer Affairs, after additional legislation was passed, went from an agency that screens applicants and then issues permits, to something entirely different. The "Permit" has been replaced with a state license. Believe me, there is a difference between the two. We now have rules and regulations on all advertising, including business cards, telephone book advertising, etc.... The business name is also controlled. You have to apply for a name and if it's not in use state wide, then they can/might allow it's use. (Prior to this change a business name was screened on a county by county basis. That fit nicely with the telephone book area of coverage).

In other words, legislation that had the backing of most California locksmiths and the California Locksmiths Association, in it's original form, went from a law that screens to one that controls, a much broader function than what was originally intended. Paperwork and licensing of employees, advertising, notification of changes in employees, etc, etc, ... are now the order of the day.

Our failing and that of our association was not in the original intent, nor was it in the enactment of the original legislation. Our error was, first, not realizing how it could be changed into something not intended. And, secondly, in not developing an ability to watch for legislative changes that would surely follow and would greatly effect us.

The lesson? I absolutely believe that if legislation is needed it ought to be narrow in scope and not an attempt to correct all that is felt to be wrong. In other words, the saying "Keep It Simple, Stupid" has real meaning. The wider the proposed legislation, the harder it is to keep it to its intended form. It would seem to be preferable to separate the issues that need legislation and put them through one at a time.

After legislation is law, another problem exists. That is the natural tendency for the regulating agency to suggest refinement of what is now law. Then, of course, there are legislators that will surely be contacted by alarm company owners (as an example) about the needed changes. And the legislators will, of course, contact the regulating agency to get input so that the legislative assistants can draft the additional needed legislation. The point I'm trying to make is that once you have started the involvement of government, you had better be able to monitor the situation from then on. Because you will have the problem of fighting to keep the law in the intended form.

I, too, wish it were possible to pass a law that solves our problems. But, just like the work we do teaches, all things do not function as designed. Perhaps we need to think about the "cures" to our problems before we put something into motion that we then cannot control.

Thanks for allowing the discussion, Marc. It's good for us all, no matter how it finally turns out. **TNL**



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# GM'S VTD PASSLOCK

*Here it comes again.  
More changes in 1996.*

*Brought to you by your national GM dealer.*

**T**here's a new lock on the block - or should we say - a new ignition lock system. And, of course, it's going to appear on none other than a General Motors vehicle - the late 1995-1/2 (1996) Chevrolet Cavalier Z-24 and Pontiac Sunfire GT. (At this point, other versions of the Cavalier/Sunfire are not affected by this change.)



by  
**Tom Mazzone**

On the negative side we have a new lock and service procedure that we must learn. On the positive side, this turn marks the end of the dreaded Alpha Technologies ignition. Which, despite its limitation to the 1991 through 1994 J car (Cavalier) and the 1992 through 1993 N car (Achieva, Skylark and Grand Am), the number of Alpha Tech locks on the road is by no means small. Models like the Grand Am have had sales over the last few years exceeding 500,000 per year. Multiply that times the other models and the number of years they were produced and we have a whole bunch of Alpha Techs to deal with in our near future.

Based on current information, however, the new system - dubbed the Vehicle Theft Deterrent (VTD) or Passlock system - does not appear all that difficult to work on. In fact, the system is incorporated into the 1994 GM 10-Cut Module Ignition lock system, a lock that has proven to be extremely easy to service and/or replace. Both systems are produced by Strattec Security Corp., the former Briggs & Stratton Technologies. So, this system should be as easy to service even with the addition of a Hall Effect Sensor to the lock body and a magnet to the plug.

While quite similar in name to the Passkey, the electrical/electronic as well as the mechanical operation is quite different. Mechanically, this system is an integral part of the lock

and not the key, eliminating the need for a resistor pellet in the blade of the key. In fact, any correctly cut mechanical key can be used to operate the vehicle. The absence of the pellet subsequently eliminates the need for contacts in the keyway of the lock and wire leads coming off the lock plug. All in all, the new design circumvents many of the service problems present in the Passkey system - i.e. bad or lost resistor pellets, bad contacts, leads broken due to turning the plug, etc.

Additionally, this new system offers GM the ability to inexpensively create a single key car that still utilizes a passive security system. Under the Passkey (VATS) system version (currently used on the G car - Aurora, Riviera) while the 10-Cut system is used on all the locks, the resistor pellet in the ignition key cannot pass the dust covers on the door and trunk locks without extensive redesign of the locks. Therefore, a separate 10-Cut key is issued for these locks. With this new system, however, without the hindrance of the resistor pellet, a key can now be used that fits the ignition, door and trunk locks.

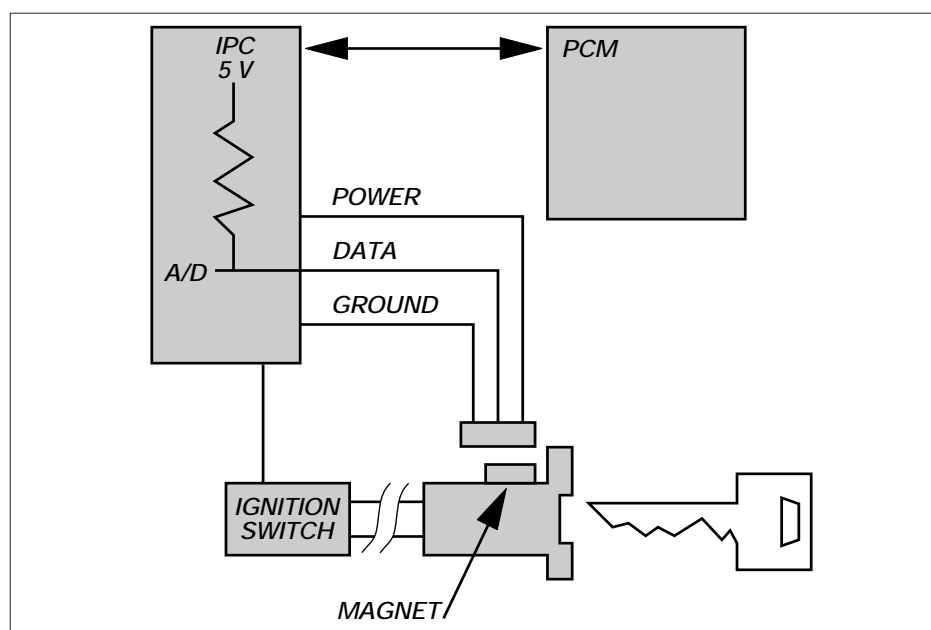
Electrically/electronically the

system is comprised of the magnet and Hall Effect sensor in the ignition lock, ignition switch, Electronic Instrument Panel Cluster (IPC), and the Powertrain Control Module (PCM). (See illustration above.)

Starting a vehicle employing the VTD system is dependent on two criteria - a proper Resistance Code (R-Code) and the presence of the R-Code within a given window or time frame. If either of these two conditions are not met, the vehicle cannot be started. It should be noted that the R-Code is comprised of both an actual resistance and a series of pulses or a "signature" distinct to the electronics of the Hall Effect switch components in the lock shell. Early reports on this system indicate that each ignition lock has its own resistance and signature. We will keep you apprised as more information on this system is available.

### *Here's how it works.*

A mechanical key is used to turn the plug, starting two synchronized sequences. From the ignition lock, a magnet in the plug turns past a Hall Effect switch in the lock shell, generating or producing the R-Code



**GM's new VTD is comprised of several components, and is being used to prevent starting the vehicle without the use of a key.**

that is sent to the IPC. At the same time the ignition switch starts a timing circuit in the IPC opening a window of time in which the R-Code must be seen by the IPC.

If the correct R-Code is seen by the IPC within the window, the IPC sends a coded password to the PCM. If the PCM receives a correct code it allows the fuel injectors to operate normally.

If the IPC does not receive the R-Code within the window (indication of a bad timing cycle), the VTD goes into a Short Tamper Mode, where the vehicle cannot be started for four

seconds and a telltale light on the instrument panel flashes. After three consecutive failed timings, the VTD goes into the Long Tamper Mode. In this mode the fuel injector system is shut down for 10 minutes and the telltale light flashes. (It should be noted that service procedures indicate that under the Tamper Modes the vehicle may start for a brief moment then die.)

If the IPC receives an incorrect R-Code the VTD immediately goes into the Long Tamper Mode.

The fun does not stop here,


however. Not only do incorrect signals to the IPC create a Tamper Mode, but incorrect signals to the PCM also creates Tamper Modes. Similar to the IPC, two factors effect the operation of the PCM - a timing window and the coded password from the IPC. Like the IPC, if the PCM does not receive a password from the IPC within the preset window, it enters a Short Tamper Mode. In this mode the vehicle is not allowed to operate for four seconds. If the password is incorrect, the PCM goes into the Long Tamper Mode.

Here's an interesting note. Should the line that carries the data from the IPC to the PCM become disconnected or become open while the vehicle's engine is running, the PCM goes into a Fail-Enabled Mode. In this mode the telltale lights continuously and the vehicle can be restarted irrespective of the timing window, R-Code and password.

***How is this system serviced?***

Let's start out by saying that should any part of this system fail, it will be difficult for the locksmith to determine the actual cause. Thus far, the only known method for troubleshooting and determining the source of a problem in this system is through the use of a TECH 1 scan tool and is best left to the trained mechanic.

Should the problem be from a mechanically inoperative ignition lock (i.e. keys missing, vandalism/theft, etc.) the locksmith can make keys or replace the lock. In doing so, however, the VTD must learn the data or logic offered by the new lock. To activate the learn mode on the VTD, simply turn the vehicle to START. This should activate the Long Tamper Mode, locking the fuel injectors out for 10 minutes and flashing the light on the instrument panel. Once the Long Tamper Mode has been activated, let the ignition lock return to the ON or RUN position and let the vehicle sit until the telltale stops flashing, usually this will be the full 10 minutes. Do not shut the ignition OFF at any time during this procedure or it will have to be restarted.

As stated earlier, the information here is based on early releases of this system. We will keep you abreast of changes and addendum as they appear. 



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# CONCEAL

## A-SAFE

*Dale discusses the latest plastic and steel entry into the in-the-floor type of installation for safes and vaults.*

**T**his is not my first experience with a Plastic and Steel in-the-floor type of safe installation. Many years ago the first safe that used plastic and steel bars was manufactured by Build-A-Safe, Inc. (BASINC). They featured single and dual locking systems in a small diameter lift out type floor safe.



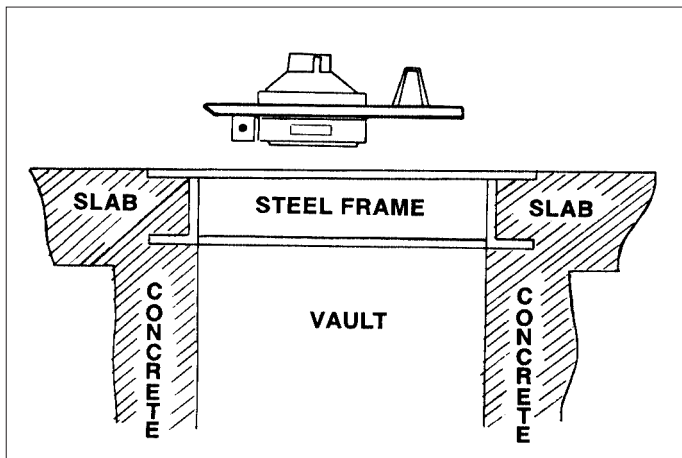
by Dale Libby

Recently there have been new innovations in this market, and Conceal-A-Safe has many models and sizes available with a new dial Security Mask Feature. The idea of a steel door with cement sides and a plastic box is the logical step for protecting the body and contents of a safe from rust and water.

The Fire Safe Mini Vault, when installed, is constructed of four concrete walls and one concrete floor. The steel door locks to a steel frame

that is securely attached to all four walls. The body of the safe is lined with soft protective plastic. (See illustration 1.)

One of the nicest features of this unit in whatever size and configuration you need is the disappearing money drop slot. This is established by using two steel interlocking doors. The first door, which has the combination lock, covers 70 percent of the actual door opening. The second plate comprises



1. Once installed, the safe is completely surrounded by concrete.



2. View of Mini-Safe with NO money slot Also shown is the standard Security Mask and Dial.



3. View of Mini-Safe with money drop slot installed. The slot has an anti-fish plate on the back.



4. Mystery revealed. Removable and turnable upper plate has offset Money Drop slot. It can easily be changed back and forth in about one minute with no tools.

30 percent of the door opening and is held in place by the first door. The money drop slot is cut into the front half of the second door.

The back half of the second door, on the money drop slot door, slides under the safe body. This door can be removed, then turned 180 degrees and replaced. When the door is positioned this way, the money drop slot is covered by the safe body. (See photograph 2.) Reverse the door and the money drop slot is exposed. (See photograph 3.)

Consequently at night, or on weekends or vacations, the money drop slot can be eliminated by the way the door with the slot is positioned. (See photograph 4.) This is a real time saver, and can be quite useful in situations where maximum security is needed.

One of the nicer innovations is the standard Security Mask Plus that these units are now equipped. The mask consists of a steel plate overlay, a removable outer dial knob, and large easy to read numbers. (See photograph 5.)

The mask cannot be easily removed from the outside of the safe. It must be drilled or Dremeled off. Because of the way the Mask is constructed, removing it accomplishes nothing of value, but is a necessary first part to remove this safety feature before opening the unit.

First, the outer knob can be removed with an Allen wrench of appropriate size. Then the upper right and lower left corner of the mask must be either drilled with a 5/16" drill or cut off using any type of cut off wheel. This allows the outside cover to be removed uncovering the number plate.

This number plate is welded to the spindle hub and cannot be removed without cutting it off with a hole saw or Dremel tool. When the plate is finally removed, the safe can be drilled under the dial. The repair requires the complete replacement of the Security Mask.

The Mask is available from Conceal-A-Safe either with or without an Anti-Auto Dialer Feature. This added feature protects against the use of the computer-controlled automatic dialer to open the safe and is accomplished by welding a steel

bracket to the Security Mask. The steel bracket covers the top of the dial's knob, preventing the hooking up of the dialer to the knob.

Conceal-A-Safe is a low cost sliding door floor safe that incorporates a unique concept. Present day safes use an expensive sliding bolt work system to secure the safe door from being forced open. Instead of sliding bolts, this safe door entirely slides under the two opposite edges of the safe body. The door becomes, in effect, one bolt, many times larger and stronger than two or more small bolts hanging from

the inside of the safe door. The combination or key lock is used to keep the door from sliding and being opened.

Another standard feature of the safe and Security Mask is the ATD or Anti-Triggering Device. This is the large hub attached to the security mask dial spindle. This protects against the burglar driving the dial's spindle into the combination lock, and thus activating the two relocker systems. (If the relockers are triggered and the dial removed, the cost of opening and repairing the safe



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5. Security Mask and Dial. Note two holes drilled in upper right and lower left corners of cover.



6. Rear view of sliding door with relock cover in place. Cover is held on by combination lock cover screws.

could be as much as the cost of a new safe.)

The two relocking systems include an internal relock trigger located in the safe lock, and an external relocking device. The back of the LaGard 3300 combination lock is shown in photograph six. The relock cover is held on by the lock cover case screws. The lock is mounted on a steel hardplate. An Allen cap screw can be seen above and to the right of the combination lock. This is one of the

two cap screws that hold on the Security Mask Plus.

Once the cover is removed, both the internal and external relockers activate. The external relocking device is spring loaded and fires into a welded plate on the frame of the steel safe door plate. This plate also blocks the movement of the sliding door when the combination lock bolt is in the locked or "Out" position. (See photograph 7.)

The relocking device, when fired is

hard to retract. Luckily, the bolt itself is threaded, and this facilitates resetting it if you have to work on the safe lock itself. This is a double-duty relock system prevalent on most safes and chests today.

The proper way to install this in-the-floor safe is in the floor. However there are many different ways to install this unit other than digging up the cement floor with all the present hazards that this may offer. First, there is an added option for installing



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7. Back cover removed releases the spring loaded relock plunger which fires into a reinforced cut out in the door edge.



8. Mini-Vault installed in a large plastic container about to be filled with cement.

this unit in a wooden floor.

The way I installed this particular mini safe was in a large plastic refuse container. First I anchored the barrel to one wall and also to the floor using cement anchors and threaded rods. These not only reinforced the installation of the outer container, but also will reinforce the poured cement. Photograph eight shows the unit prior to pouring the cement. Also used to reinforce the pour was hardware cloth with 1/4" holes.

Although this is not the recommended installation, this method worked for a large commercial car wash where cutting and digging the reinforced concrete floor was more than the customer wanted to pay for. Also, with the cover on the container, no outside person even knows that the safe exists.

These plastic and steel safes come in many sizes and configurations, with single and dual custody available. Both combination and key locking

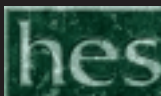
systems are available. The safes are finished in a rust preventive painted coating. Since the body is plastic, thoughts about using these safes to store hand guns is also an option. Install, Open, and Prosper!!!!

For further information please contact: Conceal-A-Safe, Build-A-Safe, 15339 Pipeline, Huntington Beach, CA 92649, (800) 248-SAFE.

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## GENERAL SECURITY

Test Article #88

# Mul-T-Lock Telescoping Into High Security

by Giles Kalvelage

**M**ul-T-Lock, though based in Israel, is a lock company which has expanded with leaps and bounds into five continents. The factory has developed locking systems for locks, doors, automobiles, and padlocks. Their mortise locks can throw bolts in up to four different directions, securing the top, bottom and both sides of a door. If that's not enough, they can manufacture a steel security door and jamb around their mortise

lock in a finish to suit from the most commercial to the most elegant of decor. Their automotive transmission lock is quite unique, and available in styles to be more or less noticeable, depending upon taste. The more discrete version relies on warning decals to reduce the possibility of attempted theft.

### The Principles

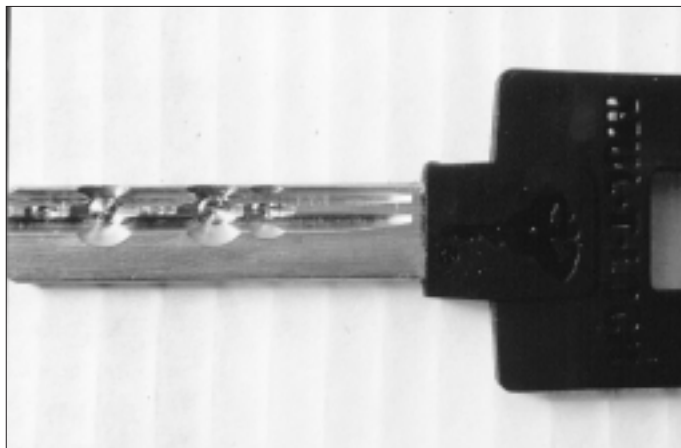
The front line security of these locks is their pin tumbler cylinder with telescoping pins - the "pin within

a pin" concept. Simply stated, while this cylinder's operation is based upon the conventional pin tumbler principle, the tumblers have been "drilled out" and an additional set of tumblers have been placed inside the "drilled out" tumblers.

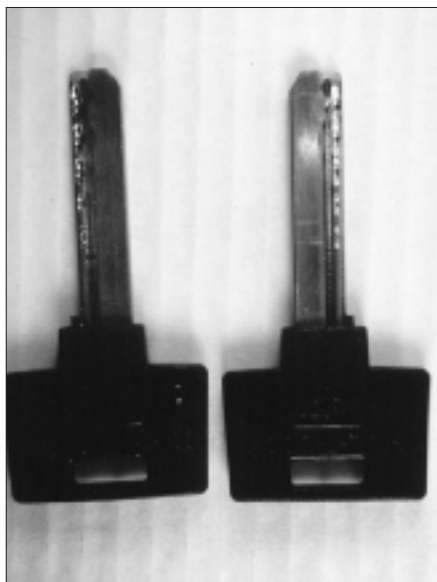
For the cylinder to turn, both sets of tumblers must meet the shear line. With this in mind, while technically this cylinder only houses four or five tumblers, conceptually it contains eight or ten. The keyway is horizontal



1. The keyway of the Mul-T-Lock cylinder is off center and horizontal.



2. The Mul-T-Lock key has dimple cuts on the side of the key. Notice the cuts within a cut.



3. The keys are handed. A left hand key (left) and a right hand key are shown.



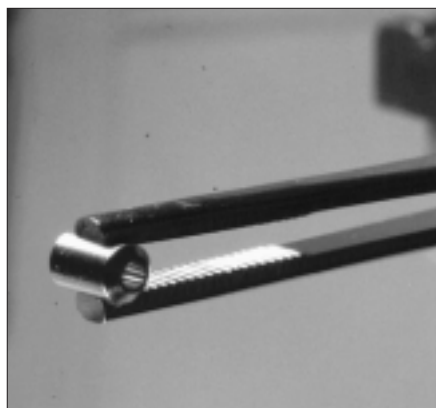
4. The specialized pins of the Mul-T-Lock system require learning new nomenclature.



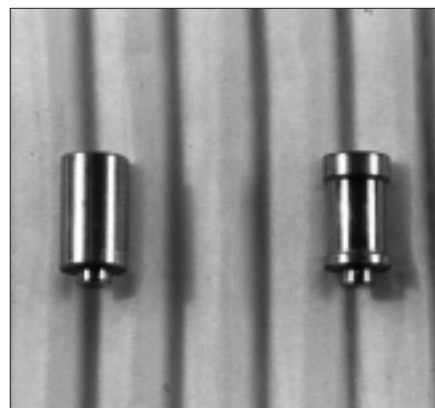
Continued from page 18



5. The internal (inner) plug pin and the external (outer) plug pin.



6. An external pin showing the drilled center for the internal pin.



7. Combined pins is either straight or mushroomed.



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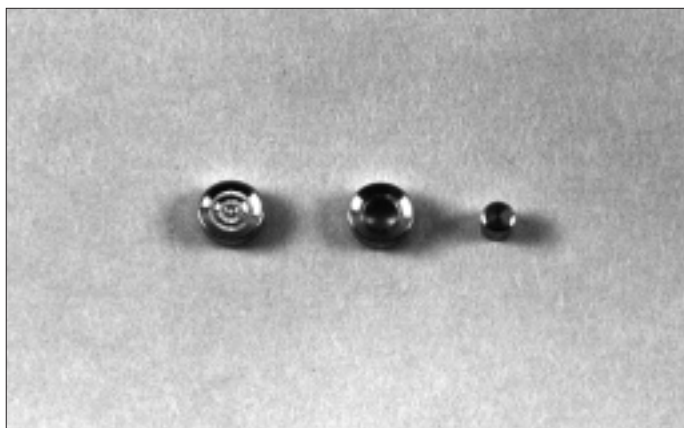
to the pin chambers, meaning the side of the key rather than the top of the blade activates the pin tumblers. (See photograph 1.) Mechanically, this reduces the amount of effective space to insert picking tools. Coupled with the pin within a pin concept, this lock cylinder is traditionally resistant to picking.

The key is side milled with "dimple" cuts. Close inspection of the key will show that each larger dimple cut has a smaller cut inside the middle of the larger cut. This special cutting requires a special key machine for originating keys. (See photograph 2.)

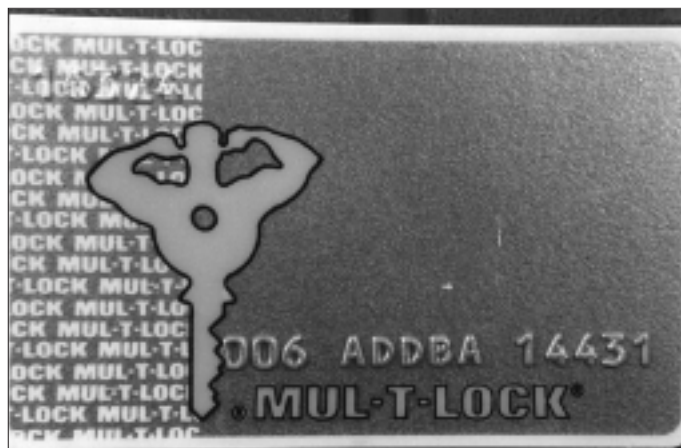
Because the cylinder plug's keyway is offset either right or left, the keys must be cut in respect to the keyway. As the key is held with the tip facing upward, the cuts on the key will be usually be either left or right of center. This will identify the key as being either left or right handed. (See photograph 3.)

On some occasions, there will be cuts both left and right of center. Those keys will operate key systems where locks of right and left hand keyways are mixed. This is known as a double face system. While most keys are designed to be convenience keys, because the lock tumblers are unidirectional, a combination might be cut into one side of the keyblank and a different combination may be cut into the opposite side of the keyblank. This key can operate two different combinations. It could be useful to key an apartment building's main entrance to a single combination, the tenant space to a different combination, but only issue one key to the tenant. Because the bow of the key has a protrusion on one side, it is easy to distinguish by sight or feel which way the key must be inserted into the lock





8. Mul-T-Lock master pins are known as disks and come in (left to right) External Solid, Concaved External, and Internal configurations.



9. The Mul-T-Lock card provides code and key information.



10. Load the combined pins into the shell making sure that the end of the inner pin projects into the plug area.

when using "dual" combinations on a single key. Of course, the locks will have to be memorized whether the protrusion will face up or down when inserting it into the lock.

### Nomenclature

With the uniqueness of these pin tumblers, it should be expected that the manufacturer designate the tumbler parts with unique names. (See photograph 4.)

What are known as bottom pins in the United States, are known as Plug Pins with Mul-T-Lock. There are two types of plug pins, outer or external plug pins and inner or internal plug pins. (See photograph 5.)

The external plug pins are 4mm (.1575") in diameter and come in four lengths. These lengths are nominated from A through D. External plug pins are "drilled" to accept the internal plug pins. (See photograph 6.)

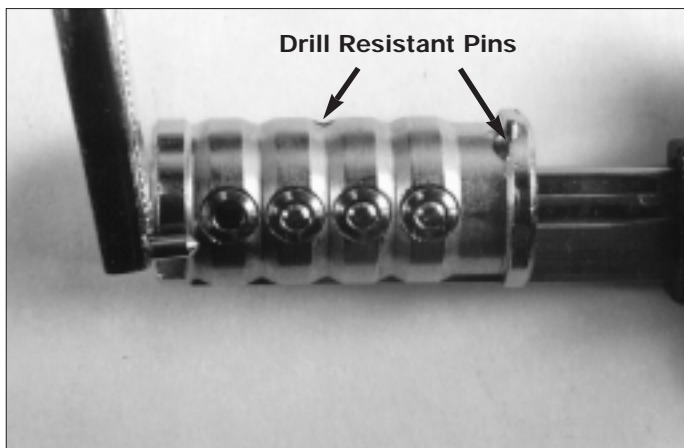
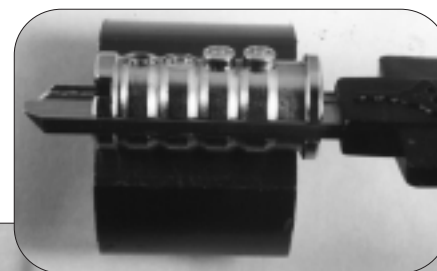
Internal plug pins come in five lengths and are nominated 1 through 5. They are 2mm (.0787") in diameter. They will fit into the top of the external plug pin, cone first.

What we refer to as top or driver pins, Mul-T-Lock calls combined pins. This pin is actually an assembly consisting of an inner pin and spring

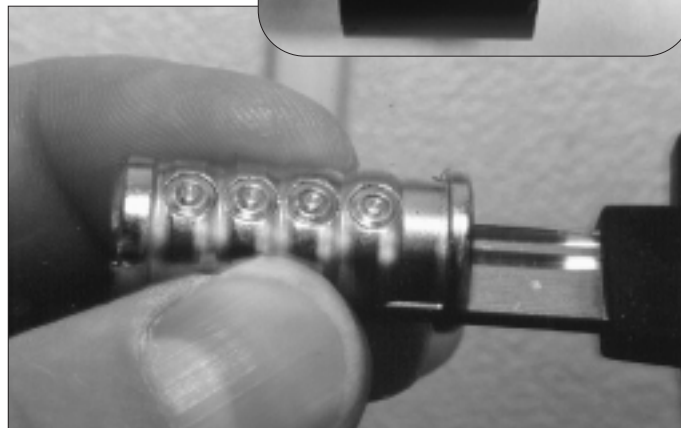
encapsulated by an external pin. The combined pin is either straight or mushroomed shape. (See photograph 7.) Because it is a complete assembly, its diameter is the same as all external pins, 4mm (.1575"). Its inner pin acts as a driver for the internal plug pins.

Master pins or wafers are to U.S. locksmiths what the Mul-T-Lock refers to as disks. There are three types of master key disks, External Solid, Concaved External, and Internal disks. (See photograph 8.)

Both external disks are 4mm (.1575") in diameter and have three lengths. The solid disks are listed from +1 through +3. Concaved disks are simply listed 1 through 3. The concaved disk has a hole in the center while the solid disk is closed.



11. Load the external and internal pins into the plug. Notice the drill resistant pins in the plug.



12. Insert the key only to the end of the plug. Without the cam attached the key can be inserted too far, giving a false reading on the tumblers.



13. Insert the plug into the cylinder shell.



14. Attach the cam and the job is done.

The internal disks are 2mm (.0787") in diameter and are available in four lengths from 1 through 4.

#### Identification

A key card is supplied with the coded key. (See photograph 9.) This card should be presented to the Mul-T-Lock locksmith dealer before additional keys are made. The card not only is useful to cut keys, but to help key lock cylinders. The card will tell the locksmith which key blank to use and what cuts to cut. Our example code is 006 ADDBA 14431. "006" represents the keyblank number,

"ADDBA" represents the external plug pin codes from bow to tip, and "14431" represents the internal plug pin codes. The code will be "decoded" as A1, D4, D4, B3, A1. (Our cylinder is drilled for only four pins. We will disregard the first "A" in the code as well as the first "1". But remember, even though the code is listed from bow to tip, the tumblers are measured from tip to bow. The key is tip gauged. This will yield an effective code or biting of D4, D4, B3, A1).

#### Cylinder Combination

Our intention is not to go into master keying in this article, but briefly, master keying can be accomplished using an IBM or compatible Mul-T-Lock master key program or listings provided by Mul-T-Lock. The total number of pin variations counting all external and internal plug pins and master disks is 43 for each chamber.

While Mul-T-Lock produces a wide variety of cylinders, from profile to padlock, we will provide our demonstration on a mortise cylinder typical to those frequently used in North American locks.

1.) Pick our key and our code. Remember, our card told us our key profile was a 006, our codes would be a A1, D4, D4, B3, A1. As we examine our plug, it is drilled only for four tumblers so we will drop the first A1, even though our key has been cut for it.

2.) Load the spring in the shell. Load a combined pin into the chamber with the spring. Be sure that the larger end of the inner pin will face toward the plug. (See photograph 10.) Repeat this step until all of the shell chambers have been filled. It's easiest to start at the middle of the plug using

a follower and work to each end.

3.) Load the external plug pins into the plug.


4.) Load the internal plug pins into the external plug pins. Note the hardened pins designed to resist drilling. (See photograph 11.)

5.) Using the cut key, make sure all internal and external pins meet the shear line. Push the key only to the end of the plug. Remember, this key is tip gauged against the cam and without the cam it is possible to push the key too far. This will effect reading the tumblers. (See photograph 12.)

6.) Slide the plug into the cylinder. Remember to insert the plug slightly turned so the combined pins will not fall into the wrong chamber if the key slips during assembly. (See photograph 13.)

7.) Attach the tailpiece to the back of the plug. Use a thread sealer or stake the screws to prevent the screws from backing out with lock use. (See photograph 14.)

The tailpiece acts as the key stop. If it loosens, the key will insert too far and will not allow the tumblers to properly align. Also note the design of the tail piece. The tailpiece is solid which prevents a bent wire from sliding through the cylinder plug and reaching the lock case to unlock the lockset. **TNL**



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## AUTOMOTIVE SECURITY

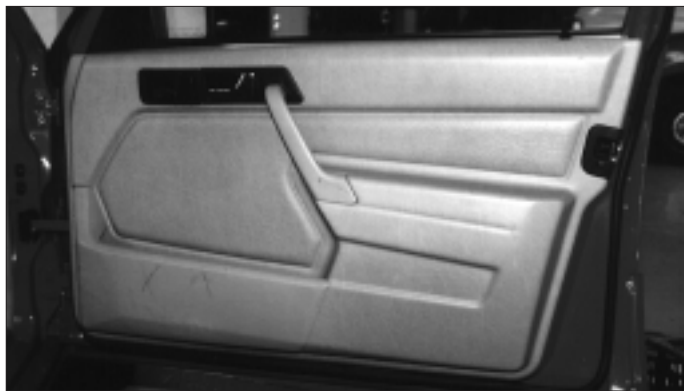
Test Article #89

# Mercedes 190E Part 2, Key Generation

by Michael Hyde

Last month we showed the ways to service the locks on the Mercedes 190E. This month we will cover making a key to the car. As you know this car uses a Two-Track High Security keyway with 13 cuts on one side and then the same cuts on the opposite side.

The way to make a key to this car is to remove the door cylinder, disassemble the cylinder and then make a key with cuts 2 through 13, and then progression the one missing cut in position one on the key. Use the following procedure to remove a door lock and generate your key.



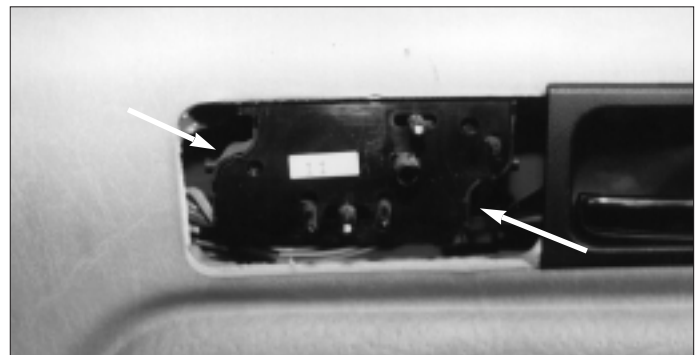
1. To remove the door lock cylinder without a working key you must remove the door panel, I suggest using the passenger side door.



4. Once this is done, slide the trim piece forward and outward to remove.



2. Remove the trim around the inside release and electric seat controls.



5. Remove the two Phillips-head screws that hold the seat control unit in place. It is necessary to remove these screws to give the inside handle release some room when removing.

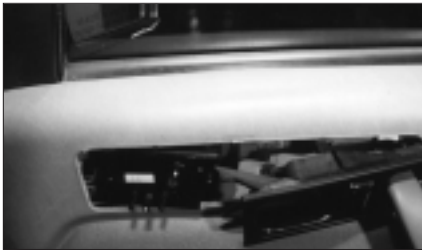


3. The three seat control buttons are removed by gently snapping them off. Below the second largest button is a small black plastic ring that must be gently removed.

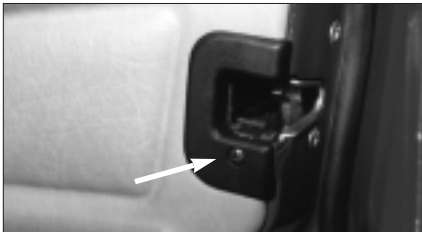


6. Remove the black plastic trim piece that goes around the arm rest/handle, it unsnaps with a little gentle pry from a small screwdriver. Behind the trim piece is a 10mm bolt that must be removed.

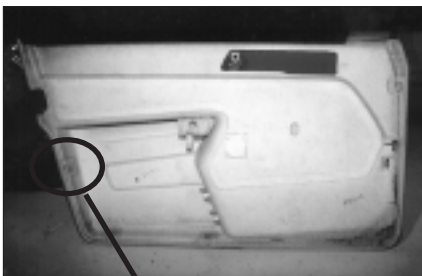
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7. Next, pull the inside handle release assembly forward to remove.



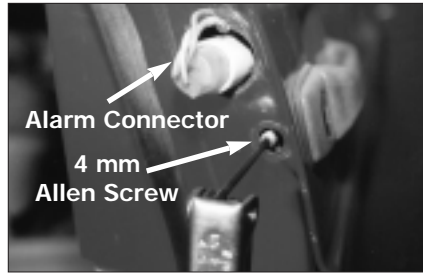
8. Remove the screw and trim piece around the latch assembly.



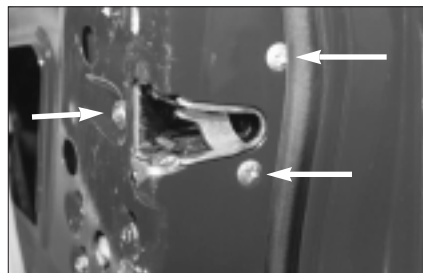
9. As with most Mercedes built before 1993, the door panel is held on by plastic hooks instead of the more common push-in type plastic clips. The hooks lock into cut-outs on the door.



10. To remove the panel you must lift upward on the panel to remove it. I have found some to be easily removed and then some it may take a minute or two of steady upward pushing pressure to free up the panel.



11. Next, remove the 4mm Allen retainer screw on the edge of the door. Disconnect the alarm connector.



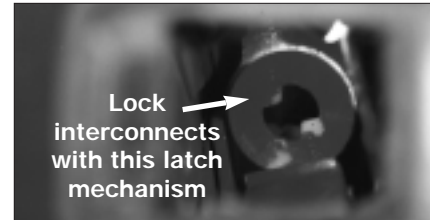
12. Next, remove the three latch screws, you will need a #3 Phillips screwdriver.



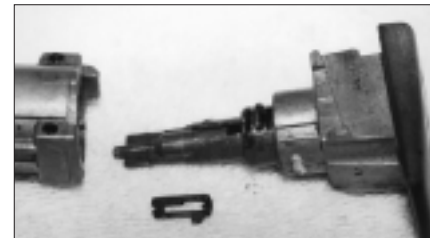
13. The long tailpiece on the end of the key cylinder will have a "winged" tip on it. The wing tip interconnects with the latch assembly, and can only be removed by rotating the key in the lock cylinder and gently pulling outward.



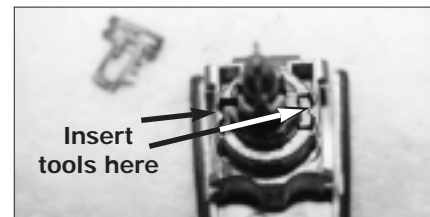
14. Since you do not have a key it will be necessary to gently pull out the key cylinder as far as it will go and then gently rotate the latch assembly in one direction while turning the cylinder in the other direction. It may work better to have the latch in the locked position or in the unlocked position



15. Be careful of the alarm connector wire. The part in the latch assembly that the key cylinder operates in is made of plastic, be careful.



16. To keep the tumblers from jumping out of the lock insert a key with all number 5 cuts on it. Remove the two tension roll pins by tapping them through the lock housing with a pin punch. Separate the front section of the housing from the rear section. Be sure to mark all pieces. In this photo a tumbler fell out because the prepped key was not inserted to hold them in place.



17. The plug must rotate in order to remove it from the shell. Use two small pieces of metal (like lock picking tension tools) to reach down in the tumbler chambers to bring the tumblers to the shear line and turn the plug. Be patient as this may take some time to get all tumblers to the shear line.



18. After you have removed the plug you can then decode the wafers to make a working key to the doors. The tumblers will be stamped with a depth number. There should only be one missing tumbler, as the door lock contained tumblers 2 through 13. Progression position 1 in the trunk to make a complete key.



## ELECTRONIC SECURITY

Test Article #90

### Switchers, Multiplexers And Other CCTV Magic

by Charles Stephenson

CCTV seems very simple when only the camera, lens, and monitor are considered; but when components such as multiplexers, switchers and quads are added to the CCTV vocabulary, many of us seek the comfort of more familiar technology. There is no reason to let this relatively new technology drive us away from this profitable niche of the security industry.

The goal of this article is to familiarize the reader with the components of the CCTV system that create the magic in a "regular" coaxial /BNC system .

#### Switchers

The basic switcher is a simple device that allows several cameras to connect to one monitor and the viewer to see each scene in sequence. The switcher will display the scenes captured by four to 32 cameras in a number of optional modes.

The manual switcher simply connects four to 32 cameras and displays the camera of choice on the monitor by allowing the viewer to manually press a switch corresponding to that camera.

The homing switcher (also referred to as a homing sequential switcher ) allows three types of switching modes. First, the automatic sequencing simply switches from camera to camera in a logical pattern, pausing for a brief time to dwell on each scene. The dwell time may range from 1 to 60 seconds or more and is optional to the viewer with about 5 seconds being a very popular range. Once the range of cameras has been viewed the sequence begins again. This activity repeats itself over and over unless one or more cameras have been bypassed by a switch, or unless the homing mode is chosen, in which case the viewer can concentrate on one particular scene.

The bridging sequential switcher allows two monitors to be utilized. One monitor may operate in the automatic sequencing mode while the other monitor is in the homing mode. This setup allows the viewer to continue to view all camera locations in sequence while either closely inspecting the activity of one chosen scene and/or recording that scene for any length of time.

Other features allow time/date generation and on-screen camera titles to fully reference the activity being recorded or viewed. The most recent models of switchers are offering freeze frame and 2X enlargement options. During the playback mode the viewer can choose to display as many as 16 cameras on one screen simultaneously. Both black & white or color signals may be transmitted through the same switcher. The alarming features on some switchers allow the cameras to operate in conjunction with motion detectors or other types of alarms so as to signal through the switcher to activate the VCR and record the activity at that location.

The advantages to using switchers are the lower cost and fewer monitors to view. The disadvantages are the dependence on a limited number of monitors and the loss of observation time while viewing only one scene at a time.

#### Quads

Quads have become very popular, and rightfully so. The quad combiner or compressor allows up to four camera signals to be displayed on one screen simultaneously. The quad combiner is compatible with alarms and will switch from the four image mode to a full screen display for closer inspection or more detailed recording at the viewer's discretion. The quad accepts signals from cameras, VCRs, switchers and other devices and combines them to create the display.

Many of the monitors on the market today feature built-in quad and/or homing sequential switchers. These monitors allow up to four cameras to be connected to the system at a time and are becoming very popular with small business owners and even home owners.

The splitter/combiner is another piece of CCTV magic which allows the scenes captured by two cameras to be displayed simultaneously in a split screen or picture in a picture format. The screen may be split in a vertical or horizontal display and reverted back to full screen display at will. The picture in a picture split can be adjusted for picture size with the inserted picture occupying 1/4 of the screen being one example.

#### Multiplexers

The king of the magical devices in the CCTV arena is the multiplexer. To understand how the multiplexer performs its magic, we need to review a lesson learned in the last article, "Unwinding the Mystery of Recording." In that article we learned that the CCTV camera captures many "still images" and transmits them rapidly so that when they are reproduced onto the monitor screen, they appear to have a fluid motion. This reproduction is at such a high rate of speed that the human eye cannot detect the change from "still" to "still".

The multiplexer captures the images (fields) from each of several cameras (up to 16) in rapid succession and assigns each an identity based on the source. These images are in turn transmitted to a monitor, VCR, video printer or other device and recreated to form the picture. This process is known as encoding and decoding. The multiplexer can recreate these images one at a time or up to sixteen at a time, and do so in an orderly fashion by assigning each camera a portion of the viewing screen or a full screen as desired by the viewer.

The multiplexer can also arrange these signals in an orderly fashion onto recording tape via the VCR and then retrieve them and create an image on the monitor screen in whatever format is desired. An example of this is retrieving the signals from the recording tape and choosing to display any one camera scene and/or switching from camera to camera during playback. The multiplexer can also be directed to display more than one scene during the playback mode. Just as you have choices for viewing during normal operation, you also have choices during the playback of recorded information. The multiplexer performs much in the same way that your computer stores and retrieves data depending on the commands you give it.

The multiplexer is the product of a natural progression of devices starting with the switcher and growing through the quad compressor. Tomorrow promises to bring more devices to make the CCTV field more effective and easier to operate.


#### **Video Printers**

The final device we will talk about in this article is the video printer. This device allows hard copies of any image to be created for a permanent record that might be used to identify objects and/or individuals. The recreated photographs taken during the commission of a crime which we see on the nightly news are products of the video printer. The taped record of activity may be played back by others (police or video services) and the hard copies produced by the printer within their system.

The implementation of these common devices will allow you to design a more useful and effective security system for your clients. I hope that some of the mystery of CCTV has been eroded and the magic has appealed to you and your confidence elevated.

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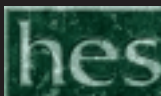
*The author would like to thank and acknowledge the continued assistance of Sean Horenstein in preparation of this series of articles.*

*Further information about CCTV is available from Lockmasters, Inc. at (606) 885-6041. *

# NATIONAL

## AUTO LOCK SERVICE, INC.

**National Auto Lock Service, Inc. offers a wide range of equipment and services for the Automotive Locksmith. From tools and hard to find key blanks to transponder programming, we can take the mystery out of car service. We accept credit card orders, and can ship COD. Contact us for the latest in automotive technology.**



# BEGINNER'S CORNER

## *The American Series 6000 Padlock*

**D**on't take anything for granted. That was the lesson I learned this week.

A maintenance building with a small weak hasp had been burglarized, and I was called to repair it.

The shackle on the hasp had been cut, tools and a generator had been taken. The building was secured by replacing



by Eugene Gentry



3. Use the American Lock PK-1 keying kit to rekey this lock.



5. Remove the roll pin that holds the shaft to the lock cylinder.



6. The lock is easily pinned through the holes on the bottom of the lock.



1. The American Series 2000 lock is shackleless.

the burgled hardware with a hardened monster hasp, that included a thick, hardened shackle and through bolts. The hasp was secured with the Abus Discus padlock.

I assured members of the complex association that no one could get in the building as they couldn't cut the lock or hasp. Guess what happened? Someone came along with a monster bolt cutter and cut the shackle of the hasp, in two places, to get the lock off.

The hasp was still intact. Luckily, nothing was stolen. Someone must have interrupted the robbers as the lock was left laying on the ground and the doors were still closed.

Now, the problem was to find some type of shackle guard to prevent this from happening again. Then while looking over some of the American Lock products, I saw the American Series 2000 rekeyable padlock. It looked perfect for this job.

This padlock completely hides the shackle of the hasp. (See photograph 1.) There is a slot in the back that the hasp shackle enters. The lock's hardened steel pin or locking bolt goes through the hole in the hasp shackle locking it in place. (See photograph 2.) When the lock is on the door every thing is concealed, so all you see is the lock its self.

This padlock is described as shackleless. The body width is 2-7/8" in diameter, 1-1/2" in thickness and the locking bolt is 13/32" diameter. Its solid body is chrome plated with

*Continued on page 124*



2. This lock completely covers and protects the hasp from being cut.



4. Removing the lock cylinder and lock shaft from the lock body.

READER'S CHOICE WINNERS



# THE FIRST ANNUAL READER'S CHOICE AWARD WINNERS

When you get a compliment from a Locksmith on a product, you know you've really done something right! That's because Locksmiths are out in the field everyday, and when a product doesn't perform as expected, the Locksmith is the one who must spend time to make it right.

That's why *The National Locksmith's* Reader's Choice (Top 100) Awards are so important. In our January issue, we asked you to vote for your favorite Locksmith Industry products. In this section, we profile those companies whose products you selected for their excellence in design, quality and performance.

We decided to permit locksmiths to select up to 100 companies for this honor. However, only 87 received

enough votes to qualify, making this an exclusive honor indeed. For next year's Reader's Choice Awards, we will be narrowing the number of possible winners, making this an even more exclusive award.

Worthy of special mention are five products included in this section. The following products received an extraordinary number of votes: Gardall Safe Corp.'s safes, HPC Inc.'s 1200CM Code Machine, Medeco Security Locks' Biaxial cylinder, Simplex Access Controls' Unican 1000 pushbutton lock, and Von Duprin Inc.'s Series 99 Exit Device.

You will notice that these five products each have a special "Top 5" Logo next to them. This shows the special honor our readers conferred upon these winners.



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**READER'S CHOICE WINNERS**



## ACCESS CONTROL

### CORBY SYSTEM 2

System 2 supports up to 250 users which can be added or deleted in seconds. The programmable relays can control almost any device including electric door locks, arm or disarm alarm systems, shunt alarm devices, or operate garage doors. For applications requiring time restriction of users and/or automatic relay operation, 16 time schedules with over 1,000 time zones are supported.

Circle Number 435



### LOCKNETICS TOUCHENTRY SYSTEM

Locknetics' TouchEntry Access Control System is a great alternative to card systems, providing access with a touch of a 64 bit microchip data key. Each controller can accept up to 500 programmable individual codes and a 500 event audit trail. Programming and interrogation may be accomplished with any DOS based portable computer.

Circle Number 434



### SECURITRON'S DK-25

Securitron weather proof/tamper proof DK-25 the narrow style keypad is suitable for indoor/outdoor use with all switch electronics completely hermetically sealed and potted in a cast stainless steel housing. It is available with separate CPU controller and includes adjustable DPDT 5 amp lock release, non-volatile code memory.

Circle Number 433



### VON DUPRIN DC2000 DOOR CONTROL DESK CONSOLES

Von Duprin Series DC2000 desk consoles provide door control and monitoring for up to eight locations. Two models are available; DC2004 for up to four and DC2008 for up to eight locations. Designed to meet a wide range of security requirements for monitoring and controlling electric strikes and electric locks of all types.

Circle Number 432



## AUTO LOCKS

### ALL-LOCK

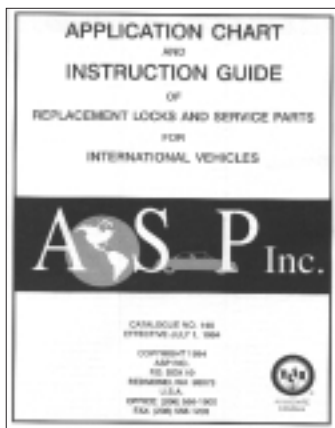
All-Lock Co. is convinced that one of the top product lines we have developed for the Locksmith over the past few years is the Ford 10-Cut aftermarket replacement ignitions, door locks, and trunk locks. Uncoded locks are not only user friendly but very economical for the professional locksmith.

Circle Number 431



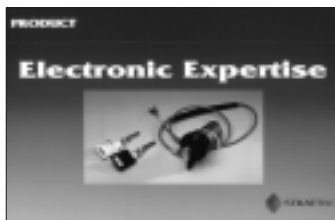


READER'S CHOICE WINNERS



### AUTO SECURITY PRODUCTS

If you like the 1994 ASP Lock Application Chart, you'll love the 1995 edition. The 1995 Chart is filled with dozens of new items for Toyota, Honda, Mazda, Lexus, and others. ASP continues to work to bring you the most complete range of import car lock service parts available. *Circle Number 430*



### STRATTEC'S PASSKEY

Cadillac helps maintain an elite product by using the PASSKEY system ignition lock (pictured here) produced by STRATTEC. The PASSKEY combines mechanical and electronic features to raise security to a new level. Strattec, the former Briggs & Stratton Technologies, helped design the PASSKEY system, introduced in 1986. The PASSKEY now is used on 26 different GM models and is certain to become standard equipment on many more. *Circle Number 429*

## DEADBOLTS & KNOBLOCKS



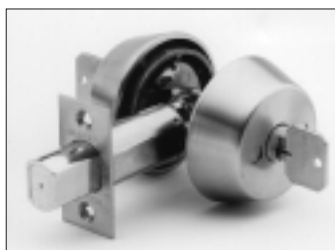
### ARROW KNOB LOCKS

Constantly maintaining the highest quality, Arrow offers knob locks with a variety of features, functions and finishes. The Grade 2 "M" Series, is ideal for residential and light commercial applications, while the Grade 1 "H" Series is engineered for more demanding commercial use. All knob locks are available with conventional type cylinders as well as the figure eight interchangeable core. *Circle Number 428*



### KWIKSET'S TITAN DEADBOLT

Titan, ANSI Grade 2 deadbolts are the popular new choice for high security hardware. Security features such as 6-pin cylinder, heavy duty deadbolt with free turning hardened steel insert and heavy steel strike with 3" mounting screws helped to make Titan the third largest selling line of residential hardware 18 months after its introduction. Titan deadbolts also feature the patented front removable cylinder for fast and easy rekeying without removing the lockset from the door. *Circle Number 423*



### MARKS DEFENDER 130 SERIES DEADBOLTS

Defender deadbolts are designed for Grade 1 security in 2-3/8" and 2-3/4" backsets for conventional, hi-security and Best size IC core cylinders. Exterior and interior assemblies fit 2-1/8" bore and fasten with two hardened 1/4" bolts which thru-bolt through the latch. Specific tailpiece orientation and latch positioning is not required. Made and patented in the USA. *Circle Number 427*

**READER'S CHOICE WINNERS**

**MASTER LOCK DEADBOLTS**

Master Lock deadbolts provide Grade 2 security - the maximum for residential applications. They feature massive inner chassis for maximum protection against prying, exclusive "hands-free" mounting, which allows quick installation, 1" long bolt with hardened steel inserts to resist cutting, single- or double-cylinder styles, and a full lifetime mechanical warranty.

*Circle Number 426*



**MEDECO MAXUM®**

The Medeco Maxum® deadbolt offers superior protection against forced entry and provides a variety of options to meet all of your customers' needs. Maxum provides maximum protection through the use of hardened steel inserts, solid brass collars, a redesigned bolt, a sidebar mechanism and elevating and rotating pins. Medeco Biaxial® cylinders and keys are protected by utility patents that make it virtually impossible to duplicate keys without proper authorization.

*Circle Number 425*



**SCHLAGE KNOBSETS**

Schlage Lock Company's F-Series residential line was designed to fill the need for affordable quality hardware. The F-Series includes key-in-the-knob entry locks with matching interior locksets. This economical line of door hardware offers affordable locks with superior appearance and operation.

*Circle Number 424*



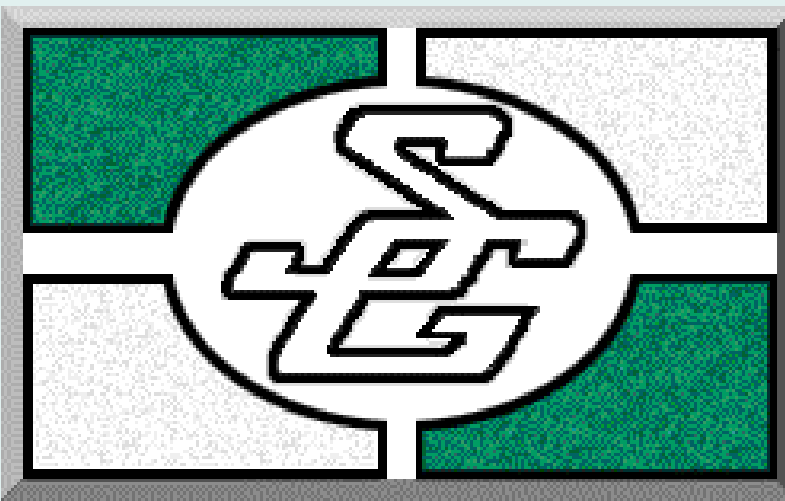
**WEISER FINISH NEVER TARNISHES**

Weiser Lock's Weiser Brilliance, is a lifetime anti-tarnish finish guaranteed not to corrode, tarnish or discolor for a lifetime. Weiser Brilliance is available on all NA keyed entry handlesets, knobsets, deadbolts and leversets in bright brass and chrome finishes. Weiser Brilliance is a patented, bonded metal-to-metal finish that solves the problem of tarnishing brass hardware when exposed to the elements.

*Circle Number 422*



*Continued on page 39*



**Make Sargent & Greenleaf's Comptronic locks your choice for electronic safe locking solutions.**

[Click here for more information](#)

Continued from page 35



## DOOR & LOCK REINFORCERS

### DON-JO MFG. WRAP AROUNDS

We have the most complete line of wrap around plates for repairing, remodeling or reinforcing the door. Our wrap arounds save costly door replacement, help resist kick in attacks and help keep wood doors from splitting. They are available in five architectural finishes and either polybagged or display packed.

Circle Number 421



### M.A.G. INSTALL-A-LOCK

Install-A-Lock by M.A.G. are pre-formed to accept all key-in-knob locksets. They are designed to cover split, scratched, and misdrilled wood and metal doors. These door reinforcers more than double the door's strength and help prevent kick-in attacks by mounting the lockset and latch into one solid metal unit.

Circle Number 420



READER'S CHOICE WINNERS



## DOOR CLOSERS

### DORMA'S ED 800 POWER OPERATOR

DORMA Door Controls Inc.'s ED 800, is a surface closer-based, low-energy power operator that precisely senses the door environment and responds appropriately. The ED 800 is both ADA and NFPA 80 compliant. It fulfills the universal need for constant, reliable control of normally closed doors, and the occasional need to power them open for the physically challenged.

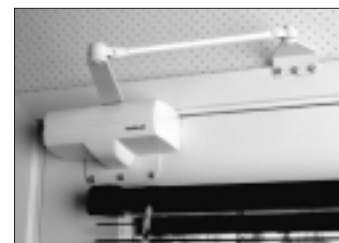
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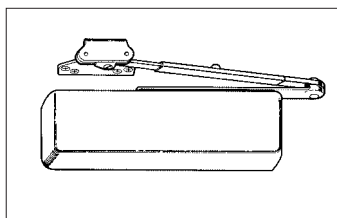


### KWIKSET DOOR CLOSER

Kwikset's Door Closer features steel construction, a hold open function and a variable speed control valve that allows adjustment of closing speed with a screw driver. It's compact size of 5-3/4" long by 2-5/8" deep by 1-7/8" high makes this unit extremely versatile. The Kwikset Door Closer can be installed on wood or aluminum doors up to 35-7/8" wide by 82-5/8" high.

Circle Number 418





**LCN 4041**

The LCN 4041 has redefined door control. There is no better combination of lasting quality, performance, aesthetics, and value. This closer features a heavy-duty cast-iron cylinder, adjustable spring power from 1 to 6 to meet ADA opening force requirements, universal mounting options, a durable powder-coated finish and a 10 year warranty. *Circle Number 417*



**NORTON 1601/1601BF DOOR CONTROLS**

Norton's 1601/1601BF door closers offer the best door control available for commercial or industrial aluminum, hollow metal, or wood doors. The 1601/1601BF Series combine rugged durability, optimum control of swinging doors and complete range of spring power adjustment. Hydraulic control and spring power adjustments are easily made right at the door. *Circle Number 416*



**RIXSON HEAVY DUTY FLOOR CLOSER**

Rixson's 27 Series 3/4" Offset Hung Floor Closer offers superb door control for exterior and interior doors weighing up to 450 pounds. Floor Closers provide the best mechanical means of controlling a door. They are designed to work with the laws of physics to provide long lasting performance and reliability. Designed for full concealment, floor closers maintain the aesthetic design of the opening, and offers unlimited design flexibility. *Circle Number 415*



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**No middle man!!**

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## ELECTRIC STRIKES

### ADAMS RITE 7000 SERIES ELECTRIC STRIKE

Featuring a very compact diecast case and stainless bolt jaw that can withstand up to 2000 lb. force, 7000 series strikes offer top level performance at mid-level prices. Options include various size and shape faceplates, jaws to fit narrow, cylindrical or mortise latches, and the most popular AC or DC voltages.

Circle Number 414



### FOLGER ADAM SERIES 600

Folger Adam's Series 600 electric strikes provide remote electrical control of a swinging door. They fit ANSI A115.1 prep with modification to the face of the frame and are constructed to fit narrow 1-3/4" jambs of either hollow metal or aluminum tube, and offer horizontal adjustment to compensate for door position. Fail-safe or non-fail-safe models may be specified, as well as optional indication switches to monitor strike status and lock bolts.

Circle Number 413



### H.E.S. 1003 SMART STRIKE™

The H.E.S. 1003 SMART-STRIKE™ is the most versatile electric strike system available today. The 1003 series incorporates 23 interchangeable models with the new SMART-Pac™ in-line voltage controller and a variety of plug-in components to meet all of your security needs. The 1003 series is backed by an unprecedented 5-year warranty.

Circle Number 412



### ROFU SERIES STRIKES

Rofu series 1430/3430 and 1440/3440 electric strikes make it possible to complete metal frame installation without having to cut a good portion of the frame away. The fail secure model 1430 (fail safe is model 3430) is specifically designed to work with Sargent, Schlage and Yale mortise locks. The fail secure model 1440 (fail safe is 3440) works with all other models mortise locks.

Circle Number 411



READER'S CHOICE WINNERS



### VON DUPRIN 6000 ELECTRIC STRIKE

Von Duprin Series 6000 Electric Strike feature all stainless steel construction, are non handed and available in 12V or 24V, DC or AC. Fail secure is standard and fail safe is available. Models are available in 21 styles for hollow metal, wood or aluminum, single and pairs of doors.

Circle Number 410

## ELECTROMAGNETIC LOCKS



### DYNALOCK #2013 SERIES

DynaLock Corp's #2013 Series electromagnetic lock for installation on outside gates. The #2013 measures only 1-1/2" x 2-1/2" x 9-1/4", exerts 1200 lbs. holding force, is available in 12 or 24 volts and includes a universal conduit fitting to simplify wiring and to discourage tampering. The #2013 is corrosion resistant and may be ordered with an optional "Z" bracket or lock status indicator.

Circle Number 409



### LOCKNETICS 390G MAGNETIC LOCK

Locknetics Security Engineering high security 390G Series Gate Lock for exterior applications has a special zinc dichromate finish on the magnet face and armature to withstand the rigors of extreme exterior environments. Each 390G includes a conduit fitting and 2' of wire to facilitate outdoor wiring connections. A field-selectable, dual voltage coil is provided. An option to monitor lock status is also available.

Circle Number 408



### DELAYED EGRESS LOCK FROM ROFU

The Model 8011-003 Delayed Egress Magnetic Locking Device by Rofu International is self-contained with all electronics built into the magnet's housing. Installation of the lock is similar to Rofu's other locks and no changes are required to existing door hardware. The lock is UL listed conforms to the NFPA 101 Life Safety Code and is in patent pending status. All functions are micro-processor controlled. Custom programming for special applications is available.

Circle Number 407

**SECURITRON'S MODEL 62**

Securitron, the World Leader in Electromagnetic Locking Technology®, brings you electromagnetic locks to fit any application or need. The Magnalock® Model 62 provides 1200 lbs. of holding force housed in a stainless steel case. The Model 62 features low energy consumption and is backed by a 5-year warranty and toll-free factory support.  
*Circle Number 406*



**READER'S CHOICE WINNERS**



**EXIT/PANIC DEVICES**

**CORBIN RUSSWIN'S ED8000**

Corbin Russwin's ED8000 Series is an economically priced pushbar exit device. Two types of panic listed devices are available, including Rim (ED8200) and Vertical Rod (ED8400). In addition, both are available for use with Class A and lesser fire doors. All Corbin Russwin ED8000 Series Low Profile Devices meet ANSI/BHMA A156.3 Grade 1 requirements and are listed by UL for safety as Panic Hardware.  
*Circle Number 405*



**LOCKMASTERS  
SECURITY  
MANAGEMENT**

TM



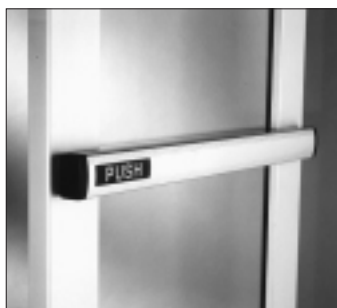
**Providing quality  
tools, parts, and  
service for  
the security  
professional.**





### DETEX ECL-8010W

Detex Corporation's ECL-8010W Wetlock™ is a water-resistant relatching exit control lock. Designed specifically to operate in adverse weather conditions, the battery-powered ECL-8010W is the perfect emergency exit control device for use on exposed exit doors and gates at garden centers, home improvement centers, and the like. *Circle Number 404*



### DOR-O-MATIC'S 1490EL

Dor-O-Matic's model 1490EL electrified exit device offers exceptional security and electronic convenience blended with guaranteed safe egress under any condition. The 1490EL provides 2-point locking, top and bottom, which can be electronically disengaged by a signal from a switch, card reader, or similar device. *Circle Number 403*



### NT MONARCH'S CONCEALED VERTICAL ROD DEVICE

NT Monarch Hardware concealed vertical rods can be adjusted on the door in just seconds using a flathead screwdriver. The device has two accessible adjustment pins which can be turned easily. The door never has to be taken down because all adjustments can be made while the door is in place. *Circle Number 402*



### VON DUPRIN 99 DOOR EXIT HARDWARE

Von Duprin's Series 99 continues to be the most used exit device on the market. Available with a full range of features and options, both electrical and mechanical, installation is easy and field sizing simple. Popular electrical options include the electric latch retraction, self-contained delayed exit control and operation monitoring. *Circle Number 401*

## HIGH SECURITY CYLINDERS



### ABLOY DISKLOCK PRO

Using a rotating disc principle Abloy's DISKLOCK Pro meets U.L. 437 requirements to provide protection against physical attack, while patented keyblanks and a card registration program guard against unauthorized key duplication. DISKLOCK Pro maintains smooth and reliable operation even in harsh environmental conditions. *Circle Number 400*

**ASSA TWIN/6000 CYLINDERS**

ASSA manufactures, U.L. listed, high security retrofit cylinders, deadbolts and padlocks. Patented, geographically exclusive keyways are available to locksmiths, distributors end-users on a regional or national basis. Reversible sidebar feature allows for instant rekeying without touching the pin stack. Master key systems are computer generated, with capabilities up to 170,000 changes.

*Circle Number 399*



**KABA PEAKS**

KABA PEAKS® interchangeable cores and retrofit cylinders are the cost-effective solution to unauthorized key duplication. When key control is the real problem, why pay more for U.L. 437 features you don't need? Strong, uncontested utility patents protect PEAKS key blanks until the year 2008. PEAKS® is made in Southington, CT, by KABA High Security Locks.

*Circle Number 398*



**MEDECO BIAXIAL**

Medeco's patented Biaxial® cylinder operates on a double-locking principle with over 20 million lock and key combinations and extensive masterkey capability. The U.L. Listed lock cylinder is operated by a key with angled cuts that elevate and rotate the pins. Medeco's Biaxial system makes it virtually impossible to copy keys without proper authorization. Medeco cylinders are solid brass, virtually pick-proof and feature solid steel drill resistant inserts.

*Circle Number 397*



*Continued on page 51*

**READER'S CHOICE WINNERS**



**HPC has it all:  
Key Machines, Software, Books, Car  
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and Key Cabinets**

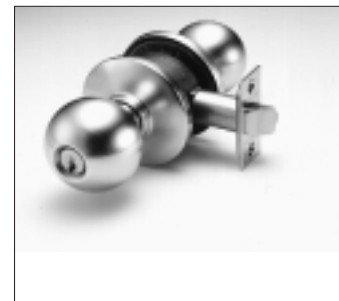
[Click here for more information](#)

Continued from page 45

SCHLAGE'S PRIMUS

Schlage's high-security Primus systems consist of dual-locking cylinders and specially milled keys. Primus keys, which only Schlage is patented to produce, have top cuts -- opening standard locks -- and side cuts (Side Bit Milling) to open Primus cylinder locks. Primus offers affordable, versatile key control and cutting-edge high security.

Circle Number 396



READER'S CHOICE WINNERS



KEYBLANKS

ESP

ESP's Locksmith Line keyblanks consist of precision crafted nickel-silver Schlage and Best blanks, a plain-coin grouping of popular brass cylinder keys, the nickel-plated automotive and cylinder keys and the brass group. ESP supplies finished blanks to many well-known lock manufacturers.

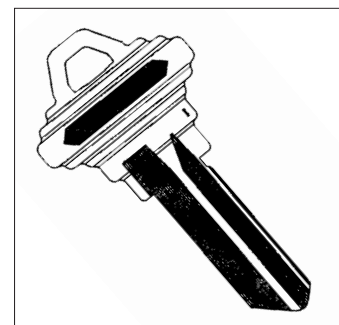
Circle Number 395



ILCO LOOK ALIKE®

The Look Alike line of key blanks from Ilco Unican feature precision engineered accuracy in millings, backgrounding and material thickness. This strict adherence to manufacturer's specifications has gained a greater customer acceptance of Look Alike key blanks. Many leading manufacturers rely on Ilco Unican for their original keys.

Circle Number 394



JET

Jet Hardware's 250 pack program offers 22 of the most popular key blanks. Unique is that unlike others, Jet packages the same key blanks available in either 50 or 250 per box. The zipper type compact box is labeled with the stock number, a picture and profile of the enclosed keys. Also available is a wire rack neatly holds six boxes. It may be used free standing or hung for easy access preventing the boxes from toppling over.

Circle Number 393





SILCA

Quality and accuracy best describe Silca key blanks. From the devotion to the important details of coining and milling to the careful attention to original specifications, the blanks speak for themselves. Foreign vehicle blanks are multi-referenced with other manufacturers' numbers for ease of identification. New catalog 405 is available from Silca distributors.

Circle Number 392



STAR KEY INDUSTRIES

For 50 years, Star keys have stood for quality and value. With new ownership, Star Key Industries has redefined the key blank, with crisp, clean and bright coining; the purest brass and nickel-silver substrates; tightened engineering tolerances; and exciting new key offerings, including new plastic heads.

Circle Number 391

KEY MACHINES



A-1'S PAK-A-PUNCH™

A-1's PAK-A-PUNCH™ Model 3 is specifically designed to suit the broad needs of Locksmiths. Because the Punch and Die are interchangeable, this hand-held, manual key punch is versatile enough to handle both automotive and commercial (Schlage/Primus) applications. The #PAK-3 can be equipped to handle different angles of cut so that the Locksmith can punch numerous applications without purchasing several machines.

Circle Number 390



BORKEY COMPACT PRO

Requiring less than one square foot of bench space, the Borkey Compact Pro guarantees precision key cutting at an affordable price. It features the updated cutter and the same jaws as the Rexa. Worklight and wire brush are included. Borkey machines are distributed in the United States by DiMark International.

Circle Number 389



CURTIS 15 CODE CUTTER

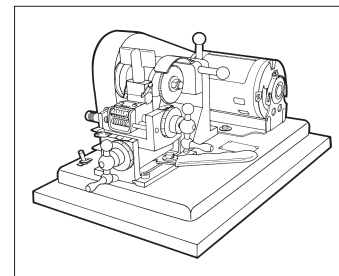
The Curtis No. 15 Code Cutter (Clipper) is the industry's preferred system for hand-held key cutting. It cuts automotive keys by code, fast and easy and allows the user to set all depths at once, even double-sided keys. No other cutter cuts more makes and models than Curtis' No. 15.

Circle Number 388

**FRAMON #2 CODE MACHINE**

The Framon #2 Code Machine is known throughout the industry as the most accurate code machine available. Included with the #2 is the 1995 Depth & Space Manual, a set of precision dial calipers, four cutters including Medeco & Emhart, a demonstration video, and five spacing blocks.

*Circle Number 387*

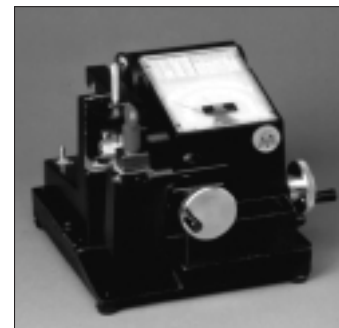


**TOP 5**

**HPC's 1200CM**

HPC's 1200CM Code Milling Key Machine has set the standard by which all others are judged. Its revolutionary code card system makes it the most versatile and accurate code machine on the market. The code cards have depth and space indicators, plus all the pertinent information such as cutters, jaws, code series, blanks and any special information you may need. HPC's 1200CM is easy to use, making it perfect for either a beginning locksmith or a seasoned pro.

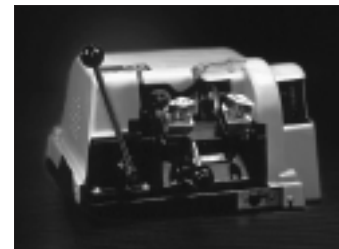
*Circle Number 386*



**ILCO O24A DUPLICATOR**

The O24A is a superbly crafted machine designed for fast, accurate key duplicating. Featuring a single angle cutter and guide, the O24A duplicates GM and Titan keys without the need for additional filing. Lever operated, the O24A duplicates keys with ease and its 4-way "super jaw 2" vise jaws securely grip both commercial and automotive keys without the use of adaptors.

*Circle Number 385*

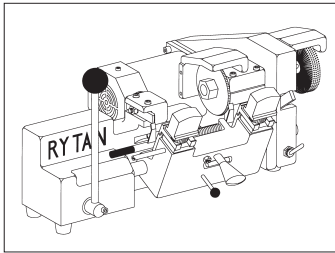


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MANUFACTURING, INC.

**Every Installation  
Is a Self-Portrait  
Of the Person Who Did It.  
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**RYTAN RY100 DUPLICATOR**

The Rytan Model RY100 heavy duty key duplicating machine is designed for the most demanding shop or service vehicle use. Comes with Full Function key gauges, Quick Change key vises, Cutter Shaft Lock, high speed "stick shift" action, heavy duty all ball bearing motor, and dual ball bearing cutter shaft.

Circle Number 384



**SILCA BRAVO**

This highest rated Silca key machine has machined four way jaws, a heavy duty high speed cutter, chip tray, brush, micrometer tracer point adjustment and many other features too numerous to mention. It is designed to be a trouble free and accurate helpmate for years.

Circle Number 383

**PADLOCKS**



**ABLOY PL SERIES**

Abloy Security, Inc. PL-Series of High Security Environmental Padlocks are backed by a "Lifetime Functional Warranty." If an Abloy PL-Series Padlock malfunctions due to workmanship, wear and tear, or environmental conditions, Abloy will repair it or replace it at no charge. The warranty applies to the entire range of padlocks on the environmentally proven CLASSIC and PROFILE Keyways.

Circle Number 382



**ABUS DISKUS 24/60**

Abus Diskus 24/60 padlock features a stainless steel, minimally-exposed shackle, a stainless steel inner and outer lock body, laser-welded to a 70 percent depth at the seams. It contains an anti-pick mushroom 4-pin cylinder and is available in keyed different, keyed alike and master keyed versions.

Circle Number 381

**AMERICAN LOCK® SHROUDED MODEL 748**

American Lock company's Model 748 has a U-shaped shackle radius to provide prying protection. The hardened boron alloy steel shackle has three times the tensile strength of its predecessor; replaceable set screw makes it easy to change shackle. Model 748 has improved cover plate, a hardened steel retainer, and is available with optional Supercentric™ factory-controlled keyways. 6-pin cylinder makes it easy to rekey and service. *Circle Number 380*



**CCL SESAMEE**

The Sesamee line of combination padlocks by CCL Security Products can be owner set and reset to any of 10,000 possible combinations. Sesamee Premium locks are made of solid brass with a chrome plated, hardened steel shackle. Sesamee Marine locks have non-corrosive, solid brass bodies and shackles and are also available with chrome plating. The Sesamee Classic features a pressure cast body with a chrome plated, hardened steel shackle. *Circle Number 379*



**MASTER LOCK PRO SERIES™ LINE**

Master Lock Pro Series™ line of rekeyable, commercial padlocks with convenient cylinder and keying options. Pro Series are compatible with Best and Best-compatible interchangeable cores, Medeco high-security cylinders, and numerous commercial door hardware cylinders. The cylinder options allow Pro Series to be use with many existing security systems *Circle Number 378*

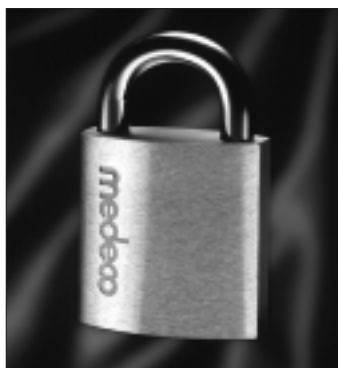


**READER'S CHOICE WINNERS**



**ASP Covers the World of Auto Locks**

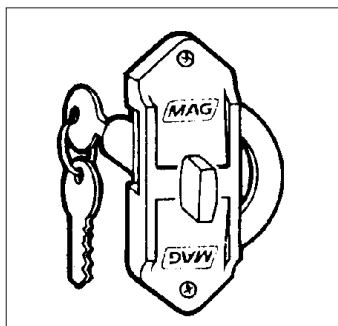
[Click here for more information](#)



### MEDECO PADLOCK LINE

Medeco's padlock line contains the U.L. Listed high security cylinders and includes solid brass padlock cases with hardened stainless steel shackles and a new line of steel padlocks with thermoplastic body cover and boron alloy steel shackles called the System Series. The brass padlocks features an interchangeable core/removable cylinder in key retaining and non-key retaining functions. The System Series padlocks can be master keyed with most existing door cylinders and include weather resistant and shrouded shackle models. *Circle Number 377*

## PATIO DOOR LOCKS



### M.A.G. 8300 PATIO DOOR LOCK

The 8300 Patio Door Lock by M.A.G. fits 7/8" to 1-1/4" thick doors. Three strikes are included to accommodate different jambs. They are hardened to resist cutting. A loop style deadlock prevents lift out and features a unique vent link. The 8300 features a thumbturn inside/cylinder outside. Other functions are available. *Circle Number 376*



### MAJOR MANUFACTURING'S OCTOPOD

Octopod by Major Manufacturing is a versatile surface mounted deadbolt that is ideal for use on sliding patio doors and windows. The lock housing will accept a standard 1-1/8" mortise cylinder and can be mounted on a door frame as narrow as 1-5/8". The Octopod is supplied with one way screws, special cam, and instructions. *Circle Number 375*



### MASTER LOCK PATIO SECURITY BARS

To meet homeowners' needs for improved security, Master Lock introduces Patio Security Bars. The Patio Security Bar helps prevent intruders from forcing a patio door open and from lifting the door off its track. Master Lock's patented locking system can withstand more than 1,000 pounds of force. *Circle Number 374*





## PUSHBUTTON LOCKS

### ALARM LOCK'S TRILOGY™

Alarm Lock's Trilogy, an electronic pushbutton lock, offers more than 29,000,000 possible code combinations, a tamper shutdown feature and is easily programmed from the keypad. Featuring a heavy duty Grade 1 lockset, the Trilogy easily retrofits standard 161 door preps with minor modifications. Special programming features include emergency/service code, passage mode, individual or group lock-outs and a variable unlock time. Weather resistant keypad allows for both interior and exterior applications.

Circle Number 373



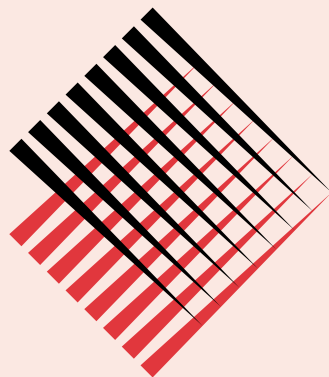
### DOOR SYSTEMS, INC.'S KEYLEX™ 2000

The Keylex 2000 is super heavy duty with a two-year limited warranty, solid cast brass body with all metal components and a patented resettable slip clutch lever handle mechanism. Standard features include: field reversible lever handles, 2-3/8" or 2-3/4" commercial 5/8" throw deadlatch and a passage feature (easily de-activated). High security key bypass model available. Retrofits into existing heavy duty door preps of other manufacturers.

Circle Number 372



READER'S CHOICE WINNERS



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READER'S CHOICE WINNERS



### LOCKNETICS CM5000

The Locknetics CM5000 Series Electronic Heavy Duty Cylindrical Lockset combines electronic access control with mechanical door locksets. The CM5000 computer managed stand alone lockset can be easily programmed or interrogated by a DOS based portable computer. Choose a TouchEntry electronic keyreader or keypad access control. Each provides 150 user codes and a 100 event audit trail. Send for a free catalog. *Circle Number 371*



### OMNILOCK 500

The new Omnilock 500 Series stand alone access control system provides a 500 individual user code capability along with a 750 transaction audit trail. Made in America and built on a Grade 1 lockset, the OM500 installs in minutes and provides superior features and quality that you have come to expect from OSI Security Devices. *Circle Number 370*



### SIMPLEX 1000

Simplex Access Controls Series 1000 line of pushbutton locks is a fully mechanical lock designed where keyless access control is required. The mechanical design eliminates the need for batteries or running wire. Trouble free performance and carefree durability. Available in knob as well as lever design. The new Series LP1000 (Lever/Panic) is designed for new or existing surface mounted exit/panic devices. *Circle Number 369*

## SAFES

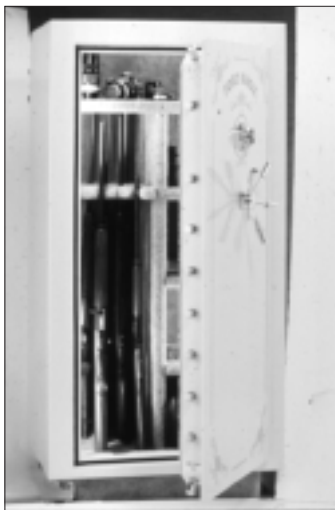


### AMSEC'S NEW BURGLARY/FIRE SAFES

AMSEC's BF series lets you take advantage of an age old problem, offering the industry's first affordable solution when Burglary and Fire protection are an essential part of your customer's buying decision. The BF series is offered in three different sizes. The two smaller sizes carry a U.L. Listed 1 hour fire label and the larger size carries a 1/2 hour U.L. listed fire label. All models are B-rate heavy duty construction. *Circle Number 368*

*Continued on page 60*

Continued from page 58



FORT KNOX YEAGER SERIES

The Yeager Series has taken the best and added our finest options. The 7 gauge body and 5/8" reinforced door are complemented by our patented Rack & Pinion multi-gear locking mechanism. Each locking bolt operates independently of one another, with 30 precision gears driving up to 28 one inch locking bolts.

Circle Number 367



GARDALL 1511 FIRE SAFES

Gardall Safe Corporation has been manufacturing safes since 1950. American made, the styles include concealed wall and floor safes, depository safes and U.L. 350° One Hour fire safes. Gardall's 1511 fire safe received the award of Premium Best Buy in 1991 by Consumer Digest. A combination of fire protection, B rate security features and quality workmanship make Gardall fire safes the premium choice for the retail consumer.

Circle Number 366



MEILINK SAFE COMPANY

Meilink Safe Company takes great pride in announcing that its entire line of TL-15 and TL-30 safes are the world's first and only line to carry U.L. labels for both fire and burglary. The KC4520 is one of nine different sizes that carry both U.L. labels. Other features include full door width bolts, U.L. rated multiple relocking devices and a full door hard plate.

Circle Number 365



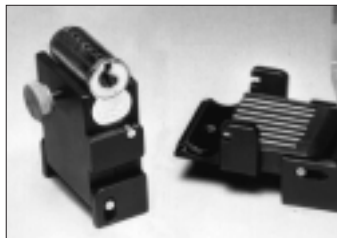
PERMA-VAULT'S PRO-W-500

Perma-Vault's Pro-W-500 deposit drop bolts within arm's length of a cash register, limiting exposed cash and helping a business prevent external or internal loss, cash variance or register stripping. Perma-Vault's 50 different units make affordable, safe and convenient depositories for interim storage of cash and checks.

Circle Number 364

Continued on page 62

# TOOLS



## THE BLOCK BY A-1

A-1's Security Manufacturing manufactures a full line of tools for servicing Interchangeable Core (Best Type), offering a foolproof method for determining the control-key code. Simply drive the pin stacks into The Block where a pin tray keeps them separated and in order. When The Block is opened, all pin stacks are easily accessible and yet secure. *Circle Number 363*



## AERO LOCK KEYS

Aero Lock produces the highest quality tryout key sets, cut key sets, and depth key sets. The company has been in existence for 12 years. What started as a one-man operation, with a few sets, has grown into a five-person team with nearly 150 tryout and cut key sets, and over 200 different depth key sets. *Circle Number 362*



## HIGH TECH TOOLS LOCKOUT SET

High Tech Tools Model 2300 Auto Lockout Set covers all new automobile models with a comprehensive encyclopedia, lockout manual, and tool kit. The encyclopedia includes; space and depth information, key blank information, replacement times, and lock part information. The lockout manual covers auto opening procedures with a detailed diagram, photo page, and tool description. *Circle Number 361*



## HPC'S ULTIMATE KILLER KIT

HPC's Ultimate Killer Kit (AKK-99) comes complete with 25 car openers, 1 pick set, 2 sets of wedges and 1 flexible probe light in a deluxe carrying case. As the inventor of the original Slim-Jim™, HPC created the "in-the-door" method of vehicle entry. HPC continues to design new car entry tools for new and redesigned vehicles. The Ultimate Killer Kit is HPC's largest kit that includes everything you need to open anything on the road! *Circle Number 360*



## KEEDEX K-18 CHANGE KEY SET

The Keedex K-18 Change Key Set consists of 12 of the most common change keys, and is a must for every tool box. The durable, stainless steel keys are labeled for easy identification. Keedex now has available the K-GSA, GSA Change Key Set. *Circle Number 359*

**READER'S CHOICE WINNERS**

**LAB PINNING KIT**

The Lab Emerald Wedge repinning system is referred to as the "ultimate pin kit." Features include 10° angle for better view of total tray; color coded passport™ pin chart where pin sizes are printed the same color as pins in the tray. Also, the chart is laminated; Dura-View™ tray which is made of clear styrene. A pin locator is inserted underneath so the numbers will never wear out; and hard coat new metallic green paint. *Circle Number 358*



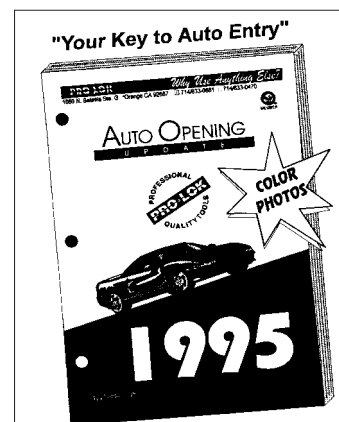
**MAJOR MANUFACTURING'S HIT-45**

Major Manufacturing's HIT-45 modular installation system can be used with a number of different templates to install locks on metal, wood, and aluminum frame doors. The clamping system is self centering by design with a door range from 1-3/8" to 2-1/4". The use of two internal locating studs calculate backset from the center of the door. *Circle Number 357*



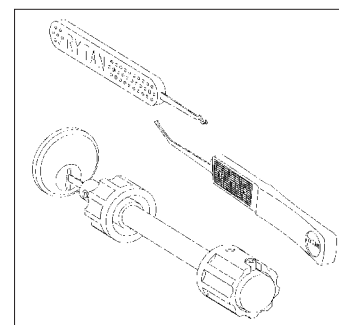
**PRO-LOK CAR OPENING MANUALS**

Of all the car opening books available today, only one company has made the commitment to invest in the state-of-the-art equipment required to produce the latest information in living color. That company is Pro-Lok. Come out of the stone age and into the space age with our 1995 Car Opening Update. *Circle Number 356*



**RYTAN PICKS**

The Rytan name on your lock picking instruments is your assurance of top quality. We've combined the best components with state-of-the-art production technology to insure real value. Each tool is engineered to reach a new, higher standard of performance. Notice the contour of the Rytan lock pick handle. Become aware of the improved "feel" while picking as the handle transmits just the right tactile response. *Circle Number 355*





**STRONG ARM MINI PRO RIG**

Strong Arm Security, leading supplier of hardplate drill bits, has introduced the drill rig of the 90's. The Mini Pro Rig is compact, lightweight, and economically priced. The kit includes rig, dial puller, templates, drills and accessories in a fitted case. Strong Arm's performance separates the best from the rest.  
*Circle Number 354*

**TECH-TRAIN PRODUCTIONS**



Tech-Train Productions produces the most extensive line of training videos available for the locksmith industry. Topics covered range from automotive locksmithing and safe deposit lock servicing to basic locksmithing. In addition, it produces a complete line of car opening tools, manuals and specialty locksmith tools.  
*Circle Number 353*



**TRESKAT SOFTWARE**

Eighteen Code Books in your shirt pocket? With the tiny "Palm Top" computer shown above you can carry all six award winning Treskat USA programs including CodeMaster and the computer in your shirt pocket!  
*Circle Number 352*



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# THE INCREDIBLE SHRINKING LOCKSMITH

Growing mass merchant markets to the homeowner no longer need to effect your bottom line. Find out how to compete against these giants – and win!



MINI SECTION

**J**ust as locksmiths come in many shapes and sizes, so do locksmith shops. There are many different specialties that locksmiths prefer. Some specialize in Automotive work, others prefer Commercial or Industrial customers. There are those that offer a full range of services - covering everything from Automobile locks to Commercial /Industrial hardware as well as Residential locks. Others service only Residential customers. No matter what type of customer you service, there are outside influences trying to take away a piece of your market.



by  
**Steve Gebbia**

The Automobile manufacturers are constantly coming out with new locks that are non-serviceable. Fortunately, there is a large group of aftermarket lock manufacturers supplying the industry with the complete locks and service parts required to repair and rekey these newer locks.

In the Commercial/Industrial market the competition comes from the manufacturers and distributors who sell direct to the end user. While they do have a noticeable percentage of this market, they are limited by the lack of after-the-sale service that they can provide. These customers need prompt, reliable service and they recognize that the locksmith is still their best source for this service.

The Residential market is different. Here there is nothing preventing non-locksmiths from eating up a large percentage of this very lucrative customer base. The mass merchandisers have been steadily taking away more and more of the residential hardware sales. They do this by selling them locks and other hardware at prices near or below the price that the locksmith pays for the same item through traditional distribution channels.

The residential lock customer falls into one of two categories:

1. The customer who is looking for the least expensive lock that can be found. He is guided to the mass merchandisers by extensive advertising campaigns.

2. The customer who is looking for a lock that provides good security and holds up to daily use and abuse. He comes to the mass merchandiser because he is unaware that the locksmith is his best source for both quality and service.

Why is this happening? Lack of knowledge on the part of the public. By and large, the general public does not know the difference between a good lock and a poor one. The locksmith must first educate the customer before they are willing to pay a little more for a much better lock.

How can the independent locksmith compete with the low pricing and marketing of the mass merchandising giants? By choosing his weapon very carefully. Just as David slew Goliath, the locksmith can compete for and win back the residential customer.

What is this powerful new weapon? A new channel of distribution. One that provides quality hardware at competitive prices. Referred to as 'Private Label' or 'Distributor Brand' hardware, they are much more than that. It is a wide variety of hardware at very reasonable prices.

There are several companies that fall into this category (USCAN and U.S. Lock, for example). Because they want your business, most of them have developed a rather extensive line of products. Remember, though, that no matter how extensive a product line is or how low the cost is, it must meet your needs in order to be profitable for you to stock. After all, which costs you more ... a \$15 lock that is sold a few days after it arrives, or a \$5 lock that sits on your shelf for a year (or longer)? The trick is to find a product that is both cost-efficient

*Continued on page 68*



*This Grade 3 cylindrical lock by USCAN is just one piece of the arsenal available to help locksmiths combat the encroaching mass merchandising giants.*



Continued from page 65

and sells quickly.

Here are some questions that you should ask when considering adding a new product line to your inventory. These Private Label locks are no exception. In fact, many locksmiths are asking these very questions right now.

- Will it easily replace existing hardware?

Yes, these locks are made to fit standard door preparations. They are available in both 2-3/8" and 2-3/4" backset. In some cases, they have adjustable backset latch and bolt units. If the door is properly prepared for a standard lockset, you should have no trouble installing the lock in your existing opening.

- What keyways are available?

These locks are available in all popular keyways. The suppliers know that your customer wants to be able to use his existing key in the new lock. Because of this, many of these locks are available on a wide variety of keyways. Other locks have replacement cylinders available to allow keying to your customer's key.

Some of the keyways available include: Arrow, Corbin 60, Dexter, Kwikset, Lockwood, Russwin D1, Sargent (several sectional keyways are available), Schlage C, Schlage E, Schlage C-K (composite), Weiser, Weslock, and Yale 8.

Not all of these locks are available on multiple keyways. The ones that aren't usually come with a Kwikset or Weiser keyway cylinder. Some are only available on Schlage C keyway. These will key to the majority of locks in Residential use today.

- Is it attractive?

Again, the answer is yes. As with any product line, these locks are available in a variety of knob styles to

closely match existing lock designs. While the names of the designs may differ, the look is the same and many customers won't even notice the minor differences in appearance. The deadbolts also closely resemble name-brand locks.

Private Label locks are also available in bright brass, antique brass, and brushed chrome finishes to match other existing hardware.

- Is it available in the function I need?

These locks are available in the same functions as any other residential lockset. Passage, privacy and entrance locks are standard stocking items. Many locksmiths carry entry sets from several name-brand manufacturers but only carry one or two brands of passage and privacy sets. Because of the lower cost, you can now afford to keep each of these functions in stock.

The deadbolt locks are, of course, available in both single cylinder and double cylinder models.

- What about durability and warranty?

Obviously these locks are not as durable as Grade 1 locks costing over \$200. But, they do compare favorably to other residential locks currently on the market. The durability varies depending upon the type of lock you are looking for.

A relative newcomer to the Private Label Residential grade knobset is the Grade 3 tubular knob lock. These are very similar to some of the lighter brand locks being sold at home centers and hardware stores.

More popular with locksmiths is the Grade 3 cylindrical lockset. These are sturdier than the tubular sets yet are priced low enough to allow the locksmith to compete with the mass

merchandisers.


Warranties will vary from supplier to supplier but all distributors are eager to stand behind their sales.

- What exactly do these suppliers carry?

The lockset shown in the photograph is a perfect example of a Private Label Residential grade locksets available to the locksmith. This unit is a Grade 3 cylindrical lock marketed by USCAN. This lock has an entrance function, an adjustable latch unit and uses the Weiser keyway. This same lock is also available in Storeroom, Passage, and Privacy functions. Standard finishes are 605 - Polished Brass, 609 - Antique Brass, 626 - Satin Chrome, and 630 - Satin Stainless Steel. The cost of this lock is low enough to easily sell itself to bargain-hunting homeowners. Is this versatile enough for you?

In addition to the Grade 3 and Grade 2 residential locks, many Private Labelers offer Grade 1 knobs and key-in-lever sets. Padlocks and file cabinet cylinders are also available at the same low pricing. Replacement locks, lever handles, and paddles for glass doors are another popular item. In fact, many Private Labelers carry a wide range of quality hardware and supplies for the locksmith.

Do you still think the locksmith can't compete with the mass merchandisers? Think again! It all depends who is on your side. With Private Labeling companies like USCAN and U.S. Lock as our allies, the tide will turn.

No longer will it be: The Incredible Shrinking Locksmith. Soon, a new giant will emerge to reclaim its rightful place in the residential lock market: The Amazing Colossal Locksmith! 



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## We have Security Exit Devices.

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# Safer Doors & Thicker Wallets

*Installing extra hardware doesn't only make you money, it really does protect your customer.*

by Jake Jakubowski

I read somewhere that there have always been thieves among us, but it took the invention of the locomotive to create train robbers.

The same line of thought would suggest that without computers there could be no "hackers." Without airplanes there could be no skyjackers. Without the invention of the automobile, there would be no car thieves. And, without doors ... there would be no need for me to write an article on door protection!

Why door protection? In most instances (especially residential burglaries), statistics show that the thugs prefer - about 60 percent of the time - to kick in the front door. No finesse - just brute force. Breach the barrier, grab the goodies and ... git!

As locksmiths, part of our job is to advise our customers how to best protect themselves from a direct physical assault on their front door (or back door as the case may be) by a heavy footed felon or a crowbar toting crook. To help you help your customer, and maybe slip an extra shekel or two into your pocket, the following is a list of products designed to strengthen any door and keep the

bad guys and gals at bay.

But! The first step in helping your customer evaluate their door protection needs is a thorough examination of the door, the door jamb and the hinges. No matter how strong a lock, locking bar or auxiliary lock you put on a door, if the door is in poor condition - you're wasting your customers money.

If the door is thin (under 1-1/2" thick) flimsy and weak then you have to do something (up to and including replacing the door) to strengthen the door itself.

If the jamb is split or cracked, or the strikes are loose or missing then, obviously, you need to recommend corrective measures before going any further.

If the hinges are loose, bent or have screws missing, then you must to correct those problems as well, if you're going to give your customer their money's worth.

One of the first things that comes to mind is installing a deadbolt. No one would deny that a deadbolt offers excellent protection against kick-in attacks, provided it is properly installed on a strong well-fitted door.

Frequently the amount of wood surrounding the bolt is only 3/8" thick on either side of the deadbolt's face plate. Not much of a safety margin when Tommy Thug is working on the door with crowbar

To help strengthen the door in this critical area try a wrap around plate to measurably increase the strength of the door. These plates are offered by several manufacturers and vary in price from about \$10 retail to around \$22 retail. The various style plates are designed to prevent the door edge from splitting, thus preventing the bolt from being broken out of the door, when force is applied.

To further enhance the strength and security of an entry door, latch guards are made by various manufacturers. Latch guards are made for outswing or inswing doors and some models have interlocking features that make the latch guard, and subsequently the door, a part of the jamb.

Mainly, latch guards prevent thugs and thugettes from "loiding" locks and take away the thugs pry point around the latch. Latch guards force the crowbar toting crook to try to pry away from the area around the latch



*There are several products that can be used to increase the strength and security of a door - Wrap Around Plates, Latch Guards, Reinforced Strikes, and other accessories can be used. Pictured (left to right) are the Door Club, The MAG 747 Heavy Duty Strike and the Don Jo Wrap Around Plate.*

where the door is most vulnerable to that type of attack. Latch guards retail from \$5 or \$6 and all the way up to \$90 for more advanced guards.

Latch guards can be used in conjunction with wrap around plates or as stand alone security. Either way, they are a viable alternative for your customer and a profit maker for you.

Wrap Around Plates and Latch Guards are available from various manufacturers including HPC, Lori, Don Jo, MAG Engineering, and others.

Using a Security Bar utilizes the tried and true wedge theory to keep someone from kicking in your customer's door. Simply place the bar under the knob, adjust the length, push the pad firmly on the floor -and the door is secure. Master's Lock offers a security bar retails for about \$45.

Another way of strengthening a door against kick-in attacks is by utilizing the Door Club by Winner International (retail about \$55). The Door Club is a blocking device that mounts at the bottom of the door and can withstand upwards of a ton of force applied to the door.

Both Master's Security Bar and



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Winner's Door Club are auxiliary locking devices and can only be used on the inside of the door. However, if your customer chooses either of these devices for their door security needs they can be rest assured that in conjunction with a good, well installed, deadbolt, they can't buy better security.

The next step in strengthening a door is to check the door jamb itself. Make sure that the jamb is solid and not cracked or broken and that the strikes (more on strikes later) are securely fastened to the frame. If the jamb is loose - secure it. If it is cracked, splintered or broken - Then, fix it.

I have found that the fastest, simplest and most effective means of repairing a jamb that has been damaged from a burglary attack or split because the structure settled is to use the Jamb Jacket by Major Manufacturing. Jamb Jackets come in various sizes to fit either 1-3/8" doors or 1-3/4" doors.

Once you have installed a Jamb Jacket on a customer's door jamb, that jamb is repaired permanently! Jamb Jacket prices vary according to size and length. A 36" long Jamb Jacket for a 1-3/4" door will retail for about \$30.

If you've ever closely looked at the way a strike is mounted on the average wooden door, I'm sure you've noticed that the strike is held to a 3/4" piece of soft lumber by 3/8" long screws. And, if you've ever seen a door jamb that has had the strikes broken completely out of the jamb after the door was kicked in, you can understand why Jamb Jackets were invented!

In my opinion, if you can't sell your customer on the idea of letting you install security strikes on the door, you should, at the very least install the regular strikes with 2-1/2" screws. At least the longer screws will anchor the strike in the jackstud surrounding the door and frame.

Heavy duty strikes like Meister Atlanta's 1280B (\$18), 2000B (\$25) or MAG Engineering's Strike 3 (\$12) and 747 (\$15) all magnify the security of the locks that they are designed to receive. The ability of these strikes to withstand aggressive entry attempts is due to the fact that they either screwed into the studs behind the frame or have a hardened pin that fits into a hole drilled in the stud for the strike.

Finally, in making your customer's door as strong and secure as it can be, you need to examine the hinges. If they are loose, tighten them and use 2-1/2" screws or longer to secure them to the studs behind the frame.

If the hinge pins are exposed on the exterior of the door, then drill a small hole through one of the hinge barrels on leaf and into the hinge pin itself. Then insert a small roll pin in the hole until it is flush. This will prevent the pin from being removed and the door taken down from the hinge side. Insert these pins in at least two hinges on each door.

Also, Lori makes hinge mount (BP-1185 and 86) and door mount (BP-1180) hinge pins that will prevent a wood or metal door from being pried out of the frame from the hinge side. Lori's Hinge pins retail for between \$2.70 and \$6.60. Any way you look at it, that's economical security.

So, The next time a customer calls you and asks you to install a deadbolt, take a look at the total door and see how you can increase your shekel intake by doin' it with doors -Ya'll heaho! **TNL**



National Auto Lock Service, Inc. offers a wide range of equipment and services for the Automotive Locksmith. From tools and hard to find key blanks to transponder programming, we can take the mystery out of car service. We accept credit card orders, and can ship COD. Contact us for the latest in automotive technology.

# BUSINESS BRIEFS

## News from the Locksmithing Industry

### INDUSTRY INTERVIEW...

*This month we were able to grab long time manufacturer and locksmith Adam Weinraub. Adam is the president of Weinraub Enterprises Incorporated, Pro-Lok division, a manufacturer of locksmith tools and manuals since 1986.*

*Adam, can you describe a little history on how you came into this field?*

I was 10 years old and working at a community center operating the score board for the men's basketball league when I was fortunate enough to meet Irv Postove, a referee for the games.

During this time I was also constantly losing the key to my house. And, so that nobody would know I took my lone key up to the local locksmith to get some extra ones made (I knew at 10 years old that a key made elsewhere might not work). When I walked in I was surprised to find my friend Irv owned the lock shop.

I stayed and visited a while and when customers came in, Irv ordered me around to help him out. (I think he thought we were still at the basketball court.) This is when I realized that I was fascinated with locksmithing. From that day forward I spent every free moment possible at the lock shop. The next four years were spent with Irv and Ted, two of the best locksmiths that I will ever know, helping me perfect my skills.

*What direction is this industry headed in and what do you feel the future holds for the locksmith and his role in security?*

I believe it is important to qualify my response. I believe that there are several types of locksmiths that have range from no change to significant change.

We have Hobbyist locksmiths. We have Rural locksmiths (small city). We have Metropolitan locksmiths (big city). We have Security Professionals.

Each type of locksmith plays important, but different roles. The biggest change is the evolution in these different types of locksmiths.

The hobbyist will show the least amount of change. They're here, they have always been here and will always be here.

The rural locksmith is the toughest spot to be in. These locksmiths work in small communities. They, many times, have to perform several services for the community in order to make a living. These locksmiths generally do not have other locksmiths to call and help them when they have a problem. Education is tough for them to get unless they live near a large metropolitan area. Yet, their communities depend and expect them to know everything.

The metropolitan locksmith is the typical locksmith. Many people in this industry predict this segment of our industry will become extinct. I do not. The consumer will always have a need for locks being rekeyed, unlocking cars, deadbolts installed, etc.... Yes, the security industry is and has been going through its own evolution with higher technology and electronics.

The fact of the matter is, however, that as fast as the high technology and electronics segment is growing, the basic needs of locksmithing will always be here.

I believe that the security professional is the newest segment of our industry. This segment will handle the more sophisticated parts of security. Electronic security is the wave of the future. It is exciting, challenging and profitable. It is a step that many metropolitan locksmiths will be making. It will require additional training. This is not an area to be afraid of, it is just the next step on our evolution ladder.

When GM introduced the locking steering column, most locksmiths were frightened by it. Now, because of training it is no big deal and second nature to most locksmiths. When high security locks such as Medeco started to become prevalent, many locksmiths were frightened of them. Many locksmiths confuse fright and pessimism with lack of education. Once the locksmith is properly trained, the fear will be replaced with profit and excitement.

The bottom line is, that changes only take place if there is a need. The locksmith will be forced to decide what options and services they are going to provide for their customers.

*What changes do you see necessary if the locksmith is to be successful in the future?*

One word. Marketing. I certainly



**Adam Weinraub**  
President of Weinraub  
Enterprises, Inc., Pro-Lok Division

**...INDUSTRY INTERVIEW  
(continued)**

cannot provide marketing advice in a couple of paragraphs. The days of placing an ad in the yellow pages and waiting for the phone to ring are gone. I have seen some locksmith companies do a terrific job in the whole marketing department. Generally speaking, there are a lot of great locksmith companies but, not a lot of great locksmith companies that know how to market.

The average locksmith does not have the expertise nor the resources available to them to do an effective job marketing their services. The Trade magazines, Manufacturers and

Distributors are going to have to do a better job providing marketing materials and training to the locksmith.

On the other hand, locksmiths are going to have to wake up and realize the importance of marketing. This will not do any good, however, if the time for education and implementation of marketing plans are not followed through by the locksmith.

The Security Professional Council is going in the right direction providing much needed consumer awareness for the locksmith. Still, like the yellow page ad; the locksmith can't afford to expect this to be the perfect answer to the problem. Marketing is not what others do for you, Marketing is what

you do for yourself.

*Any additional comments?*

Yes. Pro-Lok started as a hobby, not a business. I have always enjoyed making little tools that would make my job as a locksmith easier. As Pro-Lok has continued to grow by leaps and bounds, there are some important things that we will never lose sight of. If our company is to continue to grow and prosper, so must the locksmith. We will continue to provide education and assistance in any area that we can be of benefit to the locksmith. This includes all phases of locksmithing, whether we manufacture tools for that area or not makes no difference to me. **INL**

**HPC** is proud to announce the **3rd** winner in their monthly Codemax™ drawing. **HPC** has awarded a Codemax™ computerized key machine to **Robert Leonard** of **AAA-1 Lock & Key** in **Nampa, Idaho** on **May 1st**. It was purchased through **Intermountain Lock & Supply** in **Salt Lake City, Utah**. **HPC** will be awarding a Codemax™ to a lucky locksmith every month through February 1996. To qualify,



locksmiths simply need to purchase any 1200 Series Key Machine and send in their registration card along with a copy of their distributor invoice to **HPC**. Once this is done, they will automatically be entered in the contest. Entries will remain eligible until the conclusion of the contest. A total of over \$47,000 will be awarded. There are still **nine** more chances to win.

**JLM Wholesale** is now stocking the full line of **Alarm Lock** products as well as the new 600 Series universal strike from Folger Adam. **JLM** distributes nationally to the builders hardware, aluminum

storefront, locksmith and security industries. Phone (800) 522-2940.

**National Safe & Lock Company Inc.** announces the appointment of **Frank Morano** as corporate **Executive V.P. Sales**. **Ralph P. Nussbaum**, corporate President is very confident that Mr. Morano's vast experience relative to national sales and marketing will be a great asset to the corporation and most importantly to its chain of distribution.

**Commercial Van Interiors**, the nation's leading outfitter of locksmithing vehicles, recently announced the opening of its two newest branches in Fort Worth, TX, (817) 460-7477, and Las Vegas, NV, (702) 438-7477.

All facilities are full service operations. Each store carries a full line of inventory, in stock and ready for immediate installation. Call (800) 759-7477 for the locations nearest you. Grand opening festivities are scheduled for the first week of June.

**American Lock & Supply, Inc.**, has announced the promotion of **Rick Myers** to **Vice President of Marketing and Business Development**, effective immediately. Mr. Myers has been with American Lock & Supply for over fifteen years, and as Director of Marketing, he has been responsible for the strategic planning, development and implementation of American Lock & Supply's corporate marketing.

**Jerri Moeller** has been promoted to **Office Manager** of **All County Lock & Key** of Miami, FL. Ms. Moeller has been with All County Lock & Key for seven years.

She started as receptionist and has excelled in many facets of the locksmith business. She is a Certified Registered Locksmith specializing in I/C cores and high security systems. She has also been certified by Medeco, Primus and Abloy High Security Locks.



*Jerri Moeller*



**A. F. Stewart Locksmiths** was recently awarded the inaugural **Victorian Fair Trader of the Year Award** for 1995. The company was also awarded the **Community Group Award** by the **Office of Fair Trading and Business Affairs**. These Awards were accepted with pride and complement the two Awards presented by Security Australia magazine for the Pursuit of Excellence in 1992 and 1993. **INL**

# LIGHTER SIDE

## Take Fifty-Six

**T**here I was, trying to balance our demonically-possessed bank account, when Don's words penetrated my concentration.



by  
Sara Probasco

"...So the producer and cameraman will be here around four, tomorrow afternoon to shoot the first sequence," Don was saying.

That roused me from my bookkeeping stupor. When I had mentally tuned Don out, he was chattering on about some new advertising scheme – a frequent area of conversation, lately. Had he changed subjects while I was tuned out? Obviously, I had missed something.

"Wait, wait, wait!" I interrupted. "Cameramen and shooting sequences? You mentioned a producer? Who is it? Disney? When did my agent call?" Pawing my way through canceled checks and computerized statements, I grabbed the phone and began punching in a Los Angeles number. Don calmly removed the receiver from my hand and firmly cradled it.

"What are you doing?" I said, trying to repossess the phone. "I've got to call my agent and find out which one of my screenplays he sold."

"Were you listening to anything I said?" Don patiently inquired.

"Well, of course I was. I heard every word."

"Then tell me what the cameraman and producer will be doing here, tomorrow afternoon."

"Here? They're coming here to our store?"

"Aha! I knew you weren't paying attention. I ought to make you wait and find out when they get here, but they'll need some kind of script to

work from. Think you can whip something up for them by then?"

"You know it! Which script will they be filming, and how long does this first sequence need to be?"

Don glanced at a note pad in his hand. "No more than ten or twelve lines of dialogue, according to Jan," he said.

I was puzzled. Why would a Hollywood movie producer come all the way to Uvalde, Texas, at four o'clock on a Tuesday afternoon, to shoot a ten-to-twelve-line film sequence? Frowning, I looked intently at Don. I suspected we were not communicating, here.

"Clear me up on a couple of points here, will you? I think I must have missed something," I said. "They're coming tomorrow afternoon to shoot a half-page sequence? Why?"

"So they can get us on cable by the fifteenth," Don replied.

**H**e made it all seem so logical. I decided one of us had finally flipped, and I wasn't entirely sure which one.

"I think we need to start over with this entire conversation," I said. "Now, who is coming tomorrow?"

"The producer and cameraman. Of course, Jan will be here, too, to keep everything running smoothly. And she's arranged for a semi-professional actor to take the major part. We're supposed to round up a half-dozen people for the non-speaking roles."

There he went, again, chattering about things I didn't understand.

"Whoa! Jan who?" I asked.

"You know, that little gal with CableTime," Don replied.

The light began to dawn.

"Does this have something to do with that advertising program you've been talking about lately?" I asked.

Don sighed and rolled his eyes. "What do you think I've been talking

about for the past half-hour?"

**N**ow it was my turn to sigh. "You wouldn't believe me, if I told you," I muttered. "I must admit, I wasn't listening very closely. So, now you have my undivided attention. We're talking about shooting a couple of thirty-second commercials that will air on area cable TV, right? And they're going to be here tomorrow afternoon to shoot one. OK, tell me what you want this first ad to be about, and I'll get started on the script."

Writing a thirty-second TV commercial would be a snap, I thought. Having already written a couple of full-length fast paced movie scripts, ten to twelve pages about locks and keys should present no problem, right? Boy, did I have some surprises in store.

It is truly amazing how little can be said in thirty seconds. Even that may be too much. The listening audience can absorb only so much in a half minute, I learned. Take from that the time you must leave at the end for displaying your business information (to remind the viewer who the ad was about), and there's not much left to work with.

After a dozen false starts, we finally hit upon an idea. We would establish a theme for all our original ads and let one feed upon another, so to speak. After much intense deliberation (some of it rather loud and interesting to our business neighbors) we decided upon a negative approach: our main character would be a burglar, trying to ply his trade and being continuously foiled by A-1 Lock & Key—you know, the old coyote-versus-roadrunner theme.

**W**e decided to establish the main character—our burglar—in the first ad by means of a shadowy "testimonial" format, similar to an ad being run for sugar-frosted corn flakes. Jan made an appropriate black mask for our actor, and I blocked out a script for him. A piece of cake.

Wrong again.

That simple little one-character, one-scene shoot took no less than three hours to perfect! Over and over, the burglar read his lines from the cue cards, testing pace and tone, inflection and volume. Finally, after cutting and patching a number of lines, we got the length so it was not rushed, but moved right along. Then the lighting was adjusted, in preparation for initial shooting. The lights necessary to create the silhouette effect caused a glaring reflection on the burglar's glasses (which he was wearing over his black eye-mask, in order to read the cue-cards).

**W**e tried tying the mask over his glasses, instead, but then his lenses steamed up, and he couldn't see to read his lines. Finally, we got the mask positioned so it sufficiently covered the glasses to modify the glare without obstructing vision. Then we had to work on Jan's holding the cue cards close enough for the burglar to read them, without her appearing on camera.

That was the afternoon and the evening of the first day.

Camera call, the next morning, was for 8 a.m. The crew had another shoot at 11, and wanted to be sure there was time.

"Three hours? You've got to be kidding. After yesterday, we'll have everything wrapped in an hour or two," I predicted.

I think that one took three and a half hours.

I may never again be able to face the half-dozen friends we conned into assuming non-speaking roles. "It will take just a few minutes before you go to work," I had said, believing it.

We're confident this form of advertising will benefit our business greatly. However, I'm not sure we'll ever recoup the cost of all the dinner tabs we'll be picking up in the way of thank-you's for those who helped us accomplish it.

That night, as I closed my eyes, I sighed, remembering how I had felt when I thought I had sold a screenplay to Hollywood. Then I drifted off, dreaming of hearing Don's voice again: "The producer and cameramen are coming tomorrow afternoon," he said. Only this time, he added, "Hurry! It's Spielberg on the phone!" **TNL**



**To be a World  
Leader You Need  
Quality Products,  
Innovative  
Technology and  
Strong Partners.**

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# Locking Up HIGH SECURITY AUTO WORK

*WITH THE GROWING NUMBER OF MANUFACTURERS  
INCORPORATING HIGH SECURITY LOCKING SYSTEMS,  
LOCKSMITHS ARE GOING TO NEED TO BE MORE PREPARED  
AND WILLING TO ACCEPT THE TASK.*

by Tom Seroogy

For a variety of reasons, servicing high security automotive locks has been the focus of only a small number of locksmiths throughout the country. The biggest reason by far is the limited number of opportunities there are for working on high security in the United States. For some locksmiths, the number of high security jobs he has a chance to do in a year does not justify the expense of a specialized machine and the investment in previously hard-to-come-by parts.

Still, as the trend for more secure vehicles continues, the more new locking systems the locksmith is introduced to each year. And with each passing year, there are more high security systems that are laid at the locksmith's door step. And despite a reluctant market, growth in high security is actually expected to increase dramatically over the next few years; This growth being the result of a couple of factors: Auto manufacturers' developing vehicles for an international market, and a stringent European auto security standard.

Despite the rather slow transition, the auto industry has been moving towards an international market. Barring the cultural differences of the various countries (driving on the left or right side of the road, etc.) that affect car design, it is much more economical for a manufacturer to create one vehicle for all international markets than it is to create a vehicle for each market. This, of course, means that even the locking systems must pass an international standard of acceptance.

Who sets these standards? Actually, no one individual sets them. However, the European market

employs probably the most stringent requirements for vehicle security and locking than any single entity in the world. And until the need for opening international markets became a necessity, the United States enjoyed relative independence from these requirements, and thus insulated the locksmith from much of the strange and exotic keying and locking systems used abroad. Today, however, as we become less and less isolated, the more and more these new systems will become a part of our life here.

### Current Systems

There are two means by which to create a "high security" locking system - physically or electronically.

In the States, manufacturers have typically left electronic security up to the auto alarm industry, and only recently have started incorporating systems that integrated locking with

alarming.

Probably the most successful attempt at creating an electronic high security locking system has been the VATS/PASS system by General Motors introduced in the 1986 Corvette. The colossal success of this system in deterring auto theft has led to the use of the system in more and more GM vehicles.

In principle, VATS is simple. A key incorporating a resistor pellet is used to turn the ignition lock to ON. In order to start the car, the resistance value of the pellet must match the value required by the vehicle's onboard computer.

While the VATS key is nothing more than a simple single sided key from a mechanical perspective, the incorporation of the resistor pellet elevated the key to high security status.



1. A few of the items needed for High Security Auto Service include a high security key cutting machine, depth keys, and replacement locks and service kits.



**F**ortunately for the locksmith, keys and diagnostic equipment are available through companies like Strattec (VATS OEM and formerly Briggs & Stratton), and All-Lock (who has just introduced a full line of single and double sided VATS keys and VATS diagnostic equipment).

The introduction of GM's VTD (Vehicle Theft Deterrent) or Passlock system for 1996 is another example of integrating electronics and mechanical systems to deter theft. Fortunately, this system may have little effect on a locksmith's ability to service the vehicle. (See GM's VTD system on page 11 of this issue.)

While still only on paper, there are indications that Ford will be introducing the Passive Anti-Theft (dubbed PATS) system, under scrutiny in Europe for several years now, on the new 1986 Taurus.

Developed in conjunction with technology developed by Texas Instruments, this system utilizes a mechanical key with a specialized transmitter in the bow. When a key is inserted into the ignition an RF signal is transmitted from an antenna located around the face of the lock and into the key, the blade serving as the key's antenna. The signal from the vehicle charges a special electrical device, called a transponder, on board the key. The charge is then used to transmit a 128 bit encoded message from the key back to the vehicle. If the proper code is transmitted, the vehicle is allowed to start.

Still, electronics is a very small part of the high security picture. More high security systems are developed or built around varying mechanical attributes of keys, locks and locking systems, most of them brought in from overseas. Those used in the United States include the dimple cut key used by Fiat and BMW; sidewinder systems used by Mercedes, Lexus, Mazda, BMW, Volvo and Saab; Tibbe system used by Ford/Mercury and Jaguar; and the Porsche High Security system that uses cuts placed at 45° to the key blade.

Used widely in Europe and brought here on the BMW is the deadlock function. With this feature, the door lock is turned passed the normal lock position (typically 12/6 o'clock position) and rotated to a deadlocking

position (typically 9/3 o'clock position). When deadlocked, the linkage for all door locks and trunk lock are mechanically locked into position, making any manipulation with an opening tool almost impossible without damaging a part of the system.

With the enormous number of these cars on the road today, there is a greater need to find qualified locksmiths to service them. Sure, most of these manufacturers make it almost necessary for the owner of a vehicle to go back to a dealer for even a duplicate key. However...more often than not, the dealer himself does not want to be bothered with the work, and gladly passes onto a locksmith that does work for him.

Plus, dealers often need on-the-spot, gotta-have-it-done-today keying. The sad part of the dealer industry is that when a customer needs a lock repaired or replaced, unless the dealer is already using a competent locksmith, the customer either ends up with two separate keys, or pays for a whole new set of locks. This is our opportunity!

#### **Get With The Program**

There's no question that getting started in servicing High Security vehicles will cost a little bit: There's the manuals and training, the new machines, the new locks and supplies. Eventually, however, with proper marketing and planning, this investment will make more than its return.

For example, the first three years in business I received fewer than three calls to do a high security vehicle. After turning down the third job due to lack of equipment and supplies, I purchased all the necessary equipment, took several classes on high security automobile locks, bought the proper manuals, and then marketed my new skill and ability to the dealers in town. The first year I serviced in excess of 15 high security vehicles. At this point the equipment and supplies paid for themselves and everything from that point on was profit.

Plus, the dealers now referred me to customers and other dealers that handled vehicles with high security locking systems. I keyed locks to their customer's cars; making the dealer rich and the customer happy. In addition to this, all the lockouts

fielded by the dealer were referred directly back to me.

#### **Getting Started**

To get started, get knowledge. Follow The National Locksmith and The National Locksmith Automobile Association as we train you in servicing these high security systems. Take as many seminars on these vehicles as possible. Purchase manuals, etc.

Probably the largest purchase will be the key machine. Several manufacturers make excellent high security key cutting machines at varying cost: HPC, Silca, Framon, and Borkey to name a few.

As for supplies, at this point, the only supplier of aftermarket high security locks, lock components, keying and service kits, etc. that I know of is Auto-Security Products (ASP). A catalog, application guide and pricing can be obtained from an ASP distributor.

Keyblanks are manufactured by Silca and Ilco. Contact a Silca or Ilco distributor for information and cost. **IN**



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electronic safe  
locks for...security...  
technology...tradition.

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# TECHNITIPS

## Helpful hints from fellow locksmiths

Send in your  
tips and win.

### HOW TO ENTER

Simply send in your tip about how to do any aspect of locksmithing. Certainly, you have a favorite way of doing things that you'd like to share with other locksmiths. Write your tip down and send it to: *Jake Jakubowski, Technitips Editor, The National Locksmith, 1533 Burgundy Parkway, Streamwood, IL 60107* or send your tips via E-mail to the E-mail address posted in the upper right hand corner of this page. Remember, tips submitted to other industry publications will not be eligible. So get busy and send in your tips today. You may win cash or merchandise. At the end of the year, we choose winners for many major prizes. Wouldn't you like to be a prizewinner in 1995? Enter today! It's easier than you think.



by  
*Jake Jakubowski*

### BEST TIP OF THE MONTH

If your tip is chosen as the best tip of the month, not only do you win the All-Lock Foreign Auto Service Kits, but you also automatically qualify to win one of the many excellent year end prizes!

### EVERY TIP PUBLISHED WINS

Yes, every tip published wins a prize. If your tip is printed, you'll win \$25 in Locksmith Bucks. You can use these bucks to purchase any books or merchandise from *The National Locksmith*. Plus, every tip published will win a copy of the Technitip Handbook. (Please remember to include your complete mailing address - we cannot mail prizes to P.O. Boxes.)

### America Online: NATL LOCK

Use the above address if you are on AOL.

### Internet: [natllock@aol.com](mailto:natllock@aol.com)

Use the Internet address if you are not on AOL.

### These Prizes Awarded Each Month!

- All-Lock Foreign Auto Service Kits - Worth Over \$225!
- Strattec Pinning Kit and Jacket
- American Lock & Supply \$50 Merchandise Certificate
- HPC Pistolpick
- Silca Rubberhead Keyblanks (100 Blanks)
- Pro-Lok PK15 Professional Lock Pick Set
- Sieveking Products EZ-Pull GM Wheel Puller
- A-1 Security Mfg. Quickpull
- Major Mfg. HSK Safe Hinge Shim Kit

**Submit your tip and win!**

Recently, I received two unsigned letters complaining about tips that had been used in this column were submitted to other magazines for consideration and, in both instances, publication. Both anonymous writers castigated the submitters of those tips for sending their tips to more than one trade journal.

Normally, I would not consider responding to any anonymous correspondence that was critical in nature. In this instance, I'll make an exception (without naming the tipsters or the tips involved) since this is an issue I've wanted to address for sometime.

Yes, there have been instances where tips by the same author have appeared simultaneously in *The National Locksmith* and other trade publications. And, yes, there have been instances where tips, again by the same author, which appeared in *The National Locksmith* later appeared in another publication.

On a practical level, there's really nothing that can be done to prevent such duplications from occurring. Why not?

Mostly because of the printing schedules that any publication faces. What you are reading here - right now - written back in March. There may be tips in this current

Technitip column that were sent to me as early as January - or before!

Consequently, if a tipster sends me a tip in January and sends the same tip to another publication at the same time or at a slightly later date; the chances of the tip being used by both magazines would be fairly good since the separate columns are being written months in advance of their actual publication date.

Now, if I were to receive a tip that I knew for certain had appeared in one of the other publications, I would not use it. If, on the other hand, I receive a good, usable tip and I have no indications or proof that it has been or will be submitted to, or used by, another publication ... you can bet your boots I'll print it. I believe other column editors feel the same way.

The only realistic way this sort of tip duplication can be avoided by any publication is if each tipster makes it a matter of personal conscience to submit their tip exclusively to one magazine.

I feel the majority of tipsters are honorable and submit their tips to a single magazine. No doubt there are some tipsters who submit identical tips simultaneously to multiple publications in an effort to get information to as many locksmiths

at one time as possible.

And, I'm sure there are tipsters who offer the same tip to different magazines hoping, perhaps, to enhance their chances of winning a prize or seeing their name in print.

So, when submitting tips to this column, remember this: *The National Locksmith's* Technitip Column is really your column. And, as far as this ol' boy's concerned, any tip that appears here serves one purpose only: to share tricks, tips, ideas and information (from

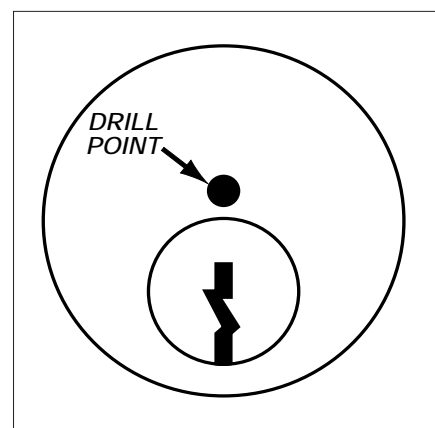
locksmiths) that might make your job (as a locksmith) easier. To that end, I will print any worthwhile tip I receive - unless I know for certain that another publication is, has or will be, using it.

So, friends and neighbors, ya'll jes' keep them tips a'comin' to me. An' iffen ya'll send 'em jes' to *The National Locksmith* an' nobody else - I'd really 'preciate that. But! The impo'tant thang, as fur as this ol' boy's concerned is that ya'll write 'em down an' send 'em in. Ya'll heah?

*All Lock Auto Service Lists Winner*  
**Restricted Keyway Lock Replacement**

Have you ever been called to a lockout where picking the lock just turned out to be impossible? This recently happened to me on a service call to a post office. Normally, in this situation, I would reach for my drill and drill the plug at the shear line, install a new plug or lock and be done with it.

The reason that I did not follow that course of action in this case was because the keyway was a restricted keyway and if I had destroyed the plug, it would have taken six to eight weeks to get a new one. My customer didn't want to wait that long, and neither did I.



**Illustration 1.**

Fortunately, I found a way to save the restricted plug, get the customer through the door and, get the restricted lock back in service almost immediately. All without destroying anything but the mortise cylinder.

I inserted an uncut keyblank in the keyway and, as shown in illustration one, I drilled a 5/32" hole just above the plug and shearline.

After carefully drilling through each of the six top pin chambers, I removed the uncut blank and used a curved pick to push the bottom pins down past the shearline, which allowed me to turn the plug and unlock the door.

Then I simply replaced the drilled mortise cylinder shell with another shell from the same manufacturer (the spacings are the same on both the restricted and non-restricted plugs), rekeyed the lock to a new combination and had a very happy customer.

Mike Ainsworth  
California



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unless it's  
Schwab Safe.**

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Continued from page 94

*STRATTEC Pinning Kit And Jacket Winner*

**Easy Code Machine Check**

Next to my key duplicator, I keep a Schlage cylinder pinned to 99999 with a key that is code cut to those depths. This specially pinned cylinder provides me with a fast and easy method of frequently checking the accuracy of my key machine without wasting any blanks.

It is especially helpful when duplicating large numbers of keys at a time for one customer. If your machine loses its adjustment during this situation, you can wind up with a large number of miscuts in a very short time.

So, periodically, I grab a key out of my throw-away can and duplicate the "9" key. Then I try that key in my "9" cylinder. If it turns smoothly, then I know my machine is duplicating properly and I continue on with my customers keys.

If try the key and the key and it turns hard, then I know my duplicator is cutting high. If the key sticks, and then turns easily, I know the machine is cutting low. Regardless, the machine needs adjusting.

I also use this handy method for checking the spacing when I change cutters. If the key turns hard after setting the depth adjustment, I turn the plug about 90°, leave the key in place and, while holding the cylinder in my hand, I hit the top and bottom of the key bow on my vise a couple of times.

When I turn the key back to the removal position and take the blank out, I will either see impression marks centered in the cuts or up on the ramps. If the dimples are centered on the flats then the machine is just cutting high but the spacing is O.K. If the marks are on the ramps, then the spacing is off.

If you try this tip you might want to use test cylinders for the more popular locks that you are likely to come across in your area of the country.

Tom Taylor, CPL  
Via E-Mail

*HPC Pistol Pick Winner*  
**Burless Safe Drilling**

Anyone who has ever drilled a safe knows how messy the shavings can be and how quickly they can get under your skin if you kneel on them or how

hard they can be to clean out of a carpet that they have fallen on.

Here's a way that I have found to keep my work area clean and free of most of the shavings that are generated when I find it necessary to drill a safe door, or try to keep my hole in a in-floor safe debris-free.

Get several barrel-type magnets (like the ones used in contact switches for alarms or enunciators). When you drill a floor safe, you can use one to remove the shavings from the hole and keep it clean. When you drill a regular safe door, you can place one or more under your drill point to keep the shavings from falling to the floor.

These magnets can also be used to hold working notes to the safe door close to the work area for speedy reference.

David M. Dowe  
Via E-Mail

*American Lock & Supply Merchandise Certificate Winners*  
**Hyundai Key Generation**

When fitting a first key for a Hyundai Excel (1986 to 1989 and possibly later models) I have found that the ignition plug can be pulled out of the housing and the wafers read

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with very little effort.

Using the back side of a diamond pick to raise and hold the nylon key buzzer activator up, and a hook pick to release the plug retainer, the plug will pull out of the housing just slightly.

When it is out as far as possible, begin raking the wafers and apply light pulling pressure while pulling the plug towards you. It will come right out!

Both the nylon buzzer activator and the plug retainer are in line with the "K" in the word "LOCK" on the face of the cylinder.

Once you have the plug out (be careful not to lose and wafers - which can happen on an overly worn lock) insert a blank key, read the wafers and generate an operating key from your readings.

This can be done in much less time than by pulling any of the other locks on the vehicle.

Jim Parrie, CRL  
Via E-Mail

Silca Rubber Headed Key Blanks  
Winner

**Spirolox Washer Remover**

If you work with S&G mechanical combination locks, one of your pet peeves may be the removal of the Spirolox washer that holds the wheel pack to the shaft.

I have tried the Spirolox insertion and removal tool that was manufactured some time ago and have since tried small screw drivers lock picks, etc. - all with only moderate success. Even then, I sometimes poke myself with the sharp tool.

Here's a technique which may not be widely known that works. Obtain a common ball-point pen (preferably one with a metal tip since they last longer and work better), retract or remove the filler. Use the tip of the pen's body to engage the pointed end of the Spirolox washer and then simply lift and remove the washer. (See illustration 2.)

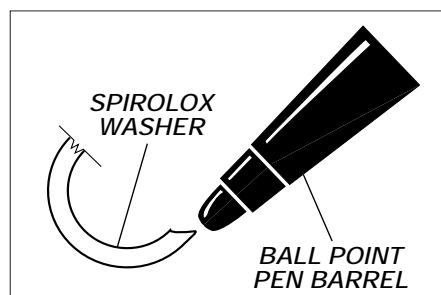


Illustration 2.

Presto! the washer is off with no gashed fingers or frazzled nerves!

Donald Shiles  
Maryland

Sieeking Products GM E-Z Wheel  
Puller Winner  
**Six To Five Pin Cylinder Conversion**

What do you do when you find yourself with a five pin cylinder and only a six pin plug and you have to make it work?

After looking around the shop for something to make a sleeve from, I found a 1/2" brass compression ferrule. By grinding and filing the tapered ends square I had a spacer that worked perfectly. (See illustration 3.)

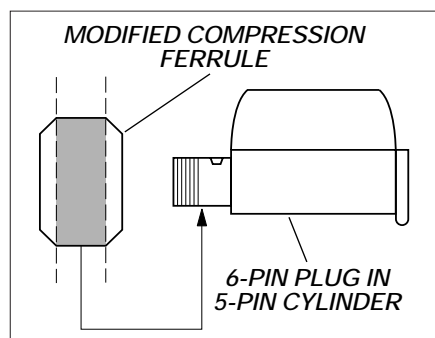


Illustration 3.

The modified compression ferrule took up the slack of the empty sixth pin space and after putting the retaining cap, etc. back on the cylinder and the cylinder back on the lock, I had a satisfied customer.

Harold Schak  
Illinois

A-1 Manufacturing's Quick Pull Tool  
Winner

**Kwikset Cylinder Removal Tool**

While rekeying a Kwikset knob the other day, one of the blades on my Rytan cylinder tool broke. Not having a replacement blade, I tried removing the cylinder with a couple of narrow beaded screwdrivers - in vain.

After a little thought, I came up with the following solution:

Using about a 4" strip of #14 AWG copper wire I put a tight 180° bend in the middle of the wire and opposing 30° bends about 1/2" back from each end of the wire. (See illustration 4.)

Holding the rounded end firmly with lineman pliers I inserted the new Kwikset tool into the knob, and with pressure from one hand holding the knob and the other hand holding the

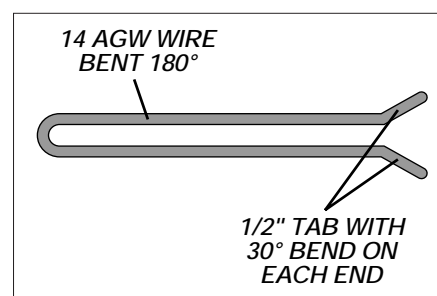


Illustration 4.

pliers, I rapped the handle of the pliers on the work bench and the cylinder popped right out!

Ron Rognlie  
Minnesota

Major Manufacturing's Prize Winner  
**GM Steering Shaft Nut Snap Ring Remover**

The GM retaining clip that prevents the bolt holding the steering wheel on from coming off can sometimes be difficult to remove. And, if you're not careful, can easily go flying and be lost if it should suddenly "pop" of the shaft.

To make this clip easier to remove and less likely to get lost, I use a small pair of bent, needle nose pliers that I modified as shown in illustration five.

By cutting a groove in the outside of the jaws of these pliers I can insert the jaws into the clip, spread the jaws so the clip is trapped in the groove,

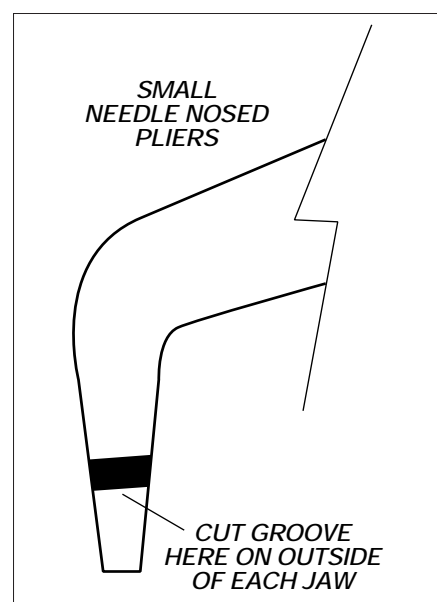


Illustration 5.

continue to spread the jaws and the clip is off the shaft. This tool also aids in replacing this clip.

Jay Chrisite  
N. Carolina

*Technitips Handbook Winners*  
**Renault Slot Key Fix**

A customer complained that their ignition key could not be inserted completely into the ignition, thus preventing them from starting the car. The key was an RN30 (X147).

Normally when you insert this key in the ignition, the key lifts the locking pin in the back of the ignition and allows it to fall through the hole in the blade of the key. Something was

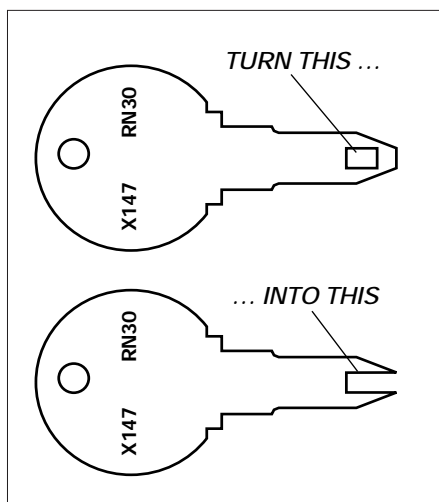


Illustration 6.

obstructing the movement of the locking pin and I couldn't determine what without disassembling the entire ignition.

The customer did not want to go to any expense on this nine-year old car and asked me to try to find an alternative to the expensive disassembly.

As shown in illustration six, I filed the hole out to a slot. This allowed the key to bypass the locking pin and allowed the customer to start the car. They drove off happy, and I haven't heard of any problems with their new-style key.

Joe Zolynski  
 Virginia

*Editor's Note: The lock you are speaking of belongs to the Renault and is known as the slot key. The small obstruction they had is the steering wheel lock mechanism. A common problem is for this piece to be pushed back down into the lock, blocking full entry of the key (just as your customer has experienced). Your solution to the problem should not be considered a "Fix." It is not! The inoperation of that particular component may have*

*undesired aftereffects that in some cases may be life threatening.*

*Your tip, however, is an excellent method for removing and replacing the lock.*

**Homemade Plug Follower**

Here's a way to make a cheap, yet effective, plug follower.

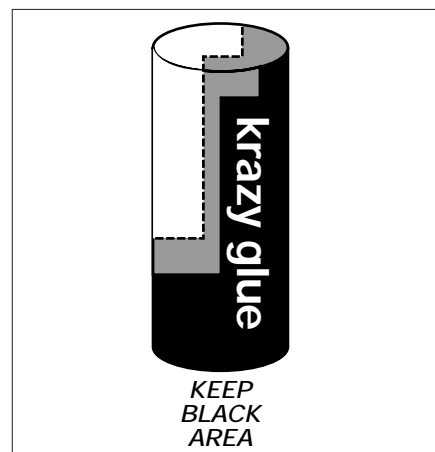


Illustration 7.

Use the case of an old Krazy Glue container and cut it as shown in illustration seven. This unique  
*Continued on page 124*

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*LaGard*



Circle 251 on Rapid Reply

# Electronic Safe Locks

*Safes, ever the challenge, are becoming more of a challenge as the industry starts to integrate the marvels of electronics. From simple, single and duo combination possibilities, to full fledged access control systems, your customer has a range of selections based on price and function from which to chose. As a locksmith/safeman these locks may only be a ripple in the wave of the safe lock technology.*

*AMSEC*



Circle 252 on Rapid Reply



*Sentry*

Circle 254 on Rapid Reply

*Sargent & Greenleaf*



Circle 253 on Rapid Reply

*Vindicator*



Circle 255 on Rapid Reply

# Opening The Dreaded

CABLE AND GUARDS MAKES THIS ONE OF THE HARDEST OPENING VEHICLES TODAY.

# CONTOUR/MYSTIQUE

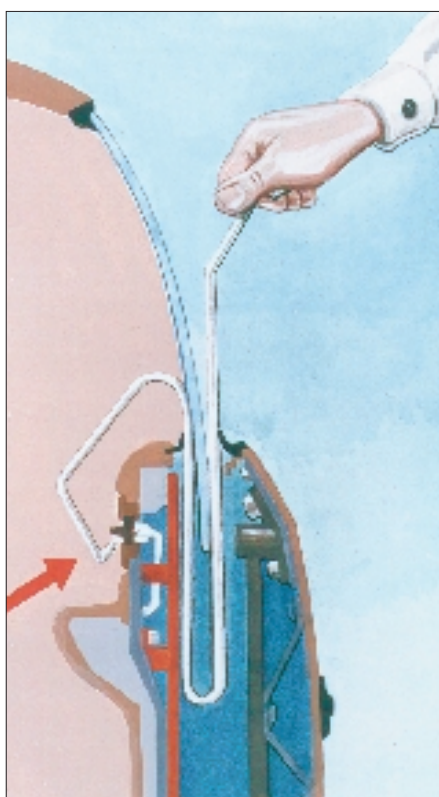
**T**ake a look at the all time toughest linkage system to come off the Ford design board since General Motors introduced the heavily guarded modular lock systems in the mid-eighties. This challenging vehicle, originally produced by Euro-Ford under the name of Mondeo, is now being mass sold under the banner of Ford and Mercury here in North America with essentially the same



by  
D. Scott Selby



**1. Unlike other vehicles, both the inside latch release and latch lock are heavily covered and are activated by cables not linkage rods.**



**2. A new Under-The-Window tool needed to be designed to open this vehicle.**

body style and carrying two new versions of tag names known as Ford Contour and Mercury Mystique.

Last winter, my technical assistance hot line advice was to forget the quick remedy of lockout tooling and instead go through the drawn-out process of obtaining the correct key code. If the caller was not equipped to do code work or didn't have extensive picking experience, then I simply advised them to turn the job down until better information on the vehicle was obtained.

That was when conditions were cold. Now we're able to research the same vehicles again during a season of above 45°F temperatures. This time around proved that the winter cautions published in the 1995 Z-Tool System Manual do not apply above the 45° threshold.

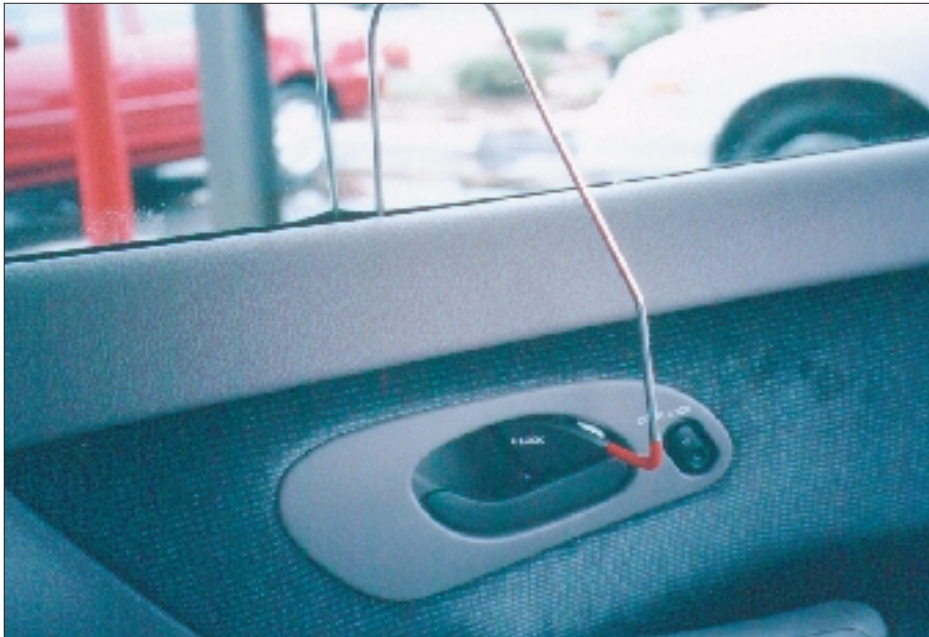
### Revealing Research

After removing both passenger side door panels, I realized why so many encountered so much trouble in



getting the vehicles opened. Both the Contour and Mystique have in common a new linkage system. The unique design does not use the common linkage rod to connect the manual lock button to the lock latch, but instead uses a throttle like cable much like those used on motorcycles which houses both the manual lock linkage and the door handle linkage. (See photograph 1.)

The use of cables encased within a plastic sheathing is not a new idea and has been worked around on other models, resulting in quick damage free openings, but this fortified system goes a step further. The front door cable feeds through a grommet which leads the cable into a white plastic box that houses the lock latch assembly, obscuring all latch components from



**5. If power locks are not an option, hit the manual lock button.**

It is very easy to remove this strip; however, there is an extra expense the customer must bare in doing so. Before executing the removal of the front door weatherstripping, make your customer aware that this Ford model uses a lead-like center core weatherstrip that is not reusable once removed. This is due to unavoidable distortions to the part caused by the removal. (Fords Probe also utilizes the same soft core design.) Any Ford body man will tell you that even the gentlest of care will not save the \$21 part.



**6. As a last resort, pull out on the active release lever and the car will open.**


In addition, there is yet another valid reason to remove excessive pressure. The windows installed on these models are of the all time thinnest I have noted in the 12 years I've tracked the how-to art of car openings. Thin, cold or hot windows combined with tool and wedging pressure also increase the chances of a broken window.

Once you have completed the first step of entering the door cavity then, depending on your particular situation, use one of the following options for unlocking the vehicle.

Option 1 - If the vehicle is equipped with power locks, and the battery is still good, simply depress the top of the power lock switch. (See photograph 4.)

Option 2 - Depress the manual lock button. This may require some degree of tool twisting, but it is possible to accomplish. (See photograph 5.)

Option 3 - As a last resort position the tool behind the inside release lever and twist the tool to move the handle. Because this is an active release lever, the door will unlock and open. (See photograph 6.)

*Scott Selby is the technical researcher of the Grand Master Z-Tool® System. For more information contact: Slide Lock Tool Company Inc., 1166 Topside Rd., Louisville, TN 37777. Phone (800) 336-8812 or (615) 577-8470. *

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# DORMA'S ED 800

INSTALLATION OPTIONS FOR ADA COMPLIANT POWER ASSIST OPENINGS.

by  
Mark Gloekler

This article will provide a brief description of DORMA's ED 800 "low energy" power operator, then explore the many options available for activating the device.

The ED 800 differs from "high-energy" automatic operators which are typically difficult to install and which power open and power close with significant force and speed. When actuated, the ED 800 operates within the parameters of ANSI A156.19, Standard for Power-Assist and Low-Energy Power Operated Doors. The low energy units do not require complicated safety mats, safety beams, guide rails and other devices necessary for the high-energy automatics, as the operational speeds and forces of these units present no hazards to pedestrians. The difference between low and high energy units is sufficient that the fully automatic units are governed by a separate standard, ANSI A156, Standard for Power-Operated Pedestrian Doors.

The ED 800 is based on the DORMA TS 83 surface applied door closer. It offers the same operating features as the TS 83, including sweep, latch, backcheck, and adjustable spring power. Under normal operating conditions when assistance is not required, the ED 800 functions as a manual door closer.

The "brain" of the ED 800 is the on-board microprocessor. At first application of power, the ED 800 completes an initial "learn cycle" which communicates all important operational characteristics about the opening to the microprocessor. Thereafter, the microprocessor constantly monitors opening and closing speeds/forces. If it detects the slightest deviation from its operating parameters, it will immediately respond to ensure user safety and convenience.

Power failures present no problems for the ED 800... it simply operates like a standard door closer. When power resumes, the unit completes a learn cycle and returns to its operational state.

The ED 800 microprocessor incorporates two slide selector switches and four user adjustments that are configured at the time of

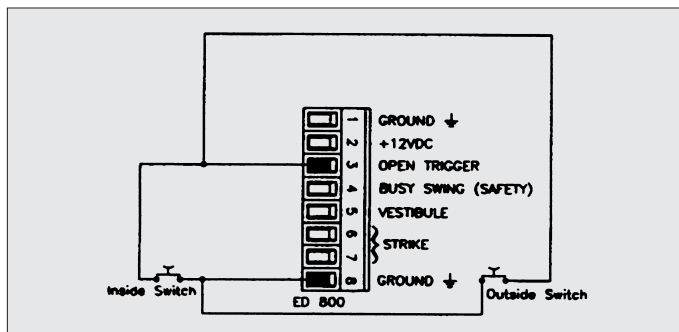
installation. This permits the unit to be universal for virtually any opening, as simple adjustments are all that are required to tailor it for each individual application. One of these field-selectable functions provides either low-energy or power assisted opening.

### Low-Energy Function

In the low-energy mode, the door is powered open upon activation within the ANSI A156.19 speed and force guidelines. The door opens to a position that is adjustable between 85 degrees and 115 degrees, and stays in the hold-open position for a period lasting from five to 60 seconds, after which the door begins its normal closing sequence.

The ED 800 is notable for its safety features. In the opening cycle, the door exerts a maximum of 15 lbs at the latch edge. If an obstacle is encountered, the power to the door is reduced, allowing the door to stop and remain stationary in a balanced state from which it can easily be pushed open or closed, as needed. The door remains in the balanced state for the selected hold-open time, which begins at the point that there is no door movement.

The maximum force generated at the latch edge of the door during the closing cycle is also 15 lbs. Again, the door balances if an obstacle is



1. For hardwire applications, easy access is made to the terminal block.

Continued from page 110

encountered, and remains balanced for a predetermined period prior to initiating the closing sequence.

**Power-Assist Function**

The power-assist function allows the door user to exert only minimal opening force in order to negotiate the opening. When the power assist is activated, the unit responds by opening the door approximately 1", thereby alerting the user that it is active. The door can then be opened with a reduced opening force that is adjustable from 1/2 pound to 5 pounds, as measured from the latch edge of the door.

The power-assisted reduction of opening force remains active for a period equal to the time the unit senses door movement, plus the duration of the time-delay setting, after which the door begins to close under the control of the TS 83 door closer.

**Activation Options**

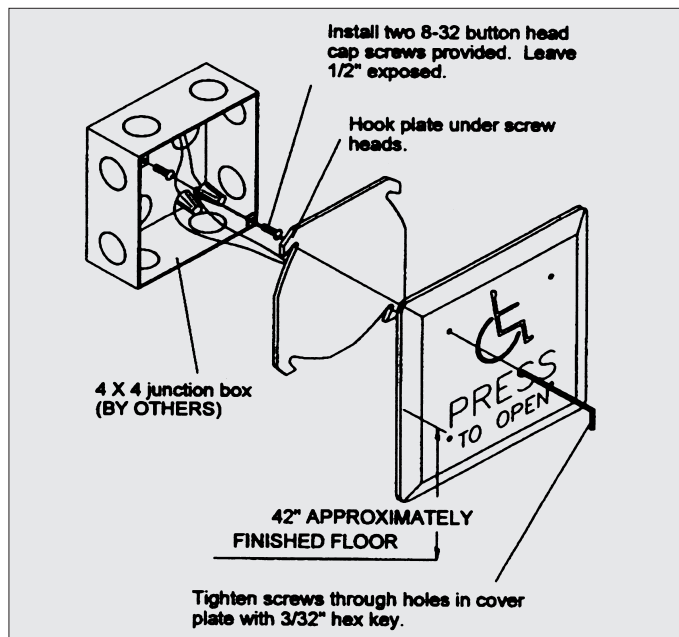
Activation of the ED 800 can be by any normally open circuit that is momentarily closed to signal the door. Activation options include hard-wired switches, radio frequency transmitter/receiver units and both motion sensors, and a wide variety of other options including card readers, keypads, palm readers and other security-related access control devices.

There is also a push and go feature for doors fully dedicated to accessibility which must assist opening at all times. Push and go is a standard, field-selectable option that activates the door when it is opened more than 1". Activation can be by push and go only, or by push and go in conjunction with other options. Push and go will "abort" when the door is opened rapidly by an able-bodied pedestrian, saving wear and tear on the unit.

**Activation By Hard-Wired Switch**

Wall or frame switches are often hard wired directly to the ED 800 external connector. These actuating devices should be located at a sufficient distance to allow time for the door to open after the signal is sent. They are normally installed 32" to 42" above the finished floor.

The ED 800 has an external connector located on the side of the



2. Shown with a junctions box installation, the 800 FS-1 frame switch is one example of a hardwire control.

controller module that can be removed to allow easy access to the terminal block screws. (See illustration 1.) When wiring, remember to provide sufficient wire (maximum 18 gauge wire) to reach the connector when it is plugged back into the controller.

The wall switch should be mounted at a junction box (provided by others); two wires are then run from the switch to the operator. Each wire is connected to a switch terminal and the switch backing plate is attached with the screws provided.

The 800 FS-1 frame switch is specifically suited for installation in 1-3/4"x4" frames Installation of the 800 FS-1 is equally straightforward. (See illustration 2.) A junction box is generally not used with this type of switch.

**Radio Frequency Receiver/Transmitters**

DORMA's 800 RFR-12 radio frequency receiver is intended for use on applications where hard wiring is not practical such as on retrofit installations or where it provides a special convenience over hard-wired actuators. The receiver can be used in conjunction with wall-mounted, hand-held or key chain transmitters, all of which are available from DORMA.

To insure the receiver is only activated by the intended transmitter(s), it must be encoded with a sequence of numbers that match those of the transmitters. The

code is determined by the positions of the 10 small switches located on the receiver board. Any combination of on (closed) or off (open) positions can be selected by using a small screwdriver or ball point pen. After selecting the code, be sure that it is recorded so that it can be duplicated in any transmitter intended to operate the door.

The receiver antenna is installed by threading it to the connector on the ED 800. The receiver should be located in close proximity to the ED 800 unit, away from direct moisture, and permanently anchored. The antenna should be positioned to be clear of any metal structures. (See illustration 3.)

Transmitters should provide reliable operation from a distance of about 50' from the receiver, though the environment and location of both transmitter and receiver will affect range.

**Transmitter Options**

Radio frequency transmitter options used in conjunction with the 800 RFR-12 radio frequency receiver include both permanently mounted and portable units. The 800 WS/RFT-1 wall switch with radio frequency transmitter is, like the receiver, suitable for outdoor use, but should not be exposed to direct moisture. Installation is a simple matter of anchoring the backplate of the wall switch securely to the mounting surface at a height approximately 42" above the finished floor. After selecting a transmitter code that matches that of the receiver, the nine-volt battery should be connected.

Hand-held and key chain transmitters provide flexibility in applications where a limited number of known individuals will require the assistance of the ED 800. The transmitters are battery operated and can be made operable simply by setting their codes to match that of the receiving unit.

**Motion Sensors**

Motion sensors activate doors that are dedicated entirely to accessibility. The 800 MS-1 Motion Sensor detects only approaching traffic and ignores departing traffic, allowing the door to

Continued from page 112

close more quickly and conserving heating and air conditioning energy.

The motion sensor must be centered in the opening and mounted at a height between 6'6" and 9'8" above the floor. It should not be exposed directly to precipitation. If it is for the pull-side of the door, it should be located so the detection pattern is beyond the swing of the door. To avoid false signals, it should be fastened securely and should not vibrate.

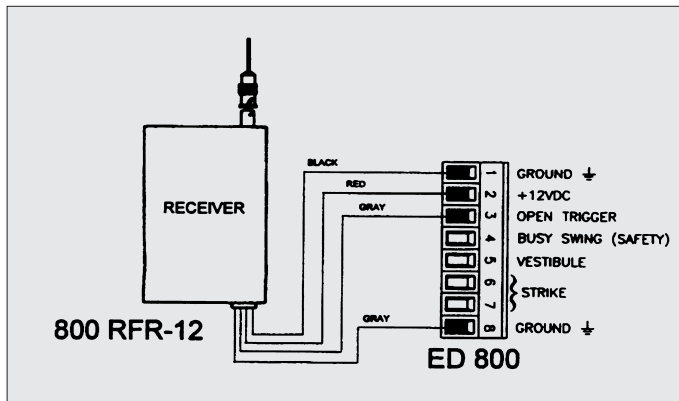
The sensor cannot be placed behind panels or other materials. No objects which might move or vibrate should be in the detection field, nor should there be neon signs in the field.

To install the sensor, remove the cover by inserting a small screwdriver between the base and the cover and gently prying them apart. Prepare the mounting surface according to the full-size template packaged with the detector, then run the wire provided with the detector from the ED 800 to it.

Remove the plug connector from the detector and wire according to the wiring diagram provided. Replace the plug connector and fasten the detector base securely. Select the detection pattern according to the instructions.

**Presence Sensors**

External safety devices such as mats, guide rails, and sensors are not required with the ED 800. However, a safety circuit is built into the unit. Use of the optional 800 PS-1 presence sensor connected to the safety circuit prohibits opening of the door if an obstacle is sensed at the time of actuation. The 800 PS-1 presence sensor is an active infrared detector which is driven by a microprocessor. This allows for a detection zone very close to the floor (approximately 12"), regardless of what the background or target conditions are. Using a pulsed, infrared signal, the presence sensor continuously scans a detection zone that has a pyramidal shape with a rectangular cross section. The sensor's photodiode continuously measures the reflected signal. As soon as an object or



3. For use where conventional hardwire applications are difficult, a wireless transmitter/receiver can be used. Above shows the 800 RFR-12 receiver and its connection to the ED 800.

person enters the detection zone, the reflected signal changes and a detection signal is sent to the ED 800. If the person or object stands still in the detection pattern, the detection/response continues for a period of time (adjustable from three to 25 minutes). After this time, the presence sensor determines that the immobile object is part of the background. The unit adapts to the new background, and the door closes.

The presence sensor must be mounted at a height of 6'3" to 8' above the floor. The sensor should not be exposed to direct rain. It cannot be placed directly behind false ceiling panels, and should be located in the center of the opening overlooking the hinge side. When the door is opened to the 90 degree position, there should be no obstructions in front of the sensor.

Installation begins with the removal of the left end cap. The set screw is loosened to allow removal of the mounting bracket, which is then anchored to the wall or ceiling.

To run the cable, locate the plug connector on the left side of the

detector. Each of the plastic end caps has two pre-cut slots which can be popped out for the cable to pass through. If necessary, there is a recess on the back of the mounting bracket to allow the cable to pass from one end of the detector to the other. There is no need to drill any holes in the aluminum housing.

It should be noted that the 800 PS-1 Presence Sensor requires an independent 24 volt power supply. The DORMA 08039980 Transformer 120 VAC is recommended. Remove the orange plug connector from the presence sensor and make the electrical connections as shown in illustration four. Then slide the sensor into the mounting bracket, selecting one of the three mounting angles. For the initial setting, the 26 degree angle is recommended.

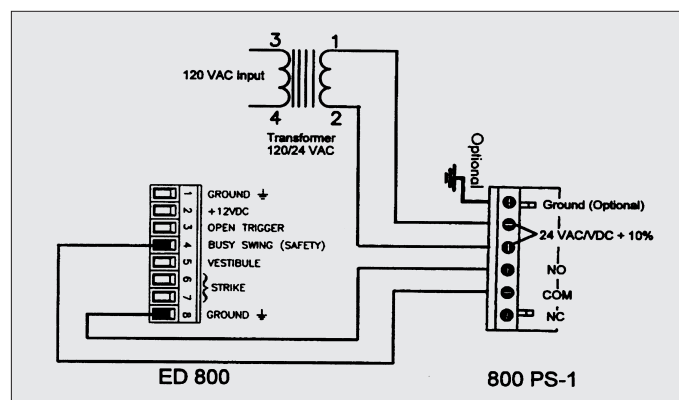
Tighten the set screw and replace the plug connector, then follow instructions for selecting the detection pattern.

**Maximum Flexibility**

The ED 800 is a highly flexible, cost-effective solution to the problem of making buildings accessible to the physically challenged and to those who need only occasional assistance. Its flexibility derives in part from the fact that it is available in one universal design with a choice of two arm options that permit it to be configured for all installations, push-side and pull-side mounts and left- or right-hand doors.

Full-size templates and simple door and frame preparation make installation of the ED 800 a one-person task. The wide range of activating options can further ease installation and enhance the value and function of the ED 800 for truly barrier-free access.

*The author is Sales Support Manager for DORMA Door Controls, Inc. For more information on the ED 800 and other DORMA products contact a DORMA distributor or call (800) 523-8483.*



4. Connecting the 800 PS-1 presence sensor.

# BITS & PIECES

## **Informative Tidbits for the Security Industry**

We've all heard :  
"You worked on  
my so-and-so and  
now my this-and-  
that isn't working."

Well, for the  
believe it or not  
column there are  
two procedures  
(one avoidable the  
other correctable) that may leave the  
customer angry and the locksmith  
scratching his head. Here are the  
complaints -



by  
**Tom Seroogy**

#1. Avoidable - You opened my car  
and now my battery's dead.

#2. Correctable - You made keys for  
my car and now it doesn't run right.

While these problems may not  
appear right after service or seem to  
be related to the service you  
performed, they very well may be.  
According to separate bulletins  
received by technical writer Tom  
Mazzone, locksmiths should be aware  
of the two following service problems  
with GM vehicles.

1. Parasitic Battery Drain caused  
by damaged alarm switches is  
prevalent on vehicles with factory  
alarms where the security system is  
armed/disarmed by switches attached  
to the door locks. During an opening  
these switches often become damaged  
and stick in a permanently closed  
position. This, in effect, causes a  
minute yet constant drain on the  
battery (thus the term "parasitic").

When opening a vehicle locksmiths  
should always question the vehicle  
owner about previous attempts at  
opening the vehicle. A wedge and  
light should be used and inspection of  
the back of the lock should be made  
when possible. If damage is evident,  
inform the customer before  
preceding.

2. Driveability Problem after a  
service procedure requiring battery  
disconnection. On GM vehicles,  
keeping the vehicle running smooth is  
accomplished by the Idle Air Control

(IAC) and the Electronic Control  
Module (ECM), creating the correct  
fuel/air mixture and idle speed based  
on information received by various  
sensors throughout the fuel and  
emission systems. The correct logic or  
data is retained in the ECM as long as  
power is available. When the battery  
has been disconnected, this  
information is lost. For locksmiths,  
this may happen while doing service  
on an airbag equipped vehicle.

Once the battery is reconnected,  
and with the loss of the correct logic,  
the vehicle may experience bouts of  
high and wildly fluctuating idling. To  
correct the problem, start the vehicle  
and let it idle for 20 minutes or let the  
customer take it for a four or five mile  
drive. This allows the ECM and IAC to  
readjust and record the settings again.

As a tidbit, an automotive supply  
house, S&S of Elmhurst, Illinois,  
intends to offer a new service to the  
auto dealers who have auto alarm  
systems purchased and installed by  
S&S.

Should a customer who owns a  
vehicle with an S&S alarm system  
ever get locked out of the vehicle, the  
owner can simply call S&S. Upon  
verification of ownership, S&S will  
transmit a signal via satellite to unlock  
the car.

Is this service a wave of the future?  
I doubt it, but I'm not going to bet the  
farm on it not happening either.

For mystery lovers, try this out. A  
novel involving locksmithing by  
someone who knows the trade! "The  
Wright Special" is a mystery in which  
an antique bicycle collector and a  
forensic locksmith join forces to  
investigate a murder. Written by Mary  
Ellen Cooper of Stillwater, Oklahoma  
(Wife of Charles Cooper, RL, and  
mother of Ralph Cooper, CML) the  
book is available for \$7.95 (plus UPS  
shipping charges) by calling the  
author toll-free at (800) 619-4771.  
Coming soon to area bookstores.

Bill Gray of Bill's Lock & Key,  
Spencer, Indiana, reports to us on a  
new American made motorcycle  
coming out of East Troy, Wisconsin -  
Buell. With close ties to Harley  
Davidson (they own 49 percent of  
Buell), the Buell is available through  
Harley distributors but is a far cry  
from the low rider image created and  
owned by Harley. Instead, the Buell  
has the sleek tour/race profile, typical  
of many of today's bikes.

As for us locksmiths, the ignition is  
Harley - using the tubular high  
security key and lock. Codes and  
bittings are not released on this Fort  
Lock produced lock.

According to Gray, who is quite  
familiar with the Harley line, the gas  
cap and fork keys may be made by  
Neiman, with the fork lock possibly  
using the Silca NE5 or NE44 key.

Bill and *The National Locksmith*  
magazine will keep you posted on this  
new bike.

From the rumor mill: *The National  
Locksmith* technical writer Michael  
Hyde has word from inside Ford that  
the 1996 Taurus will be incorporating  
a new transponder security system.  
After extensive testing on Ford  
Europe vehicles in the U.K., the  
system is apparently ready to be  
introduced to the States.

According to early releases on this  
system, a data chip located in the head  
of the key will transmit a 128 bit  
encoded RF signal to a receiver within  
the vehicle. Even with a correct  
mechanical key, the vehicle will not  
start without first receiving the signal.  
And, as might be expected, keys are  
only available from Ford, and attempts  
to replicate the correct signal for any  
given vehicle is currently unrealistic.  
(But, remember, nothing is  
impossible.)

Before you turn the page, just a  
reminder to take a look at Tom  
Mazzone's article, page 11, on GM's  
new security system to be introduced  
in late 1995 and 1996. **TNL**



# KEY CODES



## Honda Motorcycle Codes

### 101-820, 121-840

HPC 1200 CM  
Code Card - MC30  
Cutter - CW1011  
Stop - Shoulder  
Framon  
Cut start - .100"  
Cutter - FC8445  
Cut to cut - .095"  
Spacing Block #1  
Stop - Shoulder

### DEPTHS

1 - .276  
2 - .256  
3 - .236  
4 - .217

### A,B,C,D - 00-99

HPC 1200 CM  
Code Card - CMC37  
Cutter - CW1011  
Stop - Shoulder  
Framon  
Cut start - .098"  
Cutter - FC8735  
Cut to cut - .098"  
Spacing Block #3  
Stop - Shoulder

### DEPTHS

1 - .276  
2 - .244  
3 - .213

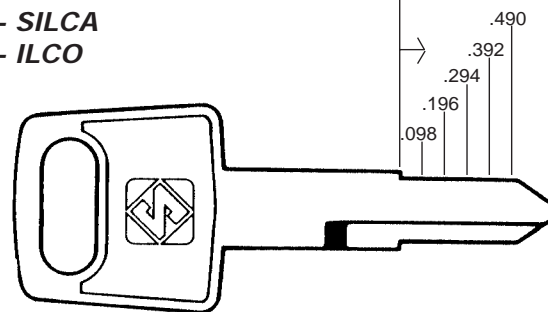
### HON 31R X84

101-120  
201-220  
301-320  
401-420  
501-520  
601-620  
701-720  
801-820  
A00-99  
B00-99

### HON 31 X138

121-140  
221-240  
321-340  
421-440  
521-540  
621-640  
721-740  
821-840  
C00-99  
D00-99

### - SILCA - ILCO



## Honda Motorcycle Codes 101-820, 121-840

101-120	121-140	213	22113	233	404	12321	424	517	42114	537	708	44112	728	
101	42211	121	214	24113	234	405	43321	425	518	11324	538	709	12412	729
102	43411	122	215	44223	235	406	33431	426	519	23134	539	710	31122	730
103	13221	123	216	21342	236	407	42441	427	520	31144	540	711	12142	731
104	21231	124	217	34314	237	408	34212	428				712	14342	732
105	12231	125	218	12414	238	409	41412	429	601-620	621-640	713	33413	733	
106	43141	126	219	31334	239	410	14132	430	601	24211	621	714	44133	734
107	14341	127	220	13434	240	411	11232	431	602	24411	622	715	34233	735
108	42112	128			412	12213	432	603	14121	623	716	43214	736	
109	14212	129	301-320	321-340	413	31413	433	604	14421	624	717	41214	737	
110	11322	130	301	44211	321	414	44123	434	605	24141	625	718	14424	738
111	11442	131	302	42121	322	415	44214	435	606	12241	626	719	42234	739
112	43313	132	303	21321	323	416	21124	436	607	24112	627	720	21244	740
113	42413	133	304	34331	324	417	14124	437	608	14412	628			
114	12123	134	305	11244	325	418	34324	438	609	21142	629	801-820	821-840	
115	32433	135	306	12312	326	419	23424	439	610	14142	630	801	22411	821
116	41143	136	307	41122	327	420	43134	440	611	21313	631	802	23121	822
117	33143	137	308	12132	328			612	34313	632	803	22321	823	
118	21414	138	309	33142	329	501-520	521-540	613	34143	633	804	44131	824	
119	14214	139	310	42342	330	501	42441	521	614	42343	634	805	43431	825
120	32144	140	311	41124	331	502	41221	522	615	22114	635	806	43341	826
			312	34133	332	503	41421	523	616	24114	636	807	41313	827
201-220	221-240	313	32343	333	504	42141	524	617	23414	637	808	14122	828	
201	23211	221	314	41314	334	505	21241	525	618	41424	638	809	34142	829
202	34411	222	315	33414	335	506	24341	526	619	41334	639	810	34342	830
203	13221	223	316	24414	336	507	32112	527	620	12144	640	811	21123	831
204	24421	224	317	41124	337	508	43312	528				812	24423	832
205	12231	225	318	11424	338	509	14322	529	701-720	721-740	813	43233	833	
206	21441	226	319	23144	339	510	41142	530	701	32121	721	814	22343	834
207	21312	227	320	14244	340	511	21442	531	702	21421	722	815	31443	835
208	24412	228			512	14213	532	703	22131	723	816	43214	836	
209	41422	229	401-420	421-440	513	42313	533	704	44331	724	817	33224	837	
210	21132	230	401	22311	421	514	11423	534	705	41241	725	818	33134	838
211	42142	231	402	33121	422	515	31433	535	706	22441	726	819	31434	839
212	24142	232	403	24121	423	516	43143	536	707	13441	727	820	24244	840



Continued from page 118

# Honda Motorcycle Codes A, B, C, and D 00-99

A/C 00-99		A/C 60		B/D 19		B/D 47		B/D 75	
A/C 00	22111	A/C 61	33231	B/D 19	22132	B/D 47	33113	B/D 75	21223
A/C 01	32111	A/C 62	11331	B/D 20	32132	B/D 48	11213	B/D 76	31223
A/C 02	23111	A/C 63	21331	B/D 21	13132	B/D 49	21213	B/D 77	12223
A/C 03	33111	A/C 64	31331	B/D 22	23132	B/D 50	31213	B/D 78	32223
A/C 04	21211	A/C 65	12331	B/D 23	33132	B/D 51	12213	B/D 79	13223
A/C 05	31211	A/C 66	22331	B/D 24	11232	B/D 52	22213	B/D 80	23223
A/C 06	12211	A/C 67	32331	B/D 25	21232	B/D 53	32213	B/D 81	33223
A/C 07	22211	A/C 68	13331	B/D 26	31232	B/D 54	13213	B/D 82	11323
A/C 08	32211	A/C 69	23331	B/D 27	12232	B/D 55	23213	B/D 83	21323
A/C 09	13211	A/C 70	21112	B/D 28	32232	B/D 56	33213	B/D 84	31323
A/C 10	23211	A/C 71	31112	B/D 29	13232	B/D 57	11313	B/D 85	12323
A/C 11	33211	A/C 72	12112	B/D 30	23232	B/D 58	21313	B/D 86	22323
A/C 12	21311	A/C 73	22112	B/D 31	33232	B/D 59	31313	B/D 87	32323
A/C 13	31311	A/C 74	32112	B/D 32	11332	B/D 60	12313	B/D 88	13323
A/C 14	12311	A/C 75	13112	B/D 33	21332	B/D 61	22313	B/D 89	23323
A/C 15	22311	A/C 76	23112	B/D 34	31332	B/D 62	32313	B/D 90	11133
A/C 16	32311	A/C 77	33112	B/D 35	12332	B/D 63	13313	B/D 91	21133
A/C 17	13311	A/C 78	11212	B/D 36	22332	B/D 64	23313	B/D 92	31133
A/C 18	23311	A/C 79	21212	B/D 37	32332	B/D 65	11123	B/D 93	12133
A/C 19	33311	A/C 80	31212	B/D 38	13332	B/D 66	21123	B/D 94	22133
A/C 20	21121	A/C 81	12212	B/D 39	23332	B/D 67	31123	B/D 95	32133
A/C 21	31121	A/C 82	32212	B/D 40	21113	B/D 68	12123	B/D 96	13133
A/C 22	12121	A/C 83	13212	B/D 41	31113	B/D 69	22123	B/D 97	23133
A/C 23	22121	A/C 84	23212	B/D 42	12113	B/D 70	32123	B/D 98	11233
A/C 24	32121	A/C 85	33212	B/D 43	22113	B/D 71	13123	B/D 99	21233
A/C 25	13121	A/C 86	11312	B/D 44	32113	B/D 72	23123		
A/C 26	23121	A/C 87	21312	B/D 45	13113	B/D 73	33123		
A/C 27	33121	A/C 88	31312	B/D 46	23113	B/D 74	11223		
A/C 28	11221	A/C 89	12312						
A/C 29	21221	A/C 90	22312						
A/C 30	31221	A/C 91	32312						
A/C 31	12221	A/C 92	13312						
A/C 32	32221	A/C 93	23312						
A/C 33	13221	A/C 94	33312						
A/C 34	23221	A/C 95	11122						
A/C 35	33221	A/C 96	21122						
A/C 36	11321	A/C 97	31122						
A/C 37	21321	A/C 98	12122						
A/C 38	31321	A/C 99	32122						
A/C 39	12321								
A/C 40	22321								
A/C 41	32321								
A/C 42	13321								
A/C 43	23321								
A/C 44	33321								
A/C 45	21131								
A/C 46	31131								
A/C 47	12131								
A/C 48	22131								
A/C 49	32131								
A/C 50	13131								
A/C 51	23131								
A/C 52	33131								
A/C 53	11231								
A/C 54	21231								
A/C 55	31231								
A/C 56	12231								
A/C 57	22231								
A/C 58	32231								
A/C 59	13231								

TNL



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# SHOP TALK

## Helpful questions and answers

*Shop Talk* answers readers questions on any locksmith related topic. Only letters judged to be of general interest will be published. We regret that we cannot answer individual letters. Because of the volume of mail, only those questions answered in the magazine will receive answers. Send your questions to *Shop Talk*, *The National Locksmith*, 1533 Burgundy Parkway, Streamwood, IL 60107.

**Q** Would you discuss the rekeying of the Dexter key-in-knob lockset. From my understanding, Dexter is no longer around? Pat Garity, MI.

**A:** You're right Pat, Dexter was sold a while ago to Master Lock Company. Initially the Dexter name was retained and eventually replaced by master. Until recent years, the

hardware itself has remained the same.

As regarding the lockset, rekeying procedures depend on which model you have. As this is not included in your letter, let me state the procedures for the 3000 series DEXLOCK followed by procedures for the 7000 series Duralock.

It should be noted that both of these procedures, along with photographs, are part of "The National Locksmith Guide: Door Lock Encyclopedia" by Bob Sieveking. This guide contains service and keying procedures and specifications for the most common residential and commercial knobsets and deadbolts.

The 3000 series knobset is a Grade 3 residential unit and it is first necessary to remove the lockset from the door for rekeying the cylinder.

To remove the lock from the door, depress the inside knob catch and remove the inside knob. Remove the rose cover and unscrew the two mounting screws. Remove the knob from the door.

With the knob removed, pick or use a working key to turn the plug 180° or to the 6 o'clock position. This aligns a locking lug on the back of the plug with a release broaching on the spindle. Pull the cylinder out of the front knob for rekeying.

The 7000 series knobset is a

# INDUSTRY MEETINGS

## July 9-15, 1995

Associated Locksmiths Of America  
1995 Annual Convention and  
International Trade Show,  
Orange County Convention Center,  
Orlando, Florida,  
Contact: *Becky Martinez for details*  
(214) 827-1701.

## August 3-6, 1995

Clark Security Products' 1995 Trade  
Show & Educational Conference,  
Holiday Inn Int'l Airport, Denver, CO  
Contact: *Pam Engdahl*  
at (619) 974-5273.

## August 11,12,13, 1995

North Carolina Locksmith's  
Association Quarterly Meeting,  
Charlotte, NC  
Contact: *Kathy Stewart*  
at (910) 578-8865.

## August 24-27, 1995

Clark Security Products' 1995 Trade  
Show & Educational Conference at  
Turf Valley Hotel & Country Club,  
Ellicott City, MD

Contact: *Pam Engdahl*  
at (619) 974-5273.

## September 8-10, 1995

The Association of Ontario  
Locksmiths Annual Convention,  
Sheraton Toronto East Hotel,  
Scarborough, Ontario  
(416) 321-2219.

## September 14-17, 1995

Clark Security Products'  
1995 Trade Show & Educational  
Conference at Sheraton Long Beach,  
Long Beach, CA  
Contact: *Pam Engdahl*  
at (619) 974-5273.

## October 6-8, 1995

1995 MINK Convention and Trade  
Show, Omaha, NE  
Contact: *Keith Delano*  
(308) 345-6174.

## October 12-15, 1995

Penn-Ohio Locksmiths' Association,  
Inc. Annual Convention and Trade  
Show '95, Holiday Inn-Youngstown  
North/Metroplex, 1620 Motor Inn

Dr., Girard, Ohio 44420

Contact: *Martha Egger or Jerry Egger*  
(216) 676-8464, or *Sally Paris* (216)  
267-2693, Fax (216) 267-2511.

## October 16-22, 1995

Pacific Locksmith Association  
1995 Tri-Regional Locksmith  
Conference, Holiday Inn at the  
Airport, Portland, Oregon  
Contact: *Stan Hauer, Co-Chairman,*  
*Hauer's Locksmith, 1606 Marina*  
*Drive, Astoria, OR 97103,*  
*(503) 325-6003 phone & fax.*

## October 22, 1995

Nassau-Suffolk Master Locksmith  
Association, 2nd Annual  
Extravaganza, Travelodge Hotel,  
Van Wyck Expressway, JFK Airport,  
Queens, New York  
Contact: *Greg Scala, All-Phase*  
*Locksmith (516) 691-5837.*

Send your press release of events to  
*The National Locksmith, 1533*  
*Burgundy Parkway, Streamwood,*  
*Illinois 60107. Attn: Industry Meetings*

heavier, Grade 2, cylindrical knobset, similar to the Schlage A series knobset. This unit does not have to be removed from the door for removal. To remove the outside knob and lock cylinder, pick or use a working key to turn the plug 45° or to about the 2 o'clock position. Use a probe to depress the knob catch found on the side of the spindle. Pull the knob off and remove the cylinder for rekeying.

**Q** I am writing you this letter to see if you could possibly help be in the location of a keyblank. The key is used for a small brass cabinet (Tabernacle)

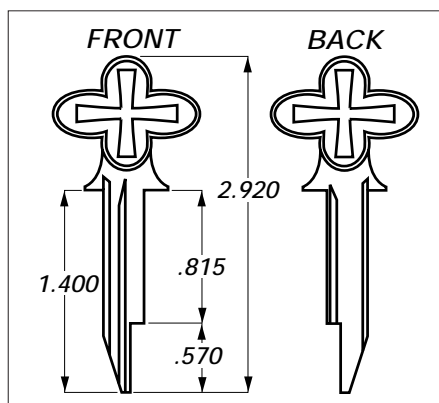


Illustration 1.

by a church to store sacraments. The lock when operated turns a revolving door in the domed shape cabinet.

The bow on the front side is labeled "AGNUS DEI SAFE." The backside is labeled SG, for the Yale keyway used. (See illustration 1.) I'm told that this piece was made in Italy over 30 years ago and that the keys cannot be found. Can you help? Morris E. Booth, Jr., CT.

**A:** It took a bit, Morris, but I think we were able to find you some of the last remaining blanks. When I got your letter I immediately contacted John Allen at Yale. While he did not recognize the key, but based on the cabinet's Italian origin, John forwarded the request to Yale Italy.

Fortunately, it didn't take long and we received an answer from S. Spagnolo at Yale Italy. Mr. Spagnolo has informed me that they have been able to find two of these blanks and are forwarding them to you.


**Q** I need opening instructions for the 1995 Chevy Z-71 Full Size pickup. Melanie Long, GA.

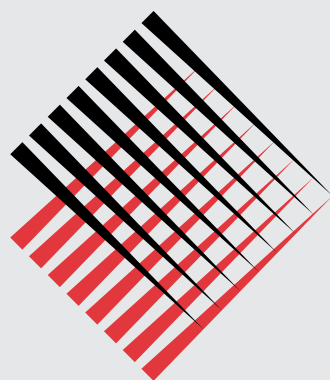
**A:** According to D. Scott Selby of Slide Lock Tool Company the 1995 Full Size GM pickups are

identical to all the full size GM pickups from 1988 up. The Z-71 is actually a reference to the suspension used.

Selby states that the lock linkage is clearly exposed and horizontal. Use the Z-tool or a similar tool to grasp the rod and unlock the door. Slide Lock Tool Company can be contacted at 800-336-8812.

**Q** I have been contacted by a local Studebaker Club looking for a keyblank source. Blanks for the 1963 and prior are readily available, but finding blanks for 1964 and up is difficult. I'm looking for Ilco 64SP and 64SS or equivalent keyblanks. Can you help? Larry Johnson, WI.

**A:** While this key can be obtained from any Ilco keyblank distributor, Larry, we were able to find your keys on the '64 and up Studebaker at Allied Locksmith Supply out of Akron, Ohio. These blanks are in short supply and cost in excess of \$1 each. But, considering the need the club has for them, the cost is well worth it. Contact your Ilco distributor or contact Allied at 800-544-2102. 



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## AUTOMOTIVE SECURITY

Continued from page 26

### Mercedes 190E 2-Track Specifications

Key Machine: High Security Sidewinder

Depth Keys: Mercedes 2-Track w/Alarm, 13 cuts

Keyblanks: Silca HU55P, Ilco S34YSP

Tumbler Positions: Bow To Tip

1	2	3	4	5	6	7	8	9	10	11	12	13	
X	X	X	X	X	X	X	X	X	X	X	X	X	Ignition
X	X	X	X	X	X	X	X	X	X	X	X	X	Doors
X	X	X	X	X	X	X	X	X	X	X	X	X	Trunk
X	X	X	X	X									Glove Box

Note: Make sure to clear all burs and/or surfaces that may cause the key to get stuck on a tumbler.



## BEGINNER'S CORNER

Continued from page 31

6-pin tumbler cylinder for maximum security. The cylinder is rekeyable.

The pinning kit is American Lock Model PK-1. (See photograph 3.) The

kit contains top and bottom pins, springs, retaining screw, and security nut. To rekey this lock, turn the key to the open position. Loosen the Allen nut at the rear of the lock to release the cylinder. (See photograph 4.) Punch out the roll pin that holds the shaft to the rear of the cylinder. (See photograph 5.) Holding the cylinder with the holes in the bottom facing upward, turn the key one half revolution (180 degrees). Remove the key, then dump the old pins through the holes. Insert the new key, and replace the pins with new pins matching the key code. (See photograph 6.) Turn the key one half revolution and remove the key. The cylinder is now ready to be installed in the lock.

## TECHNITIPS

Continued from page 100

follower can be squeezed to fit almost any cylinder.

A. M. Pollak  
New York

### Cold Weather Clip Warmer

I think that anyone who works on

automotive locks in very cold weather should carry a blow-type hair dryer in their truck.

When the temperature is well below freezing, the plastic clips used to hold lock linkages in place become brittle and can break under very little pressure when you need to remove them.

I use the hair dryer to warm this clips up before trying to pry these clips loose. It works very well.

John Carty  
Massachusetts

### Directional Lube Tube

The plastic tube that comes with aerosol spray lubricants is fine for spraying lubricant horizontally into the keyway of a lock.

I modified my tube to spray in an upward direction by cementing a hypodermic needle into the end of the tube and then bending the needle to a slight angle with a pair of pliers.

By spraying the lubricant upwards to the top springs and pins, I feel the lock is better lubricated.

Walt Thompson  
Georgia





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# TEST DRIVE



**Taking Industry  
Products for a Spin  
Around the Block**

## INTELOCK'S INNERKEY

**PRODUCT:** Series 2000 Digital Deadbolt by InteLock Technologies, 5627 Gibraltar Drive, Pleasanton, CA 94566-9018. Phone (510) 225-0300, Fax (510) 225-0600. Available through distributors with a suggested list price of \$129.95.

**PRODUCT DESCRIPTION:** An electronically controlled deadbolt unit with a key override feature.

The standard, residential grade deadbolt allows entry via input of a code or through the use of a key. Codes are user programmable and range from one to four digits in length.

Our sample came with a brass 6-pin Schlage C keyway cylinder keyed five. The cylinder is easily removed and can be replaced by 6-pin Schlage, Arrow or similar style deadbolt insert cylinders with slight tailpiece modification.

Although our sample unit came with a 2-3/8" backset, 1" throw deadbolt, standard units are packaged with an adjustable 2-3/8" or 2-3/4" backset bolt. Schlage's B250 deadlatch unit can also be used with this lock.

The attractive oval shaped unit comes in four finishes: Bright Brass, Antique brass, Bright Chrome and Satin Chrome.

The combination is entered by rotating the code ring on the exterior side of the lock. The display speed is adjustable during the programming mode.

The alternate code can be made both active and inactive.

Powering the electronics is a 3 volt lithium battery. Use of the lithium battery technology

allows for years of use without needing a replacement.

**FRIENDLINESS:** With any electronic lock, friendliness is contingent on two factors: Ease of installation and ease of programming.

The Series 2000 gets high grades in both. The unit is easily retrofitted to the standard 2-1/8" crossbore by 1" edgebore, and 2-3/8" or 2-3/4" backset. Using the Schlage B250 deadlatch (not available from InteLock), a nightlatch function can be obtained, allowing automatic relatching of the door, lending this unit even more versatility than it has currently.

Programming is equally as easy.



Simply press the interior button, enter the proper code and then press the interior button again.

From here it's simply a matter of entering the desired personal code, alternate code, and the display speed.

**COMMENTS AND SUGGESTIONS:** The 2000 is an extremely easy lock to install, program and use.

Offering alternate keyways and a deadlatch may make it a little more versatile.

Offering this same unit in Grade 2 and Grade 1 versions is equally as appealing, and may open more doors for commercial applications.

**DESCRIPTION:**  
InnerKey Digital Deadbolt by InteLock Technologies

**COMMENTS:**  
Versatile and easy to install and use.

**TEST DRIVE RESULTS:**  
Excellent single door control for both residential and commercial applications.

While designed primarily for the residential markets, this unit is as saleable to small commercial accounts as a means for controlling single doors.

**CONCLUSION:** Considering the ease of installation and operation, there's no reason the locksmith should not take advantage of this lock's potential for residential and commercial security.