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**CODES**  
Kenworth G101-G598  
— page 128 —

# The National Locksmith®

February 1997  
Volume 68, No. 2



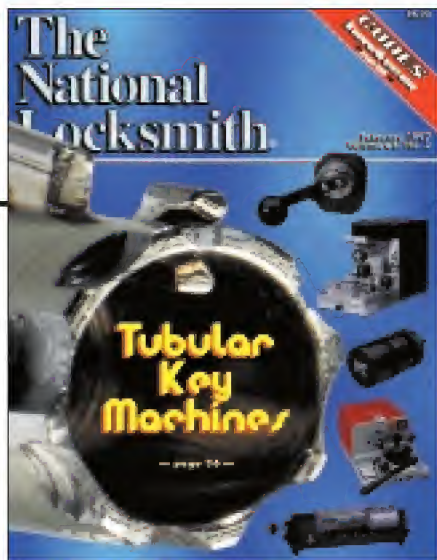
## Tubular Key Machines

— page 36 —





**On The Cover...**



Tubular key cutters come in a variety of shapes, sizes and styles. From hand helds to table tops, you are sure to find one that best fits your needs.

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# COMMENTARY



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## Your Editor's early morning adventure!

**M**-m-my fff-fingers are still fff-freezing from this morning's adventure at the car wash. Cars get really grimy on Chicago's roads in the winter and since I was early for work this morning, I decided to detour a block out of my way to have my '96 Jeep Grand Cherokee washed at a nearby establishment.

I left the car where they instructed me so the staff could vacuum it out before pulling it into the automated wash. The whole process should have taken about five minutes.

Within a couple of minutes, however, the car wash manager informed me that he had accidentally locked my keys in the car, and asked if I carried a spare. (Even a locksmith publisher doesn't think to carry a spare!)

When I informed him that I didn't carry an extra key, the manager walked out of sight for a moment, and then reappeared with a really nasty set of beat up car opening tools. Half the tools consisted of bent coat hangers, interspersed with a few actual tools.

He proposed to jam a Slim Jim down my door panel, while another employee advised him to tear out some of the weather stripping and insert his tool above the window. Naturally, I felt that this might be an appropriate time to inform these gentlemen that not only was I not a fool, but that I am also the publisher of a locksmith magazine, and that none of them were going to so much as touch my car, unless it was with a clean rag!

By this time the car was surrounded by the kids who work at the car wash. Now I admire the fact that they are all gainfully employed, but frankly they looked a whole lot like gang bangers, and they were all grabbing "tools" and heading for both front doors.

I don't doubt that they could have gotten into my car. But I was also sure that I wouldn't have a linkage left to my name by the time they finished.

Remember I said I was a locksmith publisher, emphasis on the word *publisher*? Well, I have opened a car or two in my time, but I still preferred

the idea of having someone a bit more qualified than me open my baby...preferably someone who did not learn his trade as a member of the Latin Kings.

When I confiscated the entire set of tools, I thought these kids were going to cry. We were all cold and miserable, the car wash was blocked, and a line of customers was honking. Plus, trying to open my car promised to be the entertainment of the day.

Remembering that the locksmith's locksmith, Greg M ang o, should just be pulling up to the office, I put in a call for help, and shortly, Greg arrived on the scene with a very unnecessary smirk on his face.

Greg selected the horizontal linkage tool, and wedged the window, fidgeting uncomfortably for a moment.

"Uh, do you have an inspection light?" he asked, an obvious play for time. My reply was cordial. "No, dammit!" I shivered, "Now open this sucker."

Moments later, I was on my way, with a clean, undamaged Jeep washed for free, three coupons for free deluxe car washes, and a managing editor with ego still intact. It wasn't a bad morning at all. Now if I could just w-w-warm up!

*Marc Goldberg*



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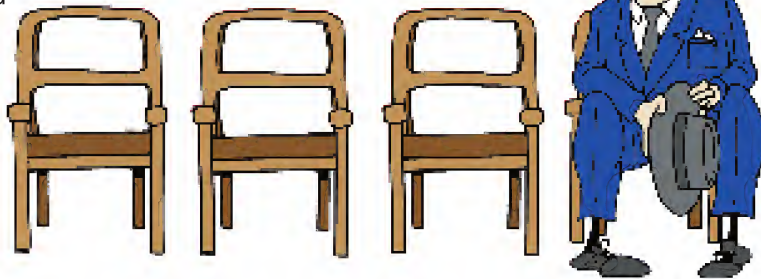
**Marc Goldberg**  
Editor/Publisher



# Mango's Message

Lately, there has been much talk about the worthiness of locksmith associations, both locally and nationally. Some feel associations are a waste of time. Others feel associations are necessary to the continued growth and success of the locksmith trade. Then there are those, who although seldom participate or attend association meetings, feel associations are necessary just the same. It's like much of this society's attitude about religion. Few truly practice their ordained religious upbringing, but most feel it's an important ingredient to an individual's development and foundation. As contradictory as that belief may be, most fall into this category.

## Association Blues



enjoy strong membership support and active participation. Unfortunately, this does not hold true for most. Dissemination, fragmentation, and separatism would best describe such associations. Why is this? Why are so many associations struggling for active membership support? Is it politics? Is it the cliques? Is it the bellyaching? Is it the competition? Is it the lack of education? Is it the lack of leadership? Is it the lack of camaraderie? Is it laziness?

Is it incompetence? I believe it is all the above and then some.

Few locksmiths attend or are even a member of their local association, but overall, the majority of them feel that associations are a good thing. Yet, if most feel that associations are a good thing, why aren't more active members? It's all very confusing isn't it?

I have attended a number of different association meetings over the years and I can tell you that the truly successful ones have a leader at the helm, limit the politics, dis-ban the cliques, quit the bellyaching, welcome their competitors, provide education, build strong camaraderie, and have a sense of direction. It is those associations that realize there is a fine thread that links us all, no matter what personal, ethnic or religious differences we may have and unite their members to focus on issues and individual growth, that are truly successful.

Over the course of my tenure in this industry, I have spoken with many individuals about this topic. I am fascinated by the scope of people's opinion and stance on associations and have always found their responses intriguing. For most, there is definitely a yin and yang attitude towards their association or associations in general. I must confess that my own attitude is the same.

The pros and cons of associations has always been one of my hot buttons. If you want to get some steam billowing from my smoke stack, throw a log on that fire and I can quickly become a run away train. I think associations are wonderful institutions which can play a very important role in our lives. I also feel they can be an absolute waste of time, which is something I seem to have less and less of. The less time I have, the less I want to waste sitting in an association meeting accomplishing — or learning — nothing.

The question that must be asked then, is why does this contradictory attitude exist? What causes many of us to have such defined opinions both good and bad, about our association?

There are a few associations around the country that do

*Continued on page 8.*

**Greg Mango  
Managing Editor**





# Mango's Message

Continued from page 6

Despite my rather cynical and sometimes unflattering opinion of some association practices, politics or boorish atmosphere, I like most, feel that associations are a good thing that can be extremely beneficial to all. I also understand that association board members are unpaid volunteers, often fulfilling positions nobody else wants. Make no mistake about it, being an association board member is one of the most thankless jobs you could imagine. Everyone wants to complain, but nobody wants to help solve the problem. Everybody wants something, but nobody wants to invest the time to attain it.

Take me for example; it's easy for me to scrutinize association practices from my Lazy-Boy rocker recliner with a critical eye. Yet, I would not want to be an association president (or even a board member for that matter) even if it was a paid position. (Unless of course it matched the six figure salary I'm currently making. Even then it wouldn't pay enough. I'm constantly bucking for a pay raise now and Marc's standard reply is: "I don't know what you're complaining about Greg, I'm paying you a six figure salary now!" My standard reply is: "I know you are Marc, but the first figure of the six, is a \$ sign!")

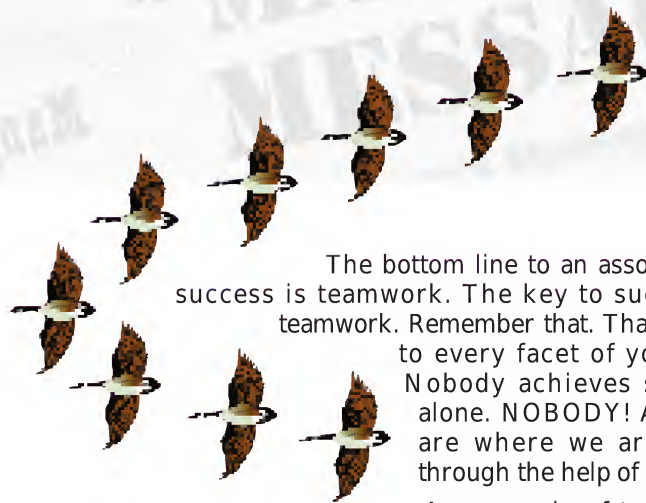
**A**s with everything in life, there are two sides to every story. Our personal opinions are determined by which side of the fence we are standing on at the time. Association members complain about the association board members and association board members complain about the members at large. Members feel that associations do not provide enough affordable — meaning free — education. Associations claim that finding a qualified instructor at an affordable — meaning free — price is impossible.

Association members feel that associations should be responsible for the promotion of locksmiths to the public. Associations feel that locksmiths should be responsible for their own promotion.

Association members feel that their association should do more for them. Associations say they would do more if the members would get involved!

As you can see, we can go back and forth like this endlessly without ever reaching a resolution.

If you find yourself having conflicting feelings about your association, or you are a board member finding yourself questioning your purpose and would like to make a change, three things are required. First, a problem needs to be recognized. Then, a desire to correct the problem is required. Finally, a practical solution to the problem needs to be planned and implemented. If any one of those three ingredients is missing, nothing will change. If you are incapable of recognizing a problem, unwilling to make a change or unable to devise a practical solution, it is impossible to progress. Nobody reaches their maximum potential with a closed mind.



The bottom line to an association's success is teamwork. The key to success is teamwork. Remember that. That applies to every facet of your life. Nobody achieves success alone. NOBODY! All of us are where we are today through the help of others.

An example of teamwork can best be described in the following analogy:

### "Lessons From Geese"

**q** As each goose flaps its wings, it creates an "uplift" for the bird following. By flying in a "V" formation, the whole flock adds 71% more flying range than if each bird flew alone.

**Lesson:** People who share a common direction and sense of community can go further and get where they are going quicker and easier because they are traveling on the thrust and strength of one another.

**q** Whenever a goose falls out of formation, it suddenly feels the drag and resistance of trying to fly alone and quickly gets back into formation to take advantage of the "lifting power" of the bird immediately in front.

**Lesson:** If we have as much sense as a goose, we will stay in formation with those who are headed where we want to go.

**q** When the lead goose gets tired, it rotates back into formation and another goose flies at the point position.

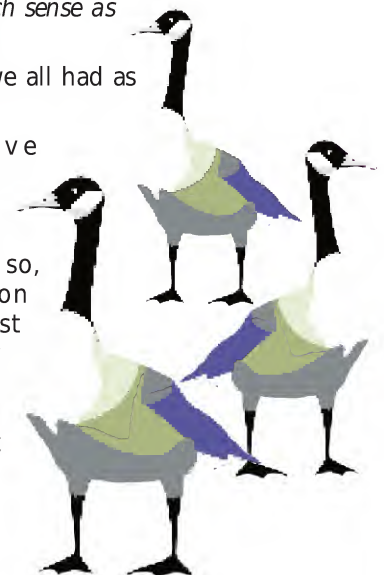
**Lesson:** We need to make sure our honking from behind is encouraging — not something less than helpful.

**q** When a goose gets sick or wounded or shot down, two geese drop out of formation and follow it down to help protect him. They stay with the goose until it is either able to fly again or dies, then they launch out on their own with another formation or catch up with the flock.

**Lesson:** If we have as much sense as geese, we'll stand by each other.

Wouldn't it be fantastic if we all had as much sense as a goose?

For all the negative connotations that may evolve around associations, there is a tremendous amount of positive. If you don't believe so, attend the next association meeting in your area. You just may enjoy it. You just may learn something. You just may make a friend. If not, maybe you're just the one that can make a difference! **TRN**





February 1997

# Letters

*The National Locksmith* is interested in your view. We do reserve the right to edit for clarity and length.

## Cool Site!

Congratulations!!! With your new cool web site we have been going through every page out here in Holland... great graphics! Keep up the good work and see ya next month. Oh yeah, Sleutel Service Plus, our name, means key service plus.

*Hank and Edwin Witsen  
Holland*

## You Can't Touch This!

Keep up your good work with the best trade magazine in the world. No others can touch it or meet it, let alone beat it.

*Harry A. Chavez, Sr.  
E-Mail*

## Do Not Duplicate

Here's what I do if a customer I do not know asks me to duplicate a key that is stamped DO NOT DUPLICATE.

I ask for a valid ID and write the information on the invoice (I already have an ID section printed on my invoices) just as if I were

replacing lost keys for a car owner. It is not against the law in Arizona to duplicate a non restricted keyway, but it would help the police if they came in asking questions. Don't forget to have the customer sign the invoice.

*Vic Szilard  
E-Mail*

## Why Be Cheap?

It has been my experience that the cheap locksmith hurts all of us, and give away rates only contribute to the public perception that we are all just handymen or women. I wish they had to pay a few people to work for them and they would quickly see that their charges are too low.

Most of the cheap, so called locksmiths always respond by saying that those who charge a fair price are gouging or ripping off our customers. That argument usually comes from someone who does this part-time or as a sideline to supplement their retirement check. Or, it's from someone who doesn't want to make a living at this, but just wants a little extra money in their pocket.

They spout off about how they care about the public, but don't care a whit about their brother locksmiths who are charging a FAIR PRICE to try and make a full time living and support their family. It must be sad to take business by being the cheapest. Where is the pride in that?

*B. Henderson  
E-Mail*

## Some Really Do Care

Do the manufacturers care about us and our needs? Some certainly do! After reading one of the Technitips I submitted to *The National Locksmith*



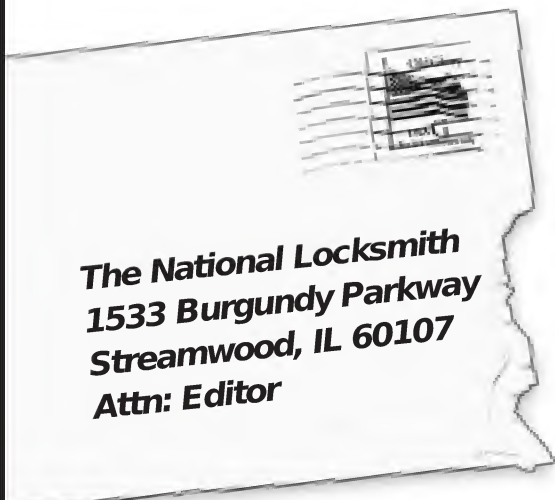
regarding a retrofit wafer for Bargman cylinders, Russell Alsbrook, the National Sales Manager for All-Lock contacted me by phone. He let me know they had developed a pinning kit for just that purpose and would like to send me a sample for field testing.

All-Lock also has Bargman replacement cylinders BC89014 (L-300) and BC8907 (L-200) which he sent also. This was all at no charge to me!

I tested their A-6070-P Camlock Service Kit on my own L-400 cylinders as well, by decoding the key with the HPC decoder using card #55 for Yale disc. The only problem was decoding the first space because original Bargman keys have large bows and don't fit in the decoder. The spaces 2-5 decode exact, and are perfect for use with the RV cylinders. The kit passed with flying colors, and is a perfect addition to your toolbox if you work on RV locks. Thanks for caring All-Lock!

*Larry Kanzer  
Pennsylvania*

**Continued on page 12**





Continued from page 10

## Will We Prevail?

Every month a letter or article appears questioning the lack of participation in ALOA or local associations. Why aren't locksmiths attending? Why won't locksmiths get involved in the legislative issue? Do members suffer from chronic apathy? Are they ignorant of the dangers of legislation? Are they stupid? Do they just not care?

The following are my thoughts that I should probably keep to myself, but won't.

Legislation may end locksmithing as we know it. The alarm industry will prevail because although their national membership is one third the size or ALOA's, their membership participation is many times that of ALOA's. They will win because they are organizationally superior to the locksmith industry. Is that in part due to national companies like ADT, Ademco, Silent Knight, Wells Fargo, who develop dealerships down to a local level? Do the owners of alarm companies approach business, in general, in a

more entrepreneurial manner than lock shop owners?

They will win because they have more money than the locksmith industry. The alarm industry has a strength that few locksmiths I know have. Just about every alarm, with or without a service contract, has a monitoring fee that the alarm company gets a piece of. We might get the occasional service contract, but basically once a lock is installed, no more checks need to be written to us.

They will win because the alarm industry was comfortable with electronics long before locksmiths ever dreamed of having a magnet to keep a door locked. The alarm industry has taken CCTV and access control and kicked the dog out of the locksmith in these fields because the learning curve and the level of comfort with electronics was on their side. How long before they begin to take over installation and service to electronic safe locks? It seems to me that an electronic combination hooked to a couple of relays could turn on a camera and sound an alarm. How long before the alarm companies

figure out they can steal locksmiths from locksmith companies and have it all? They don't need a license to do locksmith services.

O.K. Back to why locksmiths don't attend meetings:

1. Technicians aren't paid enough hourly during the regular workday to instill the desire to pay national dues to ALOA and additional dues for local associations.

2. Owners are probably putting in at least 50-70 hours a week (often more)

trying to run the business and act as a technician. Who's going to play catch with junior and kiss the wife before bed if every night your at a meeting? If you are a locksmith in our area and are trying to keep up with what's going on, then you have the MLA, VLA, ILA, LADC and ASIS associations you need to be concerned with. That doesn't include, if you're trying to keep up with the alarm industry, the NCAA or the BVFAA or the MBFAA or the NBFAA.

Let's not forget the time we need to set aside for reading the 6 trade magazines every month and some time to study for the PRP. What about networking meetings, talks to neighborhood watch associations, marketing avenues like chamber of commerce dinners, property management associations, the list goes on.

3. Locksmiths (non shop owners) can't see what good their participation in an association would do. Are the people they work for receptive to ideas they think might increase revenue? If technicians are left out of the decision making process in the shop, why participate at all? Who goes to the meetings? The owners. What percentage of the meetings are locksmith employees?

I heard that ours is the only profession more people retire into than out of. That's not altogether a bad thing. There is the need however, for people 25 to 45 years old if the industry is to grow. How do we provide trainee's in that age bracket a living wage? These people have energy, maturity, and are looking to find a better career. Give them concrete steps which will help them advance. Maybe they will be able to put up with the wages for a while if they see a defined future.

Volunteerism is a wonderful personality trait. Volunteering one's opinion is not. I am curious about how others feel about some of these topics. I'll look forward to your response.

I appreciate the opportunity to sound the fool. I know I feel better. Anyone else?

Jim Mullins, CPL  
E-Mail

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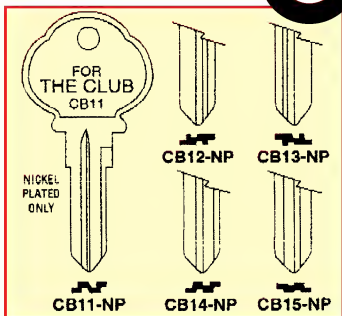
SECURITY CAFÉ

**ACSI Modifications Now UL Listed For Sargent 8200 Mortise Lock**



Architectural Control Systems, Inc. (ACSI) Series 1500 Electric Lock Modification is now UL listed for the Sargent 8200 Mortise Lock. The lock is available in fail safe or fail secure control. Voltages available are 24 VAC/DC and 12VAC/DC. ACSI offers a number of options including request to exit monitoring, latch bolt monitoring or locked status monitoring.

**Jet Introduces New Keys**



The original new China A keys are marked with four digit numbers, usually starting with the number "9" and with no letter before the number. The original new China Keys C, D, E and F are marked with a three digit number with no letter before it.

**Dynalock Corp. #7200 Digital Keypad System**

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120 codes, concealed mounting plate, 3 LED's beeper, 11 function buttons and ease of programming from the keypad.

**Secura Key's Touch Key® Works Just Like A Card**

Secura Key is offering its TOUCH KEY® card. TOUCH KEY® looks and works just like a card on all Secura Key TOUCH CARD® readers reading SKC-06 cards, but is as compact as a key with measurements of 2.937" x 1.312". The pocket-sized TOUCH KEY® is made to attach easily to most key rings. TOUCH KEY® is



raised print and are 6" x 9". There are nine different versions to choose from and all come with the raised Braille translation. Along with the signs, Don-Jo has created a display board

Security Café

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detailing the specifications. The display board is perfect for hanging in stores or will call areas.

**NT Dor-o-matic Introduces Earthquake-proof Top Pivot**

NT Dor-O-Matic Hardware announces the introduction of product #776 Extended Throw Top Pivot. This unique product is made exclusively for earthquake prone areas



to keep doors securely hung in the opening even though the clearance between the door and frame may be off by as much as an inch or more. The Extended throw Top Pivot, or "earthquake pivot", prevents damage, injury or catastrophe. The Top Pivot keeps the door attached under architecturally stressful situations and provides additional earthquake security for building personnel and/or visitors.

**JLM Wholesale Stocking The SDC Series 101 Exit Check®**



The 101 Exit Check features include verbal commands and digital count-down display. The models available include single door units, double door units in one housing and tandem sets for pairs of doors with surface panic devices. All functions are self contained. Power transfers and switched panic devices are not required. The 101 Series is field programmable for your delayed egress applications.

**Locknetics Introduces The New 2000 Series Supermag™**

The SuperMag is the only direct-pull magnetic lock to provide 2,000 pounds of holding force in the same sized template footprint as that for a standard-sized housing. The 2000 Series





S E C U R I T Y C A F É

SuperMag's modular finish plate design offers a full array of architectural finishes. Finish plates are available in satin aluminum, bright chrome, bright brass, satin chrome, satin bronze, stainless steel, satin black, satin brass and dark satin bronze. To Select the appropriate finish, the Locknetics distributor simply inserts the desired finish plate into the locks slotted face.

**NCR Makes Mas-Hamilton Group's Cencon System 2000® Its Top Choice For ATM Security**



**MAS-HAMILTON**  
G R O U P

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devices from another world leader- the Mas-Hamilton Group®.

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provide superior security and dependable fit for heavy duty industrial applications such as gates, storage facilities, and perimeter security.

Model 780 is precision machined from a 2-1/2" wide bar of highest quality solid steel, then triple plated for extra rust resistance. It exceeds the highest industry standards for strength in shackle and cylinder pull tests.

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# The SAF T LOK™

## Lock For Life



by **Gerald A. Landrum**

I recently tried a product that involves two of my professions, gunsmithing and locksmithing. It is a new lock that is used on handguns. In evaluating this product, I tried to look at it from the views of a gun owner, a gunsmith, and a locksmith. My background in firearms includes 7 years in the Army (3 years active and 4 years Reserve) and 3 years in the Air Force Reserves. My active duty jobs were as a Radar Technician, a small arms instructor and an Air Defense Weapons Instructor (Vulcan/Chaparral/Redeye).

I served in a Special Forces Unit, then as a forward observer in an Artillery Unit while in the Reserves. I was in the Security Police while serving in the Air Force Reserves. While in the military I got to handle a wide variety of weapons and used this knowledge in my gunsmithing career which started in the 60's. I started locksmithing around 1990 and have enjoyed expanding my knowledge in all aspects of this challenging profession

The object of this article is a gunlock called SAF T LOK, which is available for use on certain handguns on the market today.

Most people I talk to as a gunsmith or locksmith will picture a trigger lock or some type of lockbox / safe when talking about securing their firearms.

Some gunlocks on the market include:

key or manual locks that fit over the trigger guard and block access to the trigger; cable locks that go through the magazine tunnel barrel or cylinder; plug/rod types that fit into the barrel; and mounts or boxes that prevent access to the firearm. These must be removed from the firearm before it can be used.

Difficulty of use varies with their design and how they are secured to the firearm (keys, special tools, manual dexterity/strength, etc. ). SAF T LOK is attached to the firearm as shown in *Photograph 1*, and does not need to be removed to operate the gun.

The SAF T LOK comes in two main components, the lock module and the installation kit. *Photograph 2*, shows the lock module which is purchased separately and contains installation/operation instructions. Installation kits are available for many types of handguns and also include installation instructions.

*Photograph 3*, shows the lock module (center), the Smith & Wesson J-frame kit (left), and the Colt MK IV 1911 style (right). These kits come with modified grips that house the lock module and parts necessary to lock each model handgun they were designed to match. The installation instructions include exploded drawings which are clear and the instructions are easy to follow.



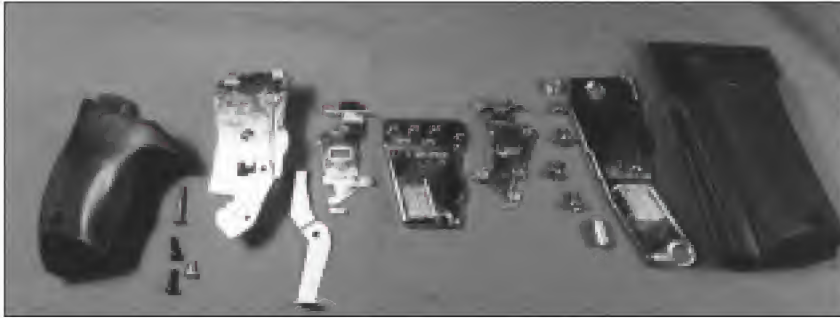
**1. The SAF T LOK is attached to the firearm handle as shown.**



**2. The SAF T LOK module used with kit that mate unit to certain model handguns.**



Continued from page 16



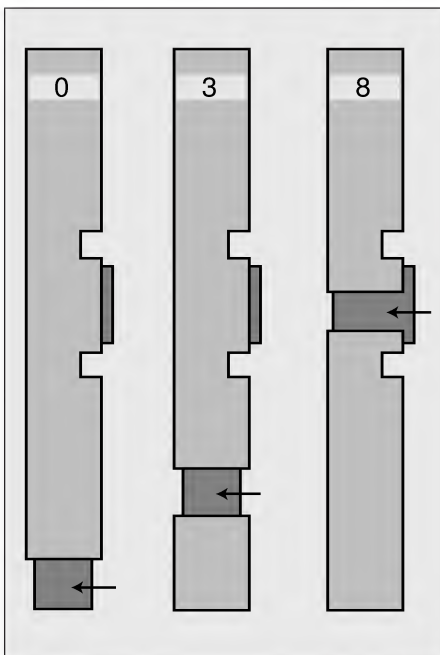
3. This is the Smith & Wesson installation kit lock module.

The lock module has three buttons which must be depressed a certain number of times before it will unlock. Example: A combination of 1-2-1 would require the user to depress the first button one time, the second button two times, and the third button one time to release the lock mechanism. The lock module comes with a preset combination which can be changed if desired. With values of 0-9 available in each of the three positions, a large number of useable number combinations can be set.

As with any settable combination lock, certain combinations should be avoided such as: 0-0-0, 1-2-3, 2-4-6, etc.

Illustration A, shows three combination gates from the lock with their value of 0-3-8 and arrows pointing to the position of the gates.

Each combination gate has two values, one of which is chosen by how it is installed in the lock. For instance, installing the combination gate 8 & 2



A. An example of the three combination gates which determine the combination.

with the 2 in the up position would require the appropriate button to be depressed twice. By turning the combination gate over, the value of 8 would be chosen, requiring the button to be depressed eight times.

Firearm safety, handling, and operation is important if you consider installing the lock for your customers. If you do not have a federal firearms license, the customer cannot leave a firearm in your possession for installation. The customer must be present if you install the lock. Call the Bureau of Alcohol, Tobacco, & Firearms (BATF) if you have questions regarding what you can and cannot do under the regulations.

It may be advisable to post a sign that firearms must be unloaded before being brought in for work. However, always consider the firearm loaded until you verify for yourself that it is unloaded. Just because someone has possession of a firearm, never assume that they are experienced in safe handling and operation of the firearm. Most gunsmiths can tell you of incidents where an "unloaded" firearm had been mishandled or accidentally discharged.

Although the method for unlocking the lock module (depressing the buttons) remains the same, the method for connecting the lock to the firearm varies with each model handgun. I will describe the installations for the Smith & Wesson "J" frame revolver and for the Colt MK VI 1911-style semi-automatic pistol, as they are popular styles with which many are familiar. I would recommend taking some classes in firearm handling before working on them (i.e. gunshop's, firing ranges, correspondence courses, etc.).

The Colt Model 1911 (see Photograph 4) was the U.S. Armed



4. A Smith & Wesson "J" frame with the SAF T LOK kit attached.

Forces' main service pistol from the early 1900's until fairly recently. After World War II, it started to become popular with civilians and many companies began to produce pistols of this design for the civilian market.

The Colt 1911 has a grip safety which is disengaged when held in the normal firing position. The thumb safety is engaged manually when the hammer is in the cocked position and is disengaged manually to allow the pistol to be fired. When the thumb safety is in the up (safe) position, it blocks movement of the sear, thus preventing the hammer from falling and also prevents the slide from being pulled to the rear.

With the hammer cocked and the thumb safety on, the safety slide is pushed to the rear and the reset button is pressed. This action locks the safety slide under the thumb safety, preventing the thumb safety from moving down to the fire position. Entering the correct combination allows the safety slide to spring forward, no longer blocking the thumb safety. The thumb safety can now be depressed downward allowing the gun to be fired.

There are several levels of security you may have according the status of the pistol when you engage the lock. With the pistol unloaded and the magazine stored separately, cock the hammer, push the thumb safety up





**5. A Colt MK VI 1911 style pistol with a SAF T LOK kit attached.**

and engage the lock. The pistol is now disabled. Even if someone found a magazine it could not be loaded since the slide will not move.

The magazine could be left in the pistol without chambering a round and locked, or a round could be chambered and the pistol locked. The pistol could be loaded and locked with part of the combination all ready entered. For example, the

combination for the first and second button would be entered, leaving the third alone. Or the lock could be left unlocked. Each of these may be appropriate for certain situations or conditions.

The Smith & Wesson "J" frame revolver (see Photograph 5) may be fired single action (SA) or double action (DA). Some models are double action only. In single action, the hammer is cocked manually, then the trigger is pulled to fire the bullet. In double action, the hammer is cocked and released by pulling the trigger (usually a longer and heavier pull). The hammer is propelled forward by a coiled mainspring that fits over the mainspring stirrup.

The hammer must be in the down position for the SAF T LOK to be activated. The safety slide is moved to the lock position and the reset button depressed. This moves a lever which blocks downward movement of the mainspring stirrup and prevents the hammer from moving, preventing the revolver from operating. Entering the correct combination allows the safety slide to move the lever clear of the mainspring stirrup as it springs to the unlocked position.

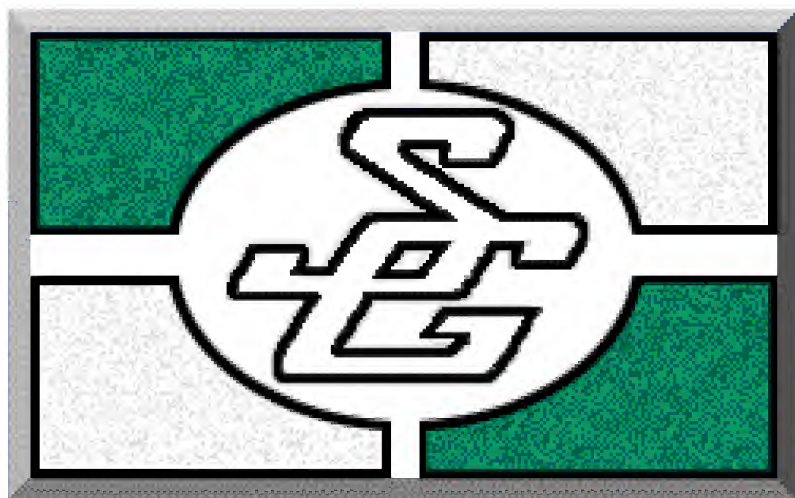
For a gun owner, safety and liability are important issues when a firearm is kept in a house, whether it concerns children or someone breaking in and using it on you or someone else. With more people buying handguns for self protection in the home or for concealed carry, training and safety must not be overlooked.

SAF T LOK uses factory screws to install the grips on some models and provide adapters when necessary. They use a thread-forming screw to attach the lock module to the mounting plate. Most grip screws use a flat slotted head and the screw used to attach the lock module uses a #1 Phillips. Tamper resistant screws (torx, allen, tri-wing, etc.) would be a nice addition as they would be harder to remove by a casual user or a child, than a slotted screw. However, even if the grips are removed, the lock module could not be removed when it is locked. Current retail price for the lock module is \$89.95 and installation kits are \$39.95 each. For more information on SAF T LOK call 800-723-8565. **TNL**

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# Servicing the 1996 Toyota Camry

## Part 2



### Door Lock

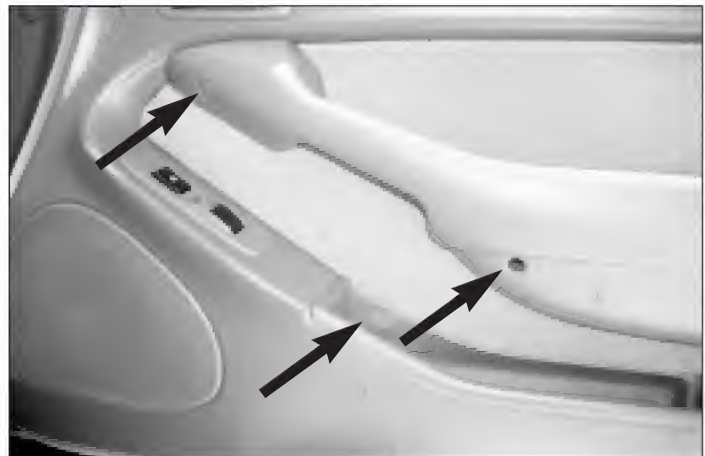


**Photograph 1.** The door lock cylinder is part of the door handle assembly.

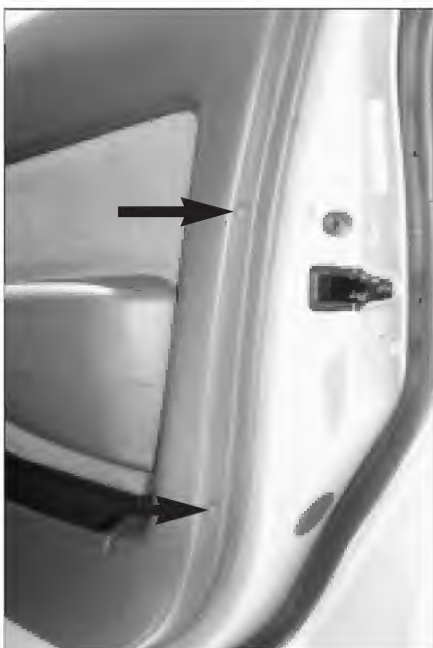
by Michael Hyde



**Photograph 2.** The door panel must be removed to service the door lock cylinder.



**Photograph 3.** First, remove the two armrest screws and the screw that is hidden by a trim cap in the door panel storage compartment.

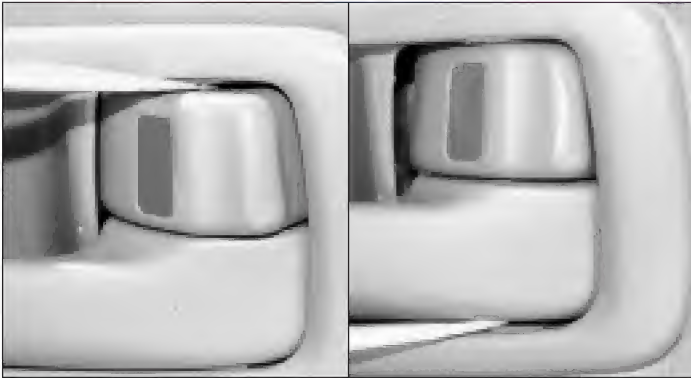


**Photograph 4.** There are two plastic fasteners on the rear edge of the door panel that must be removed. Gently press in on the center part of the fastener about an 1/8" to loosen it and then pull out the whole fastener.



**Photograph 5.** There are two Phillips-head screws located at the forward section of the door panel and hidden under trim covers. Remove the screws.





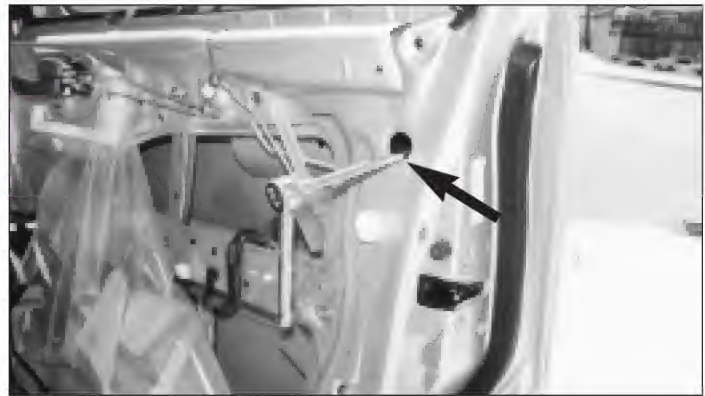
**Photograph 6.** To remove the trim cover that sits in the inside door release and lock button cavity, it will be necessary to use a small flat-head screwdriver to lift the top and bottom sections off the metal posts.



**Photograph 7.** Now you can remove the door panel. It uses the standard plastic push-in clips. Once the panel is removed you will need to disconnect the associated door panel wiring.



**Photograph 8.** A view of the door with the panel removed.



**Photograph 9.** The lock/handle assembly is held to the door by two 10mm bolts.



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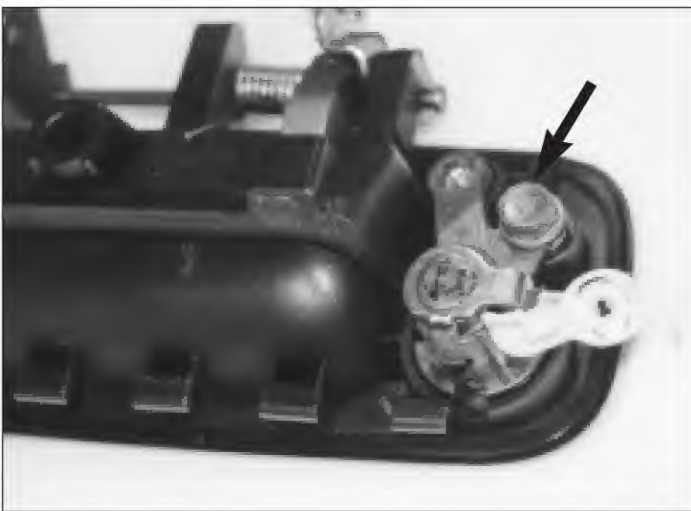




**Photograph 10.** If your just looking for the code, lift outward on the bottom of the handle assembly and you can read the code off of the lock without removing the lock.



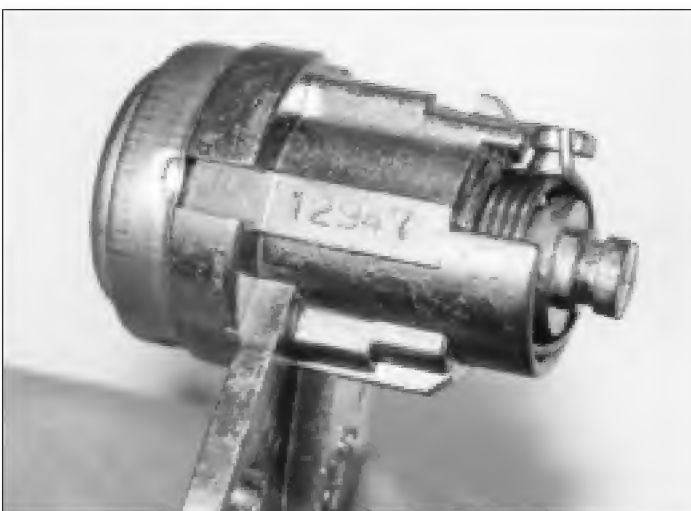
**Photograph 11.** To make life easier for you, disconnect the linkage rod to the handle pull and slide the handle assembly out of the door to remove the 10mm bolt holding the lock cylinder into the handle.



**Photograph 12.** A view of the lock cylinder and how it is held to the handle assembly.



**Photograph 13.** The door lock cylinder.



**Photograph 14.** The code can be seen on the side of the lock. To disassemble the lock cylinder, remove the tailpiece and remove the face cap. The face cap is reusable and there are no replacements available.



**Photograph 15.** The cylinder plug contains all the tumblers. It has split tumblers in positions four and seven.





Continued from page 22

### Trunk Lock



Photograph 16. The door lock cylinder disassembled.



Photograph 17. The trunk lock cylinder is located under the rear taillight and trunk lid centerpiece.



Photograph 18. The cloth-like material liner must be pulled back or removed to access the trunk lock cylinder.



Photograph 19. Remove the 8mm nuts that hold on the taillight assembly to lift it up far enough to remove the lock cylinder.



Photograph 20. The trunk lock cylinder is held in place by the standard style horse-shoe clip.



Photograph 21. The trunk lock cylinder removed.





Continued from page 24



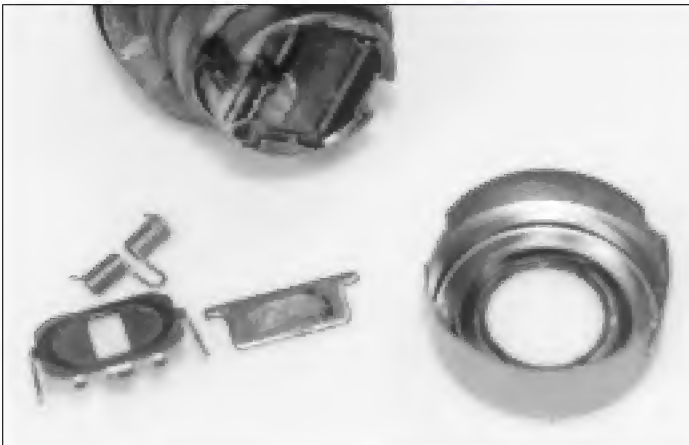
**Photograph 22.** To disassemble the trunk lock cylinder, remove the tailpiece and the face cap.



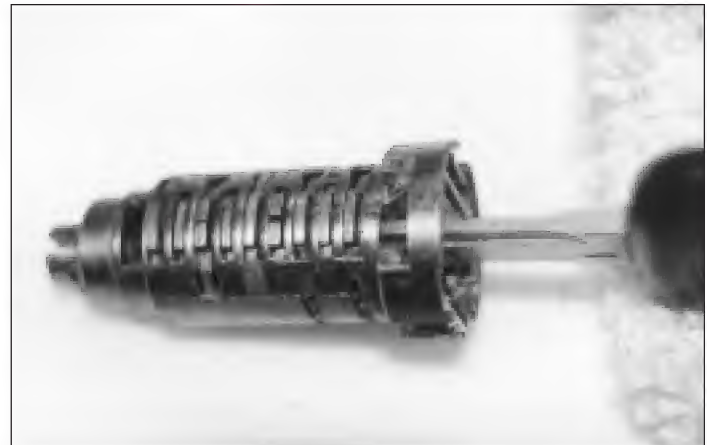
**Photograph 23.** The face cap is reusable and there are no replacements available.



**Photograph 24.** Be aware of the ball bearing in the back of the lock as you disassemble it.



**Photograph 25.** It is common for dust shutter assemblies on these locks to fall apart as you remove the face cap.



**Photograph 26.** The trunk cylinder plug contains all the tumblers. It has split tumblers in positions four and seven.



**Photograph 27.** The trunk lock disassembled, is shown.

### Glove Box Lock



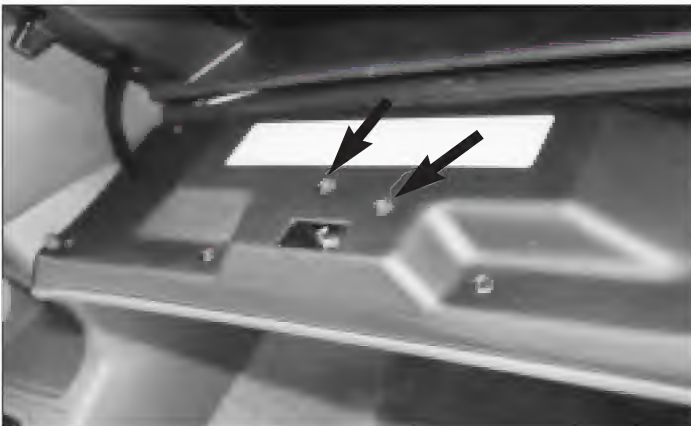
**Photograph 28.** The glove box.

Continued on page 28





Continued from page 26



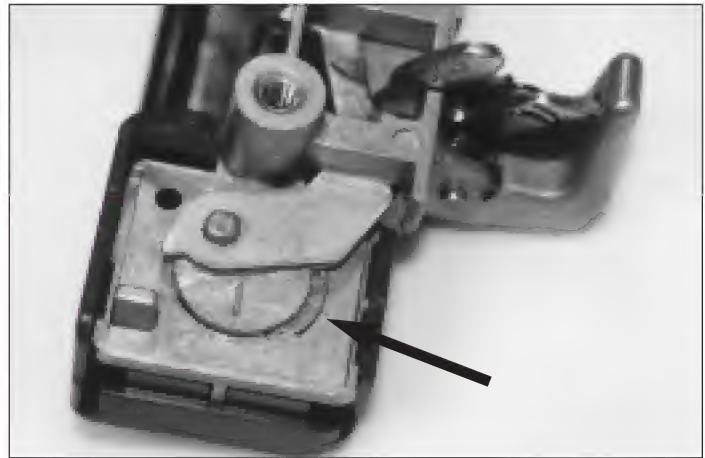
**Photograph 29.** The glove box lock is held in place by two phillips-head screws. Remove the screws and slide out the lock assembly.



**Photograph 30.** The glove box lock assembly.



**Photograph 31.** Unsnap the plastic cover that sits in front of the cylinder plug.



**Photograph 32.** To slide out the cylinder plug, depress the retainer on the rear of the lock assembly.



**Photograph 33.** The cylinder plug contains tumblers in positions five through eight with a spit tumbler in position eight. The valet tumbler is in position nine.

**GENERATING FIRST KEY:**

- Method 1).** Check owners manual for code, written in by the dealer or fellow locksmith.
- Method 2).** Remove passenger door cylinder and read code stamped on lock.
- Method 3).** Disassemble door cylinder or trunk cylinder and decode wafers to make master key.

**SPECIFICATIONS:**

- Code Series:** 10000-15000
- Key Blank:** Ilco X217/TR47 /Silca TOY43
- Reed Codes:** 11-02-064
- HPC 1200CM #:** XF208, PUNCH PF208
- M.A.C.S:** 2
- First Cut:** .885 (measured from tip)
- Cut to Cut:** .090
- Depths:** 1=.323, 2=.299, 3=.276, 4=.252
- FRAMON:** Use Ford 5 PIN Spacing Clip, Set
- Starting Cut @ .017 (First Cut From Bow)**

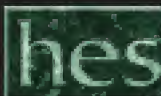
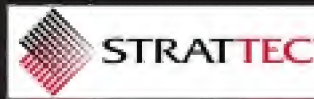


**Photograph 34.** The glove box lock disassembled.

This concludes our coverage on the 1996 Toyota Camry.







# BEGINNER'S CORNER

## Servicing the 900 and 1000 Series Simplex Locks



by  
**Jim  
Langston**

The Simplex Unican lock is widely used for a variety of applications and locations. It is an auxiliary door lock with a push-button combination keypad that comes in two distinct versions, the 900 and 1000 series. The push buttons eliminate the use of keys and these locks are by far the most popular of all the push button locks on the market. The lock is completely mechanical, there are no electrical components at all.

There are actually quite a few different models and optional features available for the Simplex locks. Optional features can include: Key override, ; Passage feature; ADA Lever handles; and Entry / Egress. The 900 series is available in two latch configurations. The spring-latch model is model 917 and the dead bolt lock is model 902 (see Photograph 1). Both of these locks come with an optional key override.

The Simplex 1000 series can be ordered with an entrance knob or a lever handle. The lever lock is the L1000 series, and the knob lock is the 1000 series (see Photograph 2). All of these locks are very easy to install.

The first thing we will cover in this article is how to change the combination. The second thing we will cover is how to reset a combination if you don't know the combination.

### CHANGING COMBINATIONS ON THE SIMPLEX 900 SERIES LOCKS

There are basically five steps to changing combinations on the 900 series. Combinations may be changed to any sequence, using any or all buttons, in any order. Each button may be pushed separately or pushed at the same time with other buttons, as long as the same button isn't used more than once in a combination.

1. With the door open and the Simplex in the locked position (as in Photograph 1), turn the front control knob (which is marked "SIMPLEX") to the LEFT, and release. Push the existing



1. The model 902 Simplex auxiliary door lock.

combination and release the buttons.

2. Remove the screw on the top or bottom (depending on the handing of the lock) of the lock housing with the Allen wrench provided with the lock. If you don't have the original Allen wrench which came with the lock, any allen wrench of the proper size will do. Insert the wrench into the hole and depress the lockout slide (see Photograph 3). Remove the wrench.

3. Now, turn the front control knob to the LEFT and release it.

4. FIRMLY AND DELIBERATELY, press the buttons in the sequence you want for the new combination. Be sure to record the new combination so you won't forget it.

5. Next, turn the front control knob to the RIGHT. The new combination is now installed. Try the combination to be sure you have recorded it correctly before you shut the door. After making sure you have the combination correct, replace the threaded screw on the lock housing.

NOTE: If the front control knob opens the lock without pushing the combination, steps 3, 4 and 5 were performed out of order and the Simplex is in a "0" combination state. If this occurs, follow steps 2 through 5 to reinstall a combination.



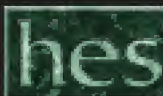
2. The model 1001 Simplex auxiliary lock.



3. Remove the screw on the top or bottom of the lock housing and insert the wrench into the hole and depress the lockout slide.

Continued on page 32



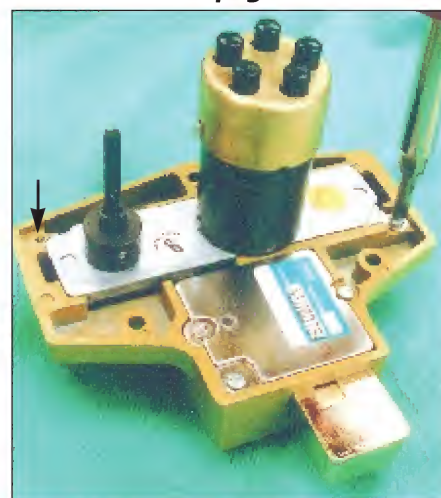


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*Continued from page 30*



**4. Remove the two screws that hold the combination button assembly on.**

**RESETTING UNKNOWN COMBINATIONS**

**N**ext I will discuss how to reprogram the combination lock chamber when a combination is not known.

First, on the 917 and the 902 models, remove the two screws that hold the combination button assembly on (see Photograph 4). Now lift the button assembly off and set it aside (see Photograph 5).

Next remove the bolt/latch cover plate by removing the two screws that hold it on and set it aside (see Photograph 6).



**5. Lift the button assembly off and set it aside.**

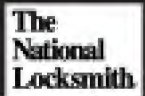
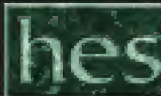
There are two screws that hold the combination chamber in place. Remove these screws and the combination chamber (see Photograph 7).

NOTE: There is a limit cam on the combination chamber. It must also be set aside.

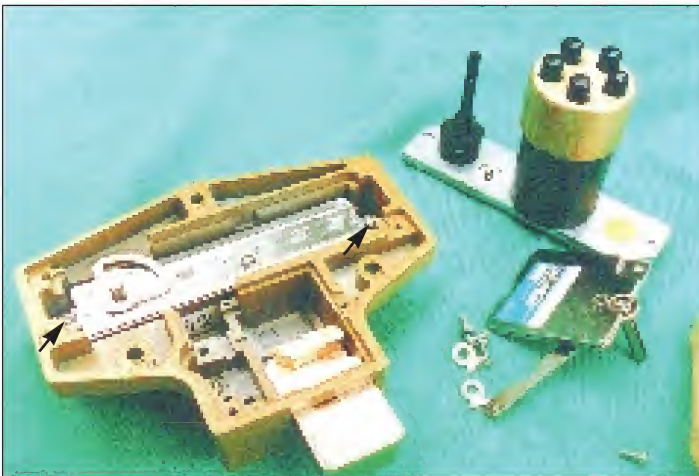
Now, with a screwdriver or pocket knife, remove the back cover of the combination chamber by lifting up on

*Continued on page 34*





Continued from page 32



**6. Remove the bolt/latch cover plate by removing the two screws that hold it on and set it aside.**



**7. Remove the combination chamber.**



**8. Remove the back cover of the combination chamber by lifting up on the staked joints on both ends.**

the staked joints on both ends (see Photograph 8).

With the cover removed, use a small screw driver or pocket knife to remove the E ring from the unlocking slide, be careful not to loose this clip (see Photograph 9).



**10. Lift the end of the unlocking slide at the end where the E ring clip was.**

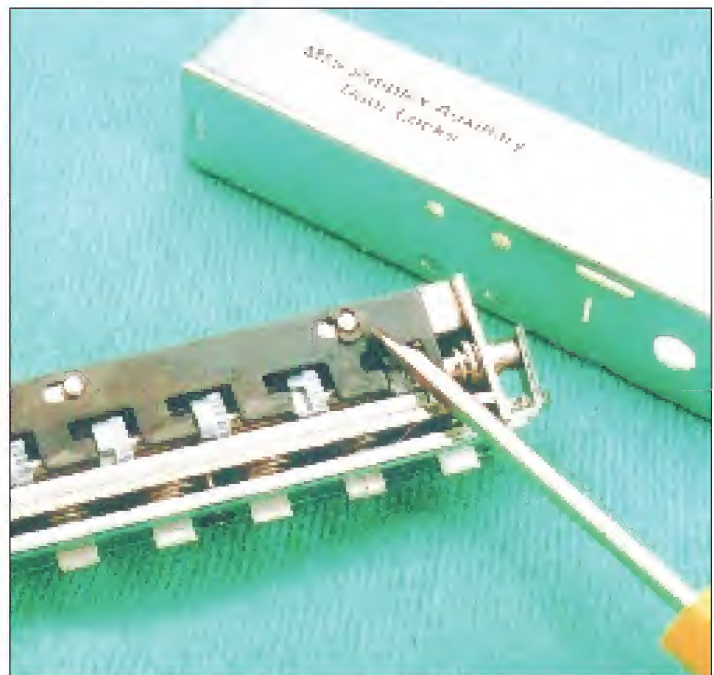
Now, with a small screw driver, lift the end of the unlocking slide at the end where the E ring clip was (see Photograph 10). Swing unlocking slide sufficiently to clear the gears, but no farther than shown in the picture.

NOTE: The unlocking slide is under spring tension and will be easier to lift if pushed to the left to ease the tension.

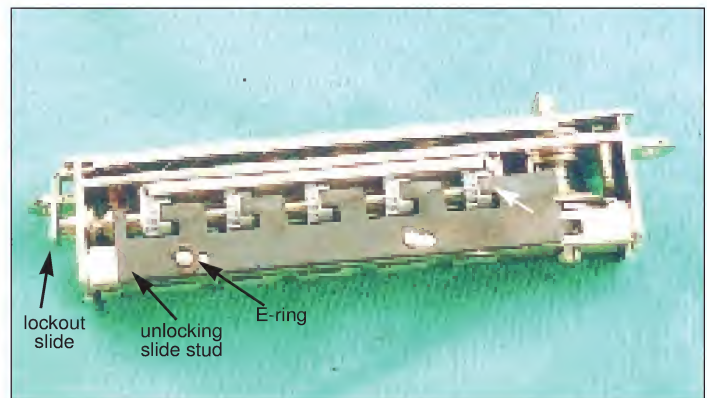
At this point, depress the lockout slide (see Photograph 11). The gears

are now free to rotate. Turn each gear so that the slots are aligned as in the picture.

Next, place the unlocking slide over the unlocking slide stud while making certain the five toes are engaged in the five gear gate pockets as seen in Photograph 11. It may be necessary to adjust each gear slightly to make proper



**9. Remove the E ring from the unlocking slide, be careful not to loose this clip.**

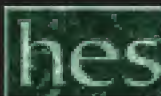


**11. Depress the lockout slide, the gears are now free to rotate.**

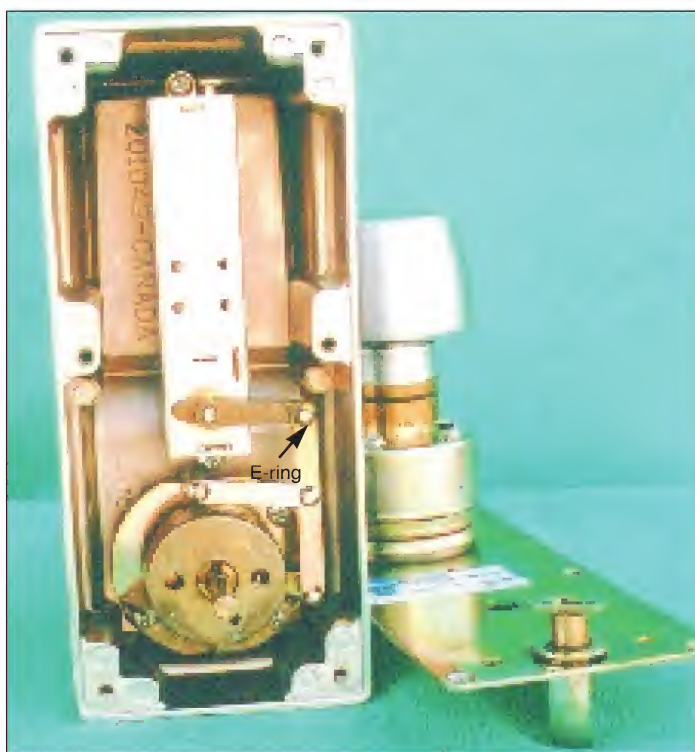
adjustment between toes and gear slot.

Replace E ring back on stud then replace the combination lock cover back on the combination lock chamber. You are now ready to put the lock back together.





**12. Changing the combination on the 1000 is done by turning the cam on the back of the lock to the LEFT.**



**13. You must remove the actuating cam on the inside of the 1000 by removing the E clip.**

Once the lock is back together, turn the front control knob (marked "SIMPLEX") to the LEFT (counter clockwise). Next, push in the new combination and turn the front control knob to the RIGHT (clockwise). The new combination should now work.

Be sure to record the new combination, and as before, make sure it works before shutting the door.

#### **CHANGING COMBINATIONS ON THE SIMPLEX 1000 SERIES LOCKS**

**C**hanging the combination on the 1000 series lock (Photograph 2) is

slightly different than on the 900 series. There are basically five steps to changing the combination just as on the 900 series. Combinations may be changed to any sequence, using any or all buttons, in any order. Each button may be pushed separately or pushed at the same time with other buttons, as long as the same button isn't used more than once in a combination.

1. After entering the existing combination, remove the keyed wafer cylinder on the backside. If you don't have the operating key, it can be picked. The cylinder screws out.

2. With the cylinder removed, insert the changing key — that comes with the lock — into the cam of the lock and turn to the left (counter-clockwise) (see Photograph 12). If you don't have a changing key, insert a screwdriver or some such object to turn cam. This cam depresses the lockout slide, performing the

same function as the Allen wrench in the 900 series.

3. Turn the outside knob clockwise to the stop position and release it.

4. Depress the buttons for the new combination.

5. Turn the outside knob counter-clockwise to the stop position and release it. This action locks in the new combination.

There is one main difference between the combination chamber of

the 900 series and the 1000 series. On the 1000 series, the actuating cam is on the back of the combination chamber, on the 900 series it is on the front of the combination chamber. Other than that, the inside of the lock chamber is the same.

You must remove the actuating cam on the inside of the 1000 by removing the E clip on it to remove the combination chamber (see Photograph 13). Once the combination chamber has been removed, proceed with the same instructions as with the 900 series.

The Simplex Unican lock is one you will frequently encounter. Combination changing and finding lost combinations are very common occurrences. I would suggest that you become very familiar with this lock from a servicing aspect. It is one you will most likely see often.

#### **Points to Ponder:**

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# CUTTING

# — IN — CIRCULAR

**C**utting residential, commercial and automotive paracentric keys is bread and butter for most locksmiths today. While most locksmiths familiar with tubular locks disagree they are truly high security locks, they will attest that tubular key generation is still in the hands of the locksmith instead of the discount hardware chains and bulk mail outlets. Regardless whether you are a part-time, full-time, or proprietary/institutional locksmith, somewhere down the line, two decisions will need to be made — when to purchase a tubular key machine, and which machine to buy.

This article explores five very fine key machines that should be a welcome addition to any locksmiths' inventory. The machines tested include the electric bench top models; HPC/ Scotsman 747XU; Framon TKM-100, and the Silca Crown. Two "hand-held" models were also tested, the A-1 Herty Gerty, and the HPC TKM-90.

manufacturers except Silca provided an effective way to decode an existing key. The Framon TKM-100 provides Reed's Tubular code book in its package of goodies.

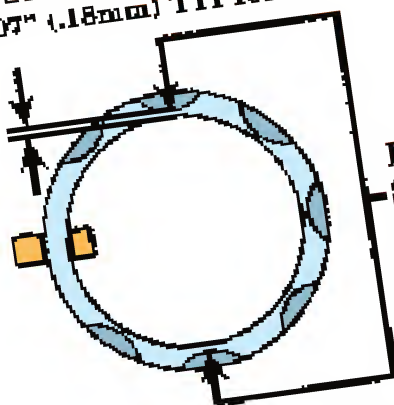
## DECODING

The most common keys will have seven cuts around the edge of the key, at 45 degree increments. Cuts will be stepped at approximately .016" increments. While Chicago/Ace and Fort/Gem share the same depths by measurement, they name them differently. While the same measured depth, a #1 cut in Chicago is a #0 cut in Fort. A #7 cut in Fort would be a #8 cut in Chicago, if Chicago had a #8 cut. The positions of the cuts also change nominally between the two manufacturers. If you are looking at the bottom of the key, cuts are numbered 1 through 7 in a counter-clockwise direction with Chicago and a clockwise direction with Fort. This distinction is much more critical when reading the code from a book.

Your machine, if cutting by code, will also be set up to a particular manufacturer - usually Chicago. If your machine comes with a nominal decoder (identifies cut by depth number, not in thousandths of an inch), it will be set up to work with your machine's factory setting. In short, if you are decoding a Fort key with the gauges provided with your machine, even though it will be reading the depths as Chicago specifications, when you cut the key on your key machine, which will also probably be set to Chicago depths, your finished key will work fine.

Another very critical dimension is the thickness of the wall of the key after the cut has been made. This has been referred to as side depths, or web thickness. True

WEB THICKNESS  
.404" (.10mm) to .407" (.18mm) TYPICAL



DIM. X ON A  
STANDARD KEY:  
.320" (8.13mm) to .326"  
(8.28mm)

**Illustration A.** If the thickness is wider than these dimensions, the uncut portion of the web will oftentimes depress the pin tumbler and prevent the lock from turning.

There are two ways in which a tubular key is created, by duplication and by code. Only the HPC/ Scotsman 747XU can do both without the use of depth keys. The Silca Crown only duplicates keys (if keys by code are required, depth keys could be used). Because of the relatively few configurations of space, depth, and key blank specification between tubular lock manufacturers, the other machines require keys to be effectively "duplicated" by code. All



# LES

by  
Giles  
Kalvelage



**Tubular key generation is still in the hands of the locksmith.**



**1. The Herty Gerty can cut Standard 137 keys in offset left and offset right, as well as center.**

calculation for this distance is by measuring the distance from the inside of one cut with the inside of the cut immediately across from it. For standard 137 cut keys, the dimension (Dim. X) should be between .320" and .326". This will leave a web thickness between .004" and .007". If the thickness is wider than these dimensions, the uncut portion of the web will oftentimes depress the pin tumbler and prevent the lock from turning (see *Illustration A*).

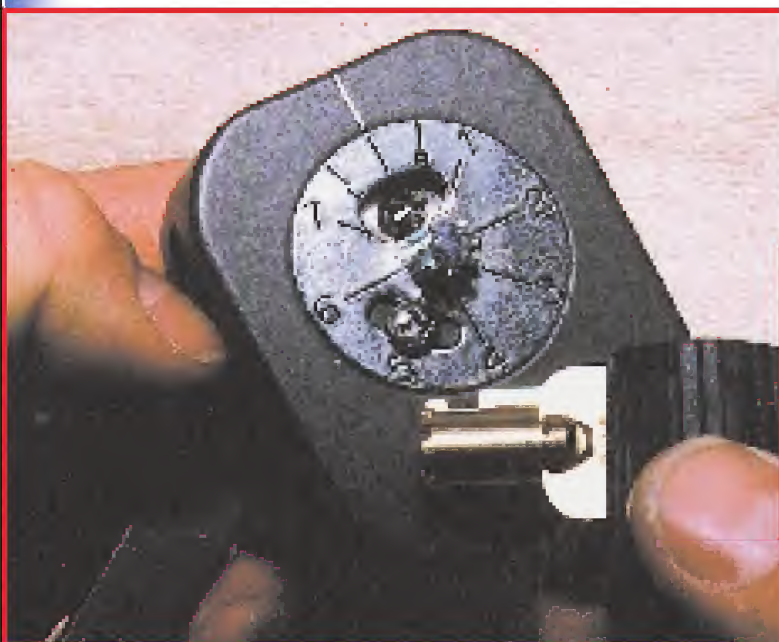
Machines which cut "cuts within cuts" (Primary/M aster cuts) must change this dim. X or web thickness to perform these cuts. Obviously, this will require machine adjustments. Depending on how many keys you cut and how often dimension set up is required may influence your decision on which machine is right for you.

## HAND-HELD CUTTERS

The hand held key machines are quality machines. These machines work without the use of electricity, but by the power of your own two hands. If you've never used one of these machines before, you'll be impressed at the relative speed these machines will cut.

### A-1 Herty Gerty

This portable hand held key machine is shipped with two cutters, two Allen wrenches, three hub dials, a key decoder,



**2. The Herty Gerty includes a palm cushion and indexing on the hub. The hub can be adjusted for offset left, right and center.**

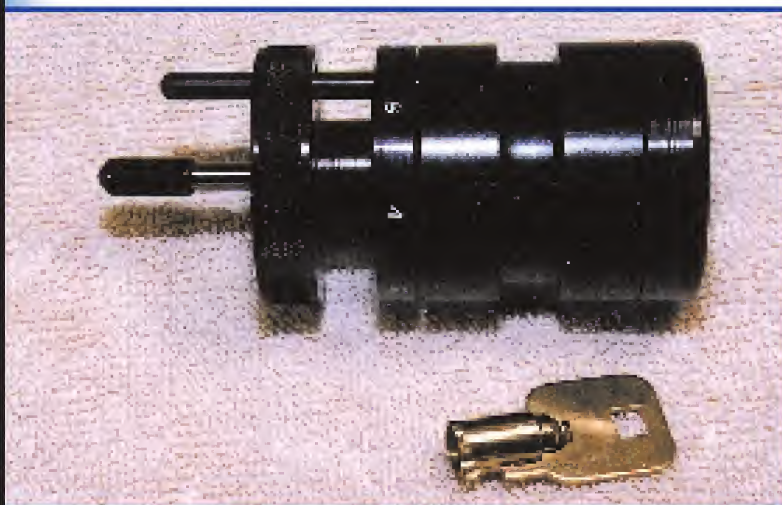


**3. Rotate the crank with your right hand in a clockwise direction until the crank bottoms out against the base.**

*Continued on page 40*



Continued from page 37



**4. The HPC TKM-90 Pocket Cut Up is the most compact design.**

a palm cushion, and a high quality carry case. (see Photograph 1). The machine can cut Standard 137 keys in offset left and offset right, as well as center. It is also capable of cutting the 137A key with primary and master cuts by changing the hub and cutter, and by changing to the S hub, it can cut small diameter keys.

While a handy bench mount is available, the machine is equally suitable for hand operation - but use the key cushion, it will save your hand.

This machine requires that you decode your key and make keys by code. Provided for your use is a small plastic "table" decoder with Chicago "elevations" from 1 through 7. Simply place each cut of the key on the elevation that fits closest and note the number. After you have your code, it's time to cut your key.

Slip the rubber palm cushion over the head of the key blank (see Photograph 2). Loosen the lock screw on the crank handle. Move the crank handle pointer to the desired cut number then tighten the lock screw. With your left hand, place the key blank with the tang over the number of the position to be cut. Note, the positions on this tool are Chicago positions, but may appear to be reversed because when you place your key on the machine, the key is turned around. The numbers on the tool will correlate with the positions on the lock themselves instead of the key. Rotate the crank with your right hand in a clockwise direction until the crank bottoms out against the base (see Photograph 3). Your cut is complete. Follow this procedure until all cuts are finished and your key will be complete.

#### **HPC TKM-90 Pocket Cut Up**

This machine at 4" X 1-5/8", stacks into itself for storage and comfortably fits into a shirt pocket, and is also designed for two hand use (see Photograph 4). Again, this machine makes keys by code for standard center, offset left, and offset right. It does not, however, cut primary/ master cuts. It is designed to squeeze the key blank between the cutter and the retainer, which makes cutting the key comfortable. There are no spacing numbers on the machine, a feature of mixed reactions.

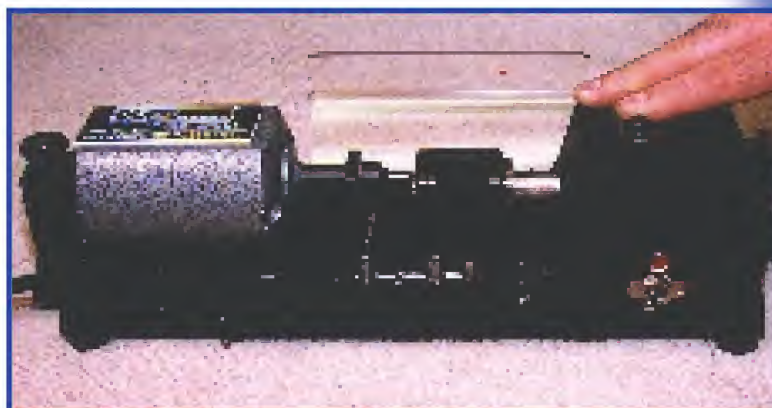
Depth spacing is marked on the dial around the machine. From the factory, the machine is designed to cut Chicago depths, however, the dial has indications from 0 through 7. Should you cut a large number of Fort keys by code from the



**5. The "C" and "O" indicator is for the center, offset left and right cuts.**



**6. Compressing the key onto the positioning post with the key retainer face plate with your left hand, turn the cutter handle wheel with your right hand.**



**7. The working key, with the tang upward, should be inserted as far as it will go. The key blank must be pushed a little farther into the collet.**



Gem code book, it is possible to re-calibrate the dial to cut Fort depths. Keep in mind, however, that the decoder gauge supplied with the machine will still read Chicago depths.

To cut a key with the machine, a key blank is placed on the key positioning post one step to the right of the "C" indicator to set up for the first position for Chicago Ace keys. After cutting the key, rotating the key position counter clockwise will continue the rotation for Chicago Ace. This is just the opposite for Fort/Gem locks. The letter "C" on the indicator stands for Center, "O" stands for Offset. This hub is adjustable (see Photograph 5).

After setting the spacing position, set the depth of the cut. Turn the depth plate clockwise until it touches the housing. Turn it back counter clockwise until the depth indicator lines up with the depth number to be cut. (The exception is that after bottoming the depth plate, the first number you reach will be 0. This will actually be an 8 cut. The second time you reach 0, it will actually be a no cut.)

With the key on the positioning post, place the long post of the key retainer into the hole closest to the "C". Insert all the way in until the key retainer face plate holds the key in place and the short post goes into the remaining hole. Compressing the key onto the positioning post with the key

retainer face plate with your left hand, turn the cutter handle wheel with your right hand clockwise until it bottoms out (see Photograph 6). Your key will be cut in that position. Follow the same procedure for all cuts.

### THE BENCH TOPS

These bench tops machines are all quality machines which do not require electricity. All three of the tested machines operated with a Rediline 500W generator. At about the same size as most duplicators, all are small enough to fit comfortably in most vans.

All of the bench tops tested will cut the three common size tubular keys, in center, offset left and offset right positions.

### HPC/Scotsman 747XU

This machine is officially a bench top machine, but it's the lightest of the three tested. It could conveniently be carried to a job site that had electricity. The machine looks similar to the Ilco machine, but do not confuse it with the look alike. There are quite a few differences between the two. The 747XU machine is the only machine we tested that can decode keys with its on-board decoder and cut keys either by code or by duplicate - users choice. Its manual was the easiest to read and understand and could make you a tubular key cutting expert in less than a half hour.

Because of the variety of keys this machine will cut, the proper key extension must be selected for insertion onto the main key shaft. An extension allows the machine to cut different diameter keys. The machine comes set up with the standard 137 extension installed. If the extension needs to be switched to a different size, the instruction manual easily explains the procedure.

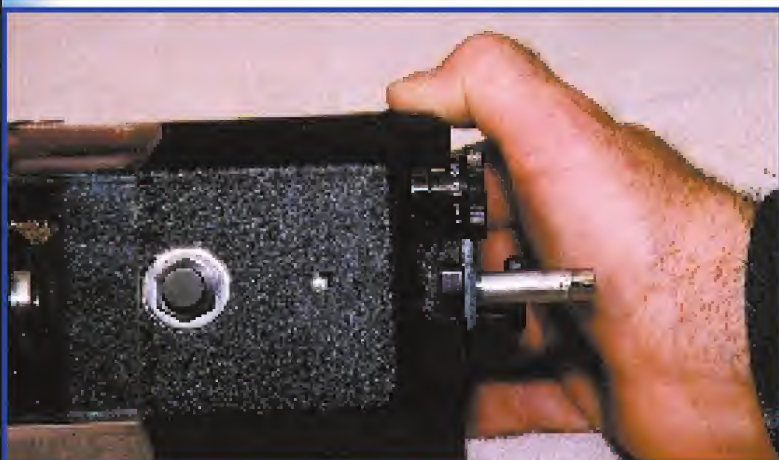
The hardest part of working with this machine will be indexing the key blank. At this point, the machine's power should be turned off and the cover open. A cutter flute should be facing downward and a key blank inserted into the collet with about 3/8" exposed from the collet. The collet is then hand-tightened and the key to be duplicated (or the code key) is placed on the main shaft and pushed in (see Photograph 7). After indexing, tighten the collet just a little tighter. Lower the cover, turn on the machine and follow the tracings on your original key.

To decode a key using the 747XU, place the key to be decoded on the main shaft. Make sure that the decoder dial is on the letter "D" before pushing the key to the stop pin (tracer). When the key engages the stop pin, rotate the decoder clockwise until it stops. The decoder dial indicates the cut depth (see Photograph 8). Continue this procedure for all key cuts.

The machine is equipped with an elevation dial which changes the height of the cutter to specific elevations for the cut within cut features. Also the stop pin can be adjusted for duplication or origination of keys with cuts within cuts (see Photograph 9).

### Framon TKM-100

This machine comes packaged with some interesting goodies. A decoder gauge measures actual depths in .001" increments and is easy to use. It also comes with the Reed Tubular Code book. This is a newly designed machine which replaces a Framon standard of many years. In fact, the reference manual shipped with the machine referenced the older machine. If this should happen to you, I'm sure the factory would supply you with the proper manuals. It also

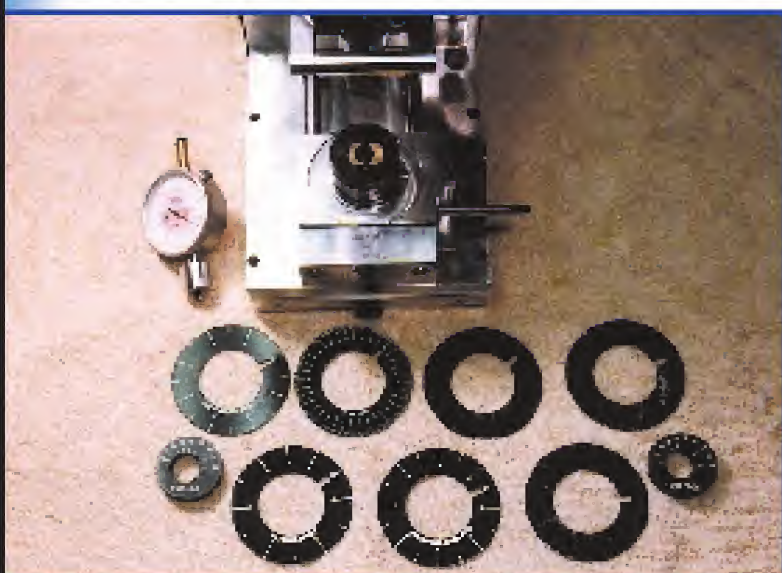


8. (Above) The decoder dial indicates the cut depth.

9. (Below) The stop pin can be adjusted for duplication or origination of keys with cuts within cuts.







**10. A side depth cam adjusts by number, the amount of web removed from the outside diameter of the key.**

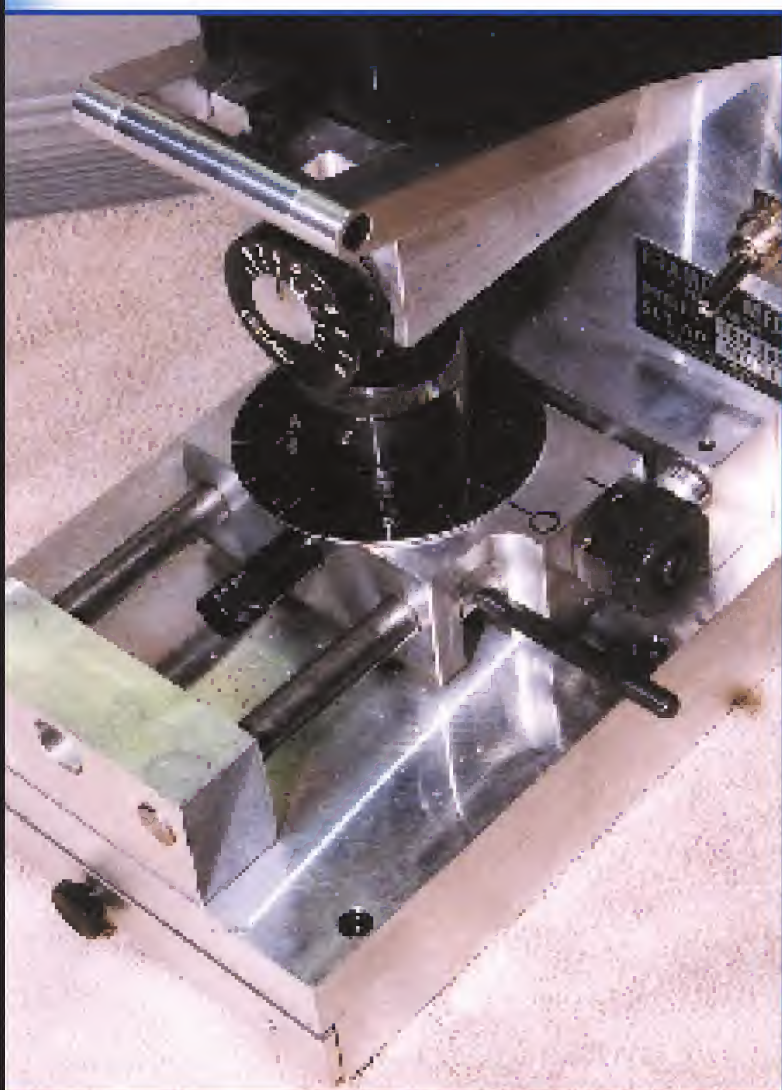
comes with an instructional video which does a great job demonstrating the operational procedures of their machines.

The TKM-100 will only cut keys by code. Framon's

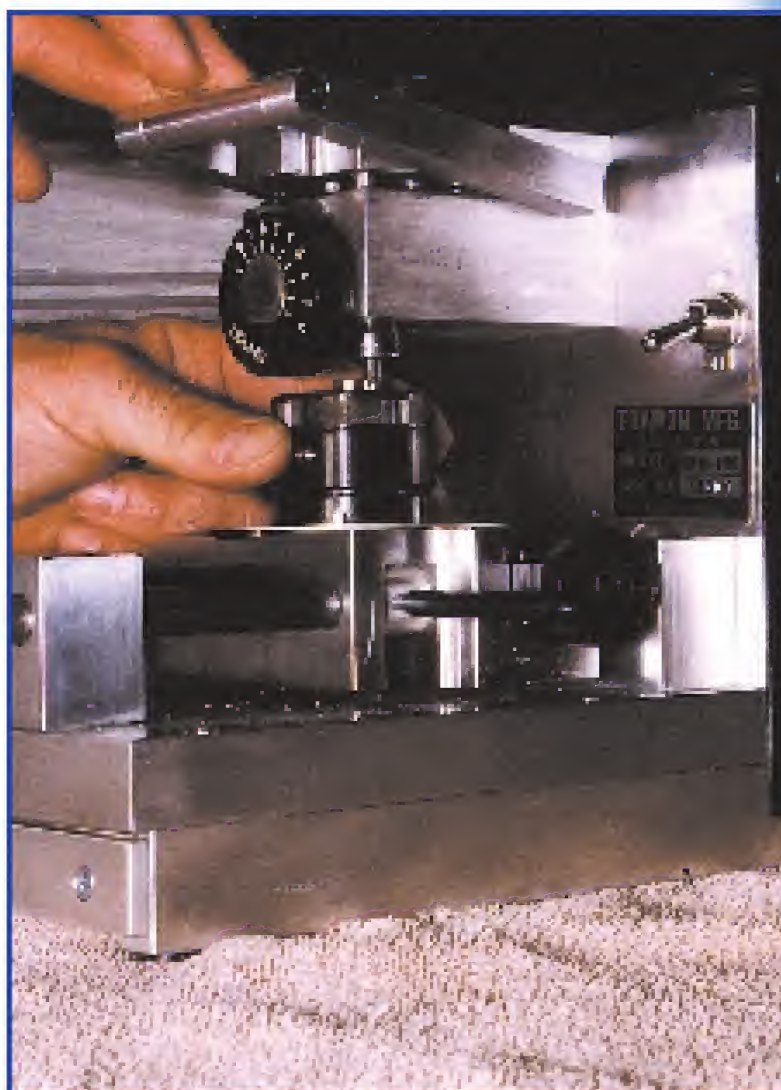
philosophy, according to the video tape, is; "Tubular keys, even originals, tend to be very inaccurate. By always producing a key by code you can be sure you are making a perfect key every time." Placing this controversial statement aside for the moment, this machine does a fine job in producing keys by code. Depth cams and spacing plates are the cornerstone of this machine's versatility in code keys. (Vertical) Depth cams are changeable according to the lock manufacturer and include specifications for Fort/ Dom, Dyna/ Uni, American, and of course, Chicago.

Spacing plates include Chicago center, offset left, offset right, National Keyset, Ace Changematic, Segal 8 pin, and a Universal plate which measures out 360 degrees. A side depth cam adjusts by number the amount of web removed from the outside diameter of the key. This is especially useful when cutting cuts within cuts and of the machines tested, is the easiest to change settings (see Photograph 10).

Cutting a key on the Framon TKM-100 is also easy (see Photograph 11). First install the proper spacing plate. This will slide around the collet and fit in the alignment notch. The carriage and the collet can then be locked in place. At this time, the collet should be locked so that it won't spin when trying to tighten a key blank in it. It can only be locked when the collet is positioned so the alignment notch for the spacing plate is at the 3 o'clock position.



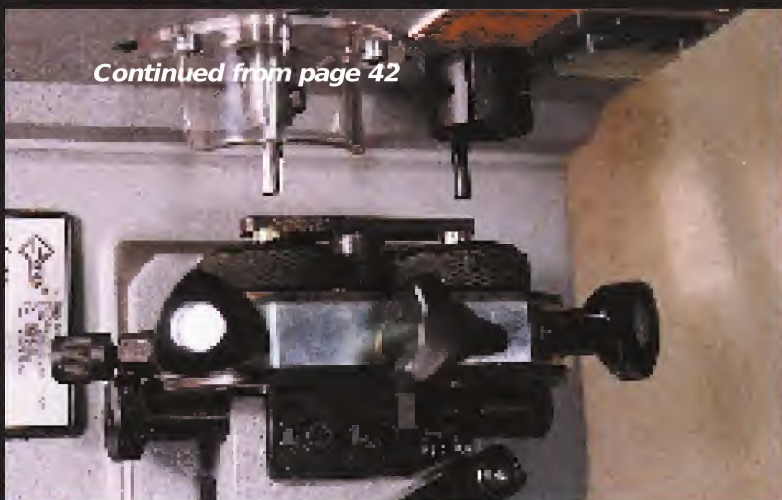
**11. Cutting a key on the Framon TKM-100 is fast and easy.**



**12. Dial the proper (vertical) depth cut and press down on the spindle handle.**



Continued from page 42



**13. Tighten the clamp fixing ring (collet), and you are ready to duplicate a key.**

Install the appropriate depth cam, it will slide right into place. Adjust the depth cam so that the index line (without a number above it) is indexed with the scribe on the machine. This is the proper depth to index the key. Depress the key into the chuck far enough so that it will pass under the depth cam. The maximum length of key blank, including bow, that can fit into the collet will be about 2-1/2". Tighten the collet and slide the carriage underneath the depth cam and loosen the collet. The key should snap up against the depth cam, then tighten the collet.

The key is now properly indexed. Unlock the collet by pulling out the collet lock knob at the base of the collet platform. Adjust by dialing the side depth cam (adjustment for Dim. X or web thickness). For the standard cuts of a Chicago key, this would be depth 1. Slide the carriage all of

the way to the back of the machine and lock into place by lifting the lock bar. Rotate the collet to the desired number on the space plate (Framon recommends holding the collet in position while cutting the key to prevent shifting. Keep your fingers away from the cutter.) Dial the proper (vertical) depth cut and press down on the spindle handle (see *Photograph 12*). The first cut has been completed.

Release the spindle handle, rotate the collet to the next space position, dial the next depth, press and release the spindle handle. Continue until the key is completed. Unlock the carriage and return it to the front of the machine. Return the collet so that the spacing plate notch is at 3 o'clock. Press in the collet lock. Loosen the collet and remove the key.

### **Silca Crown**

The Crown is a heavy duty machine, but will only duplicate (use of depth keys excepted). This machine sports a Synchronized Self-Centering Device T10 which permits the cutting of tubular keys having a minimum outside diameter of .375" up to a maximum diameter of .416". This includes all of the keys discussed with the other machines, including cuts within cuts, and the manual shows keys from other countries that aren't much found here in the Heartland of America. (Optional devices can be purchased separately to cut keys not usually seen in the US.)

The Synchronized Self Centering Device T10, which performs the functions of a vise and carriage, almost looks like a smaller version of the glasses the eye doctor uses to evaluate your prescription, but instead of looking into the device with your eyes, you place a key blank through the left hole, and the key to be duplicated through the right hole.



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**14. The left side of the Synchronized Self Centering Device T10 is line indexed with the most popular spacing positions. The right side provides a numbered scale in degrees.**

The key and blank will be inserted with the device centered on zero and the key tang up. The key will bottom out against the Key Retainer, which indexes the key. Tighten the clamp fixing ring (collet), and you are ready to duplicate a key (see *Photograph 13*).

At the upper corners of the Synchronized Self Centering Device T10, there are locking handles (knobs). When one or both are tightened, neither the key nor the blank will rotate, loosening the handles allows the key and blank to rotate to the next cut. The left side of the Synchronized Self Centering Device T10 is line indexed with the most popular spacing positions around the circumference of the key, the right side provides a numbered scale in degrees (see



**15. At the bottom right of Synchronized Self Centering Device T10, there is a height adjustment which will change the thickness of the cut at the webbing.**

*Photograph 14*). This allows for the precise cutting at any position around the circumference of the key.

At the bottom left corner of the Synchronized Self Centering Device T10 is a selector which allows for a "snap in" stop at the common spacing positions for key duplications. If you are cutting keys at irregular positions, this selector may be deactivated.

At the bottom right of the Synchronized Self Centering Device T10, there is a height adjustment which will change the thickness of the cut at the webbing, similar to the Framon side depth cam and HPC/ Scotsman elevation knob, but not as easy to use (see *Photograph 15*). To adjust for web thickness, math skills, trial and error, as well as a good micrometer are essential for proper calibration. Adjustments



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are made by a calibrated dial. It may be helpful for you to set up a list of scale of adjustments and keep the list near the machine for quicker changes. Should confusions or problems occur, Silca technical staff will walk you through the procedure and cheerfully take as much time as needed to get you back to work.

To cut a key, lock the clamps at the 0 degree position with the handles (knobs), insert the key in the right clamp and the blank in the left clamp. Insert the key and blank until they hit the stop. Tighten the clamps around the key and blank. Unlock the clamps with the handles (knobs). Use the key bow or clamp to rotate the keys clockwise to the first position, lock at least one of the handles, preferably the left handle, to prevent the key blank from shifting. A feed Lever will push the key blank into the cutter to cut the key. Depress and release the lever. Release the handle(s) and rotate clockwise to the next position. Continue this procedure until the key is completed.

The Crown is a precision machine which allows for the adjustment of various positions and side depths of cutting. Adjustment for side depth or webbing depth is simple - but not necessarily easy. Once the machine is adjusted properly for side depth and tumbler depth however, it is very easy to duplicate keys. If your shop regularly cuts multiple sets of the same key, this machine would be the easiest to use. The more duplicates of a single key that are cut, the more this machine would be appreciated. To originate keys, however, a set of depth keys would need to be acquired, then of course, duplicate the new original.

#### **RECAPING**

All of the machines presented in this article are really quality machines. You could be proud to own any one of them. Larger shops, or those locksmiths who do a lot of tubular work may wish to own more than one because of the varied strengths of the machines. Remember, a locksmith can never have too many machines.

The A1 Herty Gerty - a long time favorite for those who like hand crank machines is retail priced at \$359.75. The unit is small, cuts by code and can cut "cut within cuts" For more information call: (804) 359-9003.

At a retail price of \$299.00, The HPC TKM -90 is the most inexpensive tubular key machine on the market. It is a comfortable key machine to operate and easiest to carry in your pocket. Cuts by code only. For more information call: (847) 671-6280.

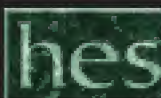
The HPC/ Scotsman 747XU, is the most advanced of the HPC/ Scotsman tubular key machines. This is a versatile machine which cuts all the standard keys, and the cut within cuts keys. At \$1099.00 retail, it both duplicates and cuts by code. For more information call: (847) 671-6280.

The Framon TKM -100 is newly designed offering ample spacing plates and depth cams should prove sufficient for North American locksmiths. The video tape nicely overviews the machine's operation. At a retail price of \$1295.00, this machine will only cut by code. For more information call: (714) 441-0544.

The Silca Crown will be found in shops where they duplicate tubular keys all day long. It's strong points include a positive stop in order to index the keys and a long lever which easily feeds the key blank into the cutter. At \$1095.00 retail, this machine will only duplicate. For more information call: (216) 487-5454.







# Locksmiths

# & Distributors

Partners  
or  
Adversaries?

**D**istributors. Every year in *The National Locksmith*, we schedule editorial attention to focus on the distributors that serve this industry. Every year that we do, we struggle to present a different editorial angle. The same approach of listing all the distributors, or focusing on a few movers and shakers, seems to be rehashed over and over again.

Well, this year we are doing something different. Instead of rehashing the same muck over again (which we came close to doing) we decided to view the distributors through the eyes of their customers, you the locksmith. The results proved to be very interesting.

We sent a questionnaire to locksmiths and asked them about distributors and their personal purchasing practices. The response was overwhelming. It became immediately evident that locksmiths have definite opinions about their distributors. Some quite flattering, and some... well, you can imagine that some feel distributors should crash and burn. However, it's that range of opinions that make the responses all the more intriguing.

## Results of the Distributor Survey

**Q.** How many different distributors do you purchase from in an average year?

**A.** Most locksmiths purchase products from an average of 6 different distributors a year.

**Q.** How many times a month, on average, do you place a distributor order?

**A.** Of the locksmiths surveyed, most locksmiths place an order with a distributor an average of 12 times a month.

**Q.** How important are the following (rank from 1 to 10. 1 is not important. 10 is very important).

**A.** The average importance of the following services provided by a distributor on a scale of 1 to 10 are: (rounded off to the nearest half) is shown in *Graph 1*.

**Q.** Have you ever purchased from a distributor due to advertising seen in *The National Locksmith*?

**A.** 84% say they have purchased products from a distributor whose ad was seen in *The National Locksmith* (see *Graph 2*).

**Q.** What percentage, if any, of your purchases do you make from mass merchandisers (like Wal-Mart) instead of locksmith distributors?

**A.** An average of 4.1% of locksmith purchases are made at a mass merchandiser such as Home Depot.

**Q.** What percentage of your purchases do you buy from distributors located out of your state?

**A.** An average of 53.93% of their purchases are made with out-of-state distributors.

## The Good, The Bad and How To Improve

Just like Fred Astaire and Ginger Rogers couldn't have existed without each other, locksmiths and their distributors enjoy a unique relationship, both being critical to each other. And just like Fred and Ginger, the locksmith and the distributor sometimes make beautiful music together. But at other moments, they just stomp all over each other's toes.

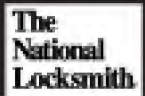
Since the locksmith is the customer in this dance, we decided to get a feel for what you do and do not like about your distributor relationships. We asked a number of you to first tell us what you do like about your favorite distributors.

Two words which kept coming up time and time again were "friendly" and "knowledgeable." Obviously, locksmiths prefer to deal with companies who treat them well, as a valued client. Here are quotes from your fellow locksmiths telling what they like about their favorite suppliers.

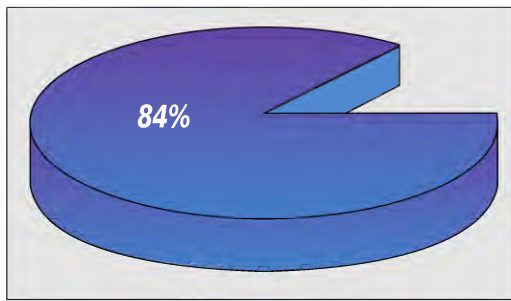


**Graph 1.** Average importance of services provided by distributors on a scale of 1 to 10.





**Graph 2.**  
Percentage of surveyed locksmiths who have purchased products from a distributor advertised in The National Locksmith.



**What do you like about your favorite distributor?**

"Good catalog, fast delivery and good prices."

Bob M.

"Friendly, helpful and knowledgeable. Next day delivery. Salesman comes to my shop three to five times a year. He keeps my catalogs up to date and takes care of restocking products I don't need whether I ordered them by mistake or not."

Tom T.

"Friendly. Calls us back if there is a problem."

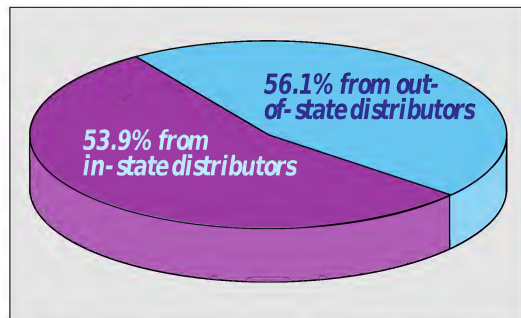
Nicholas M.

"Low back order rate, next day delivery and courteous sales people."

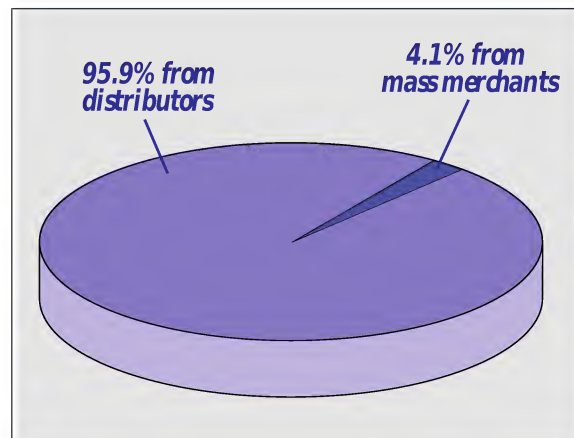
Anonymous

"Local warehouse, fast delivery, courteous, knowledgeable sales personnel, annual trade shows, monthly specials advertised in flyers. Also, free access to nationwide inventory status and a price on all times via an 800 number and a modem. I can use this system to place an order at a discount."

Jon M.



**Graph 3.** Percentages of purchases made from in-state distributors versus out-of-state distributors.



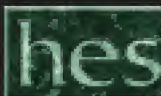
**Graph 4.** Percentages of purchases from mass merchants versus purchases from distributors.



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*"Fast accurate order fills. They have a friendly staff that is knowledgeable."*

Les M.

*"They not only stock the locks, but also the parts."*

Scott D.

*"The best thing about my favorite distributor is their willingness to answer all my questions, even the dumb ones."*

Aaron D.

*"They are dependable, eager to help, stay in touch with me, and make me feel like their best customer."*

Brian

*"No minimums and they pay the freight."*

Charley B.

*"Knowledge of the product!"*

Lenny W.

*"I like the value added services, like knowledge about the products and seminars."*

Norm Z.

*"Salesperson knows her stuff!"*

Jeff S.



***"Willingness of salespeople to help even if they have to send you to their competition!"***

**Bob D.  
Maryland**

You can see from these typical answers that courtesy and product knowledge are highly valued by the locksmith. Apparently, that is because not all distributors are considered to have those characteristics. In a little bit, we'll move on to the dirt locksmiths have to tell about distributors they don't like. But before we do, it is worthwhile remembering that if you aren't treated well by a distributor, there are plenty of others willing to give you a better shake.

Based on the comments above, these locksmiths have found and made good relationships with suppliers whom they value and who value them. Sticking with nice things to say about distributors (for a moment at least), we also asked locksmiths how distributors have helped them during a difficult moment. Here's what they had to say.

**Has a distributor ever helped you out of a jam?**

*"My main service van was stolen along with my tools, equipment and inventory. R&H Wholesale was helpful in extending flexible credit terms on critical items to help get me back on the road quickly. Also invoicing in advance of delivery helped my insurance company get the ball rolling to pay me for the replaced items quicker."*

Anonymous

*"M. Taylor has bailed me out many times. Thanks to Don and Tom!"*

Bear

*"I really needed something fast and the salesman brought it to me personally the same day as I ordered it."*

Yeggster



***"When one of my distributors doesn't have something I need for the next day, if they have it at another warehouse, they air ship it to me at their own expense."***

**Frank L.  
Florida**

*"The local manager called one of my accounts for me to reassure them that the problem with the parts I ordered was his fault, not mine."*

Victor S.

*"The distributor called his competitor to get me a part."*

Mike H.

*"I needed a part real bad and couldn't find it. All of my distributors said it would take six to eight weeks to get it. The customer wouldn't wait that long and I was going to lose the account. I mentioned to my sales rep at Armstrong's that I hated to see someone else come from out of town to service this very good customer.*

*"The next day I got the part by UPS from a company I have never done business with. My sales rep had called around to his competitors, found the part, and had it shipped directly to me at his own expense. That is service!"*

Jeff S.

*"Fried Brothers went out of their way to have locks shipped to me by FedEx from California at no extra cost. Real classy."*

Jack C.

*"When I was just starting my business part time, Clark Security Products allowed me to open an account with very little paperwork. Even after it became apparent I would be a very small account, they have continued to be helpful and supportive."*

Jon M.



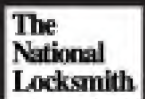
***"My distributor has helped me with special next day air shipments to make up for local branch outages. They go the extra mile to offer prices which allow us to compete with other suppliers who sell to my customer base."***

**Steve G.  
Texas**

From the stories related above, you can see that a wide variety of distributors, well beyond the few mentioned here, will go the extra mile to give excellent service to the locksmith. As a side note, I should mention that if you want to be treated well by your supplier, remember to be equally courteous to his staff.

So as you can see, plenty of distributors are keeping their customers happy. But what about the other side of the coin? Now locksmiths, as you know, enjoy nothing more than a good gripe session. So when we asked what they didn't like about suppliers, you were only too eager to spill





the beans. The names of the distributors have been omitted to protect the "innocent."

**If you have ever stopped using a particular distributor, what were your reasons?**

*"They made bookkeeping errors and made me prove I had paid for stuff. This happened not once, but many times."*

Kyle H.

*"It seems like I'm competing more and more with the very distributors I am supporting. There is one distributor I will not do business with again because they will sell to anyone at the same wholesale price as I get."*

Anonymous

*"Unfriendly staff."*

Jon W.

*"They sent multiple incorrect orders."*

Richard D.

*"I quit one distributor because of high pressure sales calls."*

Anonymous



**"Constantly being shipped wrong merchandise even though I faxed orders using their own catalog numbers."**

**Jack C. Pennsylvania**



**"They stopped sending me their catalog."**

**Jon M. Colorado**

*"The company refused to process my credit application because it wasn't accompanied by an order!"*

Ron S.

*"I felt unwelcome with small orders."*

Lee W.

*"It was their What-do-you-want-now attitude."*

S. H.

*"One guy was bidding against me on jobs, continuously getting my orders wrong, and had a hounding, overbearing salesman."*

Brian B.

*"Lack of follow up on billing errors."*

Jim P.

*"Orders filled inaccurately or dropped altogether. Shipping from multiple warehouses on non-rush orders and then charging shipping from every warehouse. Failure to carry the parts and low ticket items that everybody needs daily."*

Anonymous



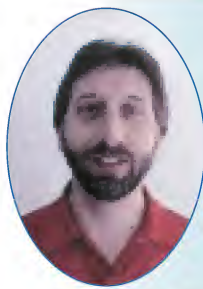
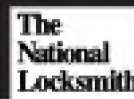
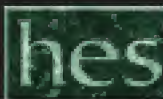
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*"Lousy service, unreasonably high prices, and they tended to sell to anybody, not just locksmiths."*  
**Les M.**  
**Pennsylvania**

*"They were selling my customers."*

Steve G.

*"Salespeople didn't know their stuff."*

Jeff S.

**C**learly one thing distributors can do to help their customer relations is ensure that their sales staff is not only competent, but also pleasant to deal with. In defense of distributors everywhere, let me say that sometimes locksmiths can be very demanding over the phone. So just as it is important for your distributor to be courteous to you, it is equally important for you to be reasonable and friendly with him or her.

Finally, locksmiths have ideas on what their suppliers can do better to improve customer relations.

**What do you think distributors could do differently to help you in your business?**

*"Hire people who have worked as locksmiths, not just order takers."*

Lenny W.

*"Hold more frequent training workshops."*

Dutch V.

*"Publish an accurate, full line catalog."*

D.G.S.

*"Update the catalogs!! Or put them on disk or CD. Some of the distributor catalogs are several years old."*

Ron S.

*"Publish price lists to go with the catalogs."*

Aaron D.



*"Begin or continue to use electronic technology to allow me to check on availability and current pricing on a 24 hour basis. Also electronic order entry would be beneficial."*

**Jim P.**  
**California**

*"Quit selling my retail customers at wholesale prices!! I mean the end user. Isn't that the way the chain of distribution is supposed to work? Manufacturer to distributor to retailer to end user. Thanks for letting me get this off my chest."*

Anonymous

*"Treat customers who spend maybe three to four thousand dollars a year the same as those who spend 15 to 20 thousand."*

Jack C.



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*"They gave me a run around about a returned product, my first in six years."*

**Shane M.**  
**Ontario**

**O**ne surprise was how many locksmiths report rude treatment from some wholesalers. Just as notable however, was the vast number of locksmiths who told us of the many ways their distributors have gone beyond the call of duty to help them in a time of need.

Distributing today is a very competitive field, just as locksmithing is. Look in our December Locksmith Directory issue and you will find page after page of distributor listings. There are some awesome companies among them, and of course, a few which could stand a little improvement.

And you know what? I bet that some of the companies lauded for saving one locksmith's butt, may be the same company criticized by a different locksmith for letting him down. The lesson is that there is a lot to be said for working together, customer and supplier, to ensure an enjoyable and profitable relationship. And remember the golden rule. If you want to be valued by your distributor, treat him that way. **TNL**





# Opening the 1996 BMW 328i

**Many claim it is impossible to easily and quickly open any of the new BMW models with deadlocking locks. Well, they were WRONG!**



**1. A 1996 BMW 328i with deadlocking system.**

**A**lthough the manufacturer touts that it is impossible to lock your keys in the 1996 BMW 328i (see Photograph 1), there are at least three different ways that intelligent people could mistakenly lock their keys in the car. While it is not very easy to lock your keys in this car, it is even more difficult to lock your keys in this car WITHOUT deadbolting the locking system.

If the driver's door is in the open position, as if the driver was getting out of the car, the car cannot be deadbolted. The driver's door vertical button cannot even be depressed with the door open. This is not true however, for the passenger and rear doors. Should the driver exit the vehicle and close the driver's door, the driver deadlocks the car by turning the key in the driver's door, the trunk, or the passenger door. The passenger can also deadlock the car by pushing the passenger vertical button after the driver's door is closed.

The only way to lock the car without deadbolting the system is to manually depress all passenger door vertical buttons on each door independently with the driver's door open, then close and depress the driver's door vertical button last by reaching through the driver's side rear passenger door window. That's a



**2. Remove the screws that secure the trunk lock cowl.**



**1. Remove the left license plate light.**



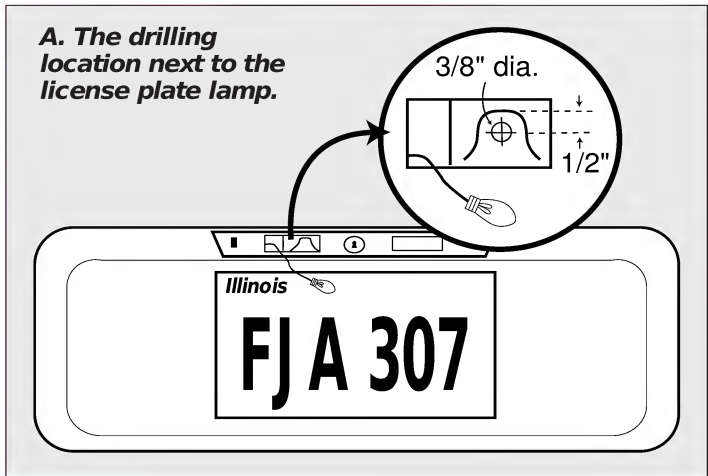


Continued from page 58

lot of work to lock this car without deadbolting the system. However, if the car door is not deadbolted, the car can be unlocked at the front door by using HPC's CO-76, Vertical Clutch Tool. You will want to use an inspection light because the door lock electronics and wiring are plentiful in all four doors of this model. Simply capture the vertical rod which runs to the inside lock button with the clutch tool and lift.

Since the doors automatically deadbolt in most cases, you will need to address the procedure for unlocking a deadbolted BMW 328i. If there is any good news for the lock-

smith it is that the procedure for retrieving keys from the trunk is the same as retrieving keys from the passenger compartment. The not so good news is that the method requires a hole be drilled in a concealed part of the car, a procedure which may lead to elevated blood pressure in your customer.



Because the door locks have fixed pawls, tight linkages, and are amid wiring harnesses, it is best to attack the one lock where these obstacles are absent... the trunk. There is a power lock solenoid which reaches across the trunk panel to the lock cylinder assembly. The solenoid and its linkage are "lazy." Viewed from the rear of the car, when the solenoid linkage is moved from the left to the right, all of the locks in the car will open, accessing both the trunk and the passenger compartment at the same time!

**To Access the Linkage:**

- 1** Remove the four Phillips screws which hold the trunk lock cowl in place. The screws are found underneath the cowl (see Photograph 2). Then remove the cowl.
- 2** Remove the left license plate lamp fixture by "unplugging" it from the trunk body (see Photograph 3).
- 3** Locate an indentation on an inner sheet metal panel which would have been under the right side of the lamp. The linkage we wish to attack is located underneath this sheet metal panel toward the bottom of the indentation, almost vertically in line with the trunk lock cylinder (see Illustration A).

Drill a 3/8" hole through the sheet metal panel about a 1/2 inch down from the top of the indentation in the panel. This hole will not be visible from either the inside or outside of the car once the license plate lamp is replaced.

- 4** Insert an HPC CO-76, Vertical Clutch Tool into the hole. If the linkage is not immediately visible, it will probably be located just below the hole. Capture the linkage with the clutch tool (see Photographs 4a and b).

View of linkage, solenoid and trunk lock assembly from inside the trunk (see Photograph 5). After the clutch

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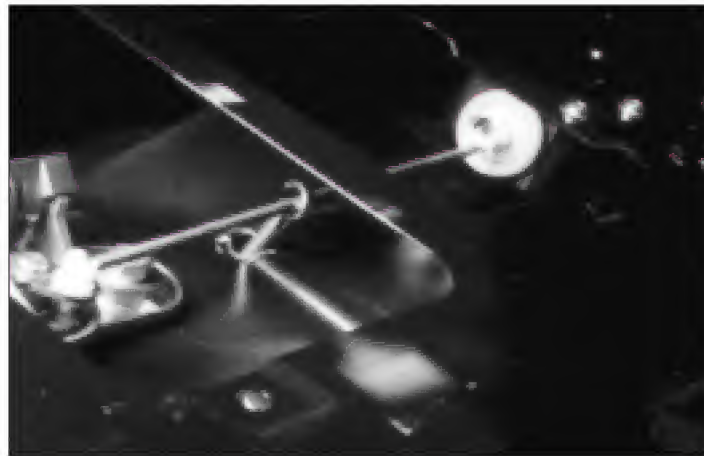
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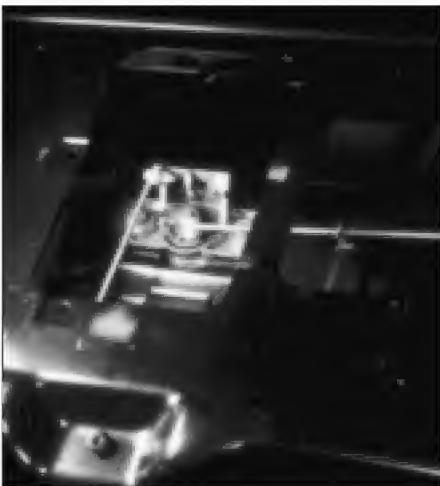
4a. Insert HPC CO-76 clutch tool.



5. Move CO-76 tool right to left to open.

BMW 328i, your pockets will jingle, your heart will kindle and a smile will grace your face.

*This car opening information was supplied by HPC, Inc. This method and many others can be found in HPC's Car Opening Authority(TM) part number COA-22.*



4b. CO-76 clutch tool attached to linkage.

tool is firmly attached to the linkage rod, move tip of clutch tool from right to left to open vehicle. All of the door locks as well as the trunk lock will come to life and pop open in unison!

**5** Remove the tool, replace the lamp and cowling by reversing the procedure for removal.

**Note:** The hole you have made in the inner sheet metal panel will not be seen from the outside once the license plate lamp is replaced. The hole will also not be visible from the inside with the trunk lid open as it is covered by an inside trunk lid liner. Because the hole is not visible and it will be made on so relatively few vehicles, we do not believe this hole to pose a significant security risk. However, the perfectionist in us all may urge you to plug the hole by a rivet, a headless bolt or similar device. If so, remove the inside trunk lid liner, insert the device from the outside, secure it from the inside, and then replace the inside trunk lid liner, lamp and cowling.

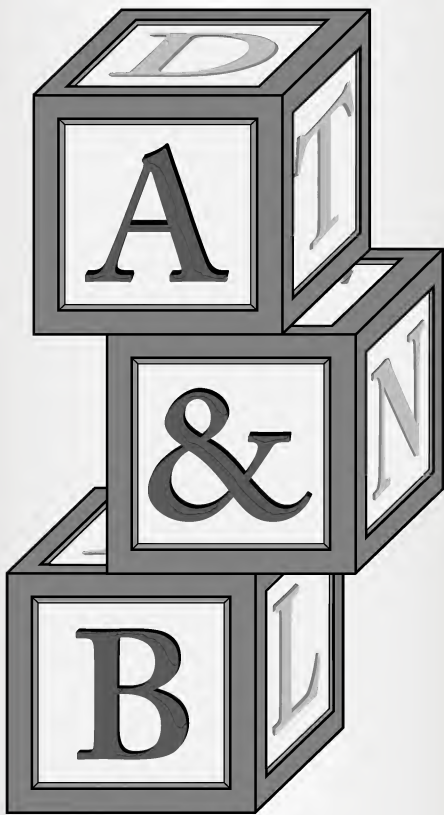
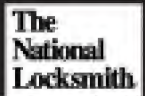
So, the next time you receive a call to open a locked/ deadlocked 1996

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**Opening this relatively simple safe can be more difficult than expected if you don't know all the variables.**



by Dale Libby

**A** & B Safe Company has been an industry name for a long time. In its inception, A & B manufactured day storage safes in Chicago, filling at the time a need for such containers. The day storage units were used both in stores and in vending trucks. It was available in a variety of configurations with slots, hoppers, and drop drawers. They were not made to keep money or receipts safe overnight, but meant to keep a days receipts and then the contents were to be deposited in a bank or otherwise protected.

Many merchants, however, did rely on this type of container for permanent storage of their valuables, and in the early days, these containers did put up a good fight against forced entry. The secret of the protection came with good construction against forced entry and the use of the then new S&G 4444 safe deposit lock.

You may have seen the A & B units under several label names. The standard configuration was easy to identify. There was a "T" handle to the left, and about 3 inches up and 2 inches to the right was a double nosed safe deposit lock (Photograph 1).

The particular lock used at first was the S&G 4440 (RH). This lock differs from the standard 4440 safe deposit lock in that it has a longer body with a much longer bolt. The end of the bolt has a threaded screw hole to accept an 8/32 inch stainless steel

screw. This screw projects out the bottom of the bolt and fits into a corresponding hole in a large blocker bolt. This can be seen in Photograph 2.

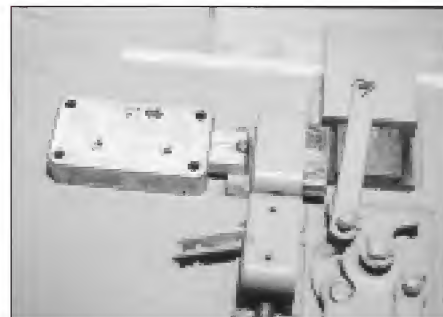
The way the mechanism works is simplicity itself. When the large bolt is extended, it blocks the vertical movement of the upper door bolt which stops the "T" handle from turning. When the safe deposit lock is opened, the blocker bolt is moved out of the way and the handle can turn, moving both upper and lower bolts into the unlocked position.

These upper and lower bolts are dove tailed and travel along a bolt plate. The door locking bolts must be well greased for the unit to work properly. The two excellent security features on this unit is the S&G 4444 lock and the diabolical relocking device.

In Photograph 3, we see the positioning of the plunger type relocking device. It is located 2-1/4



1. Typical A&B configuration was a "T" handle to the left and to the right was a double nosed safe deposit lock.

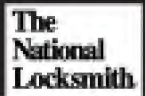


2. Inside view of a typical A & B safe. Safe deposit lock moves blocker bolt which prevents movement of upper door bolt.

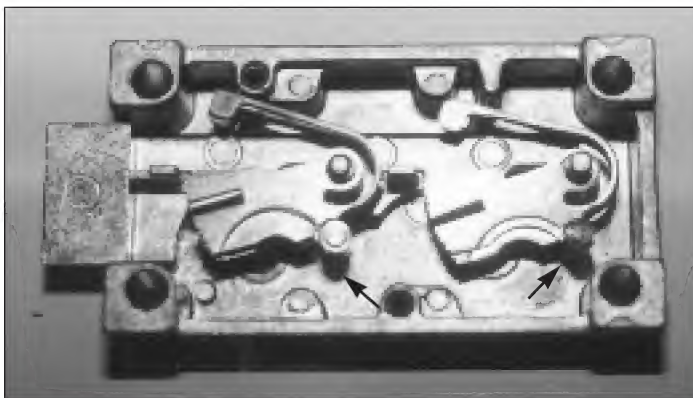


3. Relock plunger is blocked by case cover over lock.





**4. When the lock noses are pulled, tumblers drop below fence and lock can easily be opened.**



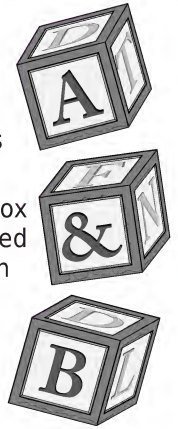
**5. By incorporating pins in the S&G 4444, the levers cannot drop low enough to clear either fence.**

inches to the left of the renter's nose, and one inch down. It is held in place by the lock cover metal extension. This can be seen at the 1 inch mark on the ruler. If the lock is punched, it will be necessary to drill and deactivate this relocker by either pinning it open or destroying the "E" clip and spring. Both methods work, and drilling this door is not a problem because there is no hardplate used.

My first S&G 4444 encounter was a puzzlement. I pulled both noses of the lock, and the lever tumblers did not fall as expected. I later learned that the 4444 utilizes two pins positioned

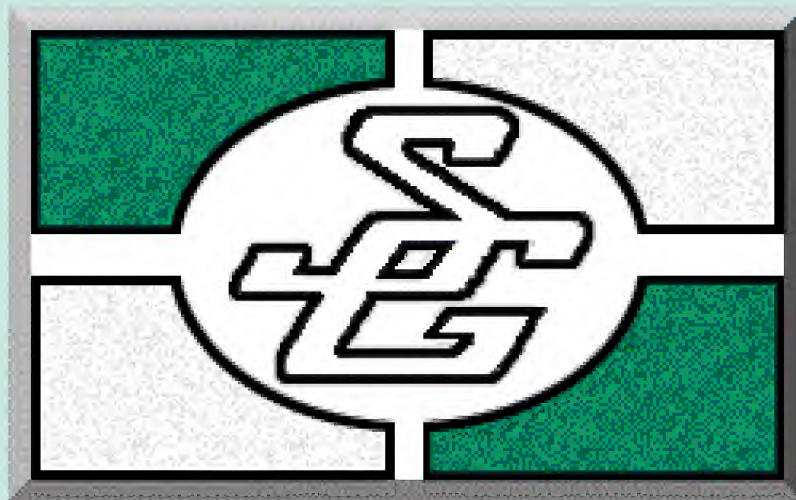
under both lever stacks which is designed to prevent the levers from dropping when the noses are pulled.

A typical safe deposit box opening is performed by first pulling one or both lock noses. This action will cause the lever stack to drop below the fence. With the levers below the fence, it is a simple matter of retracting the lock bolt and the lock is open.



Photograph 4 shows what happens in a standard S&G 4440 safe deposit lock when both the renter's and the guard nose is pulled. A standard safe deposit nose puller would be used to accomplish the task. In this picture we see that all the levers have dropped below the fence line indicated by the arrows. At this point, to open the lock insert a pointed probe above the levers and retract the bolt to the open position. This takes about 5 minutes for the total opening.

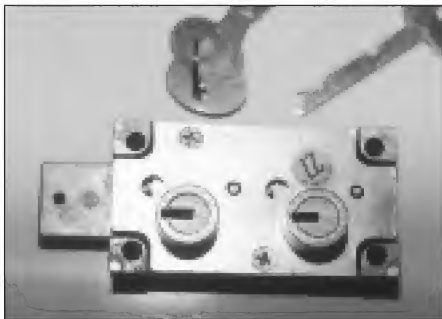
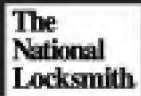
Photograph 5, shows the position of the pins in the S&G 4444 lock shown by the arrows. This keeps the levers from dropping below the fence when



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6. The Precision Products P40 lock is a replacement for the S&G 4444.

the nose is pulled. This eliminates the ability of inserting an ice pick and retracting the lock bolt. If the cover to this lock was on, the levers would be positioned even higher.

After pulling the noses, you can look into the nose horns and see the pins on an S&G 4444 lock. These pins must be knocked away or drilled off before the lock will open. I use a specially bent chisel with a notch cut in the end to accomplish this. After removing these pins, the levers will drop enough to

open in the standard way.

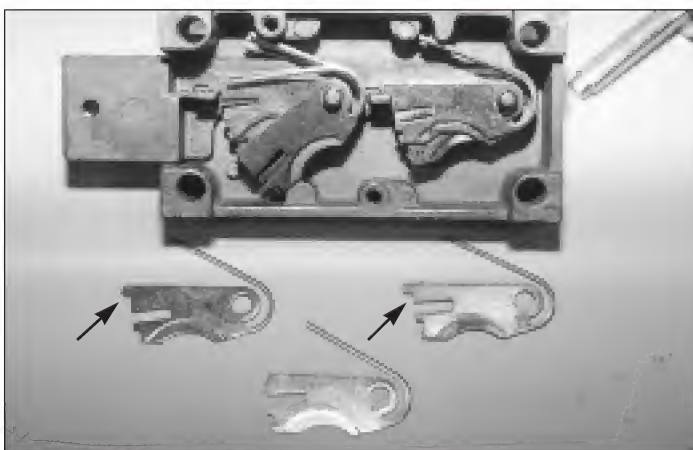
Note the solid corners on this lock for the mounting screws. Opening time for one of these safes with the S&G 4444 lock (knowing what you were doing) is about 10 minutes.

The next A & B safe I had to open used the Precision Products P40 type of replacement lock instead of the S&G 4444 lock. All these locks are right hand, with the extended bolt and a threaded screw hole in the end. The

Precision Products lock can be seen in Photograph 6. Again, note the solid corners on the lock body.

Precision (PPI) made this lock available for about half the price of the S&G 4444 lock, which was attractive to the manufacturers of the safe, as well as to the repairmen for the safe.

Instead of pins to hold up all the lever tumblers above the gate, the P40



7. When noses are pulled, some of the levers stay above the fences. Upper levers have protrusions to prevent dropping when nose is pulled.



8. The Ilco P44 has recently also been used on the A & B safe.



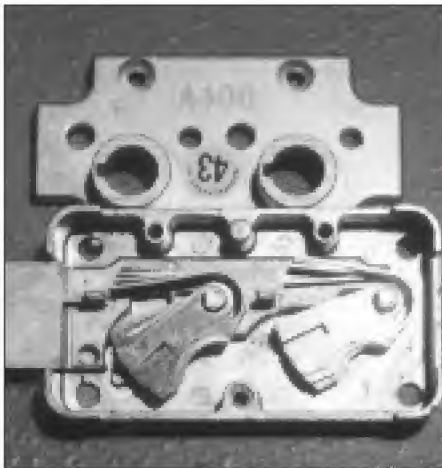
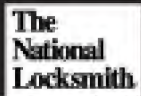
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**9. The Ilco P44 opens easily when noses are pulled. There is nothing to prevent the tumblers from dropping.**

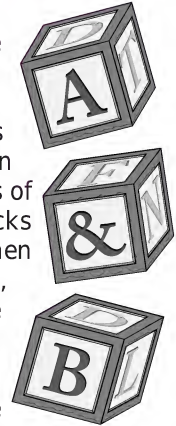
incorporated several "special" levers in the pack. The special levers had an extra tip on the end of them. When the noses of this lock is pulled, some, but not all of the levers would drop below the fence. The others would remain stationary. The levers tip protrusions would rest on the fence, preventing it from dropping. In *Photograph 7*, we can see the differences and how they work.

Of the three levers positioned below the lock in *photograph 7*, the top two levers have the special tip protrusion. The lone lever tumbler at the bottom of the picture has none. In the picture you can see (especially on the renter's side) that when the noses are pulled, some of the levers fall below the fence, while others are locked above it.

Once you have worked on the PPI lock, you will find that it is a very easy lock to defeat. It takes about 6 minutes. All you have to do is use a stout ice pick at the top of the levers and pry down sharply. You might think that you will deform the levers enough to drop below the fence, but in reality, what happens is that the fence will break allowing all the levers to drop. Both the renter's and guard fences will break easily allowing a quick profitable opening of the safe door.

Precision Products has since been purchased by Ilco Unican. The newest replacement for the S&G 4444 RH lock is shown in *Photograph 8*. This is the ILCO number P44 (A400 on the lock cover). The extension bolt has the threaded screw hole and the foot print is the same. Note the ABSENCE

of solid corners for the mounting screws. When the cover is removed, we can see there is absolutely NO protection against pulling the noses of the lock. Both lever packs drop below the fence when the noses are pulled, making this a 5 minute opening (see *Photograph 9*).



If you work on these units, the S&G 4444 RH is still available as a replacement. Expect to spend about \$28.00 or so for a replacement. The PPI lock is no longer available, and the ILCO unit sells for about \$14.00. Is the extra security of the raised levers important enough to spend the extra money on a S&G lock? You and your customer will have to be the judge of that.

By the way, if a single key operation of any of these locks is needed, just remove the lever stack on the Guard side of the lock. Now you have a lock that can be operated with just the renter's key. Open Safe deposit locks and PROSPER! **TRM**



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# Treskat's CodeMaster



by Sal Dulcamaro

**Offering a broad line of computer software for the locksmith industry, Treskat's CodeMaster has many features.**

CodeMaster is one of the most widely used computerized code programs among locksmiths. It is a simple to use program and it will run on virtually any IBM compatible computer. It will work on some of the earliest DOS based PC's to the fastest Pentium machines and it takes less than 3 megs of hard disk space to install.

### No Apologies

Codemaster is a DOS based program. It is not just the current version that will soon be replaced when the Windows version is completed. It is the only version. Ray Nazzaro, the designer of Codemaster and the other Treskat software, has made no plans to switch over to Windows exclusive software. While many might think DOS is obsolete with the advent of Windows 3.1 and 95, many DOS based programs can and do meet or exceed the capabilities of some Windows based applications.

Among DOS based CodeMaster's claims to fame is its ability to run on nearly any computer. It can even run on a palmtop computer. That can be a very important consideration for a locksmith who has yet to invest in lock codes in any form.

Most of the different code programs are very price competitive when compared to printed codes. If you already have a computer, computerized codes are probably a better investment. If you didn't own a computer, however, you would be hard pressed to justify purchasing a computer merely as an electronic storage device for your



codes. The price advantage would probably return to printed codes.

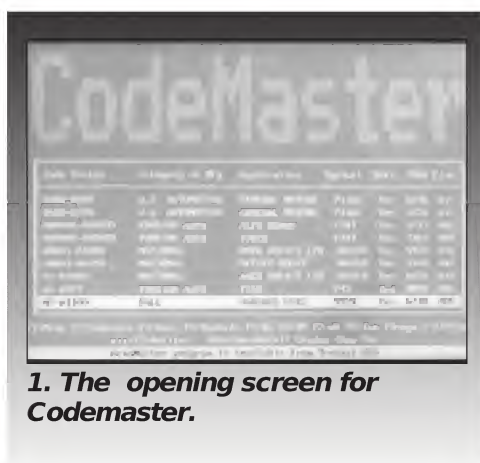
If your code program was DOS based (such as Codemaster), buying an older used computer (for maybe \$100 or slightly more) as nothing more than a device to run your code program, would again make them price competitive with printed codes.

### Running Codemaster

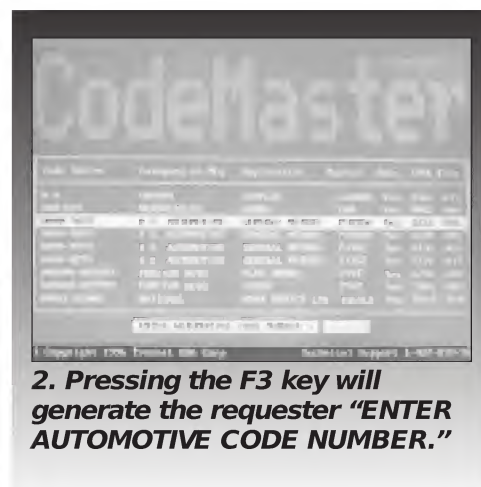
Photograph 1, shows the opening screen for Codemaster. The middle of the screen has what appears to be an index of codes. At the bottom of the screen you will see listed descriptions of the function keys. You have the option of scrolling down the screen to a specific code series, or if you type in the first letter of the code series the program

will quickly jump down to that point.

Pressing the F3 key will generate the requester shown at the bottom of Photograph 2. It says, "ENTER AUTOMOTIVE CODE NUMBER." If you're not quite sure what the full code series is, you can type in the code number and the program will search every code series and find every possible example of that particular code number.



1. The opening screen for Codemaster.



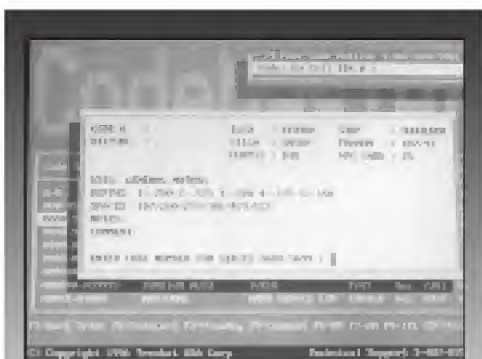
2. Pressing the F3 key will generate the requester "ENTER AUTOMOTIVE CODE NUMBER."

If you would have highlighted and selected the specific code series (example: 0A00-9A99) you would call up the screen shown in Photograph 3. With only the code series (and not the specific code number) you get the basic key cutting specifications and the key blank number,

**Continued on page 77**



Continued from page 68



**3. With only the code series you get the basic key cutting specifications and the key blank number.**

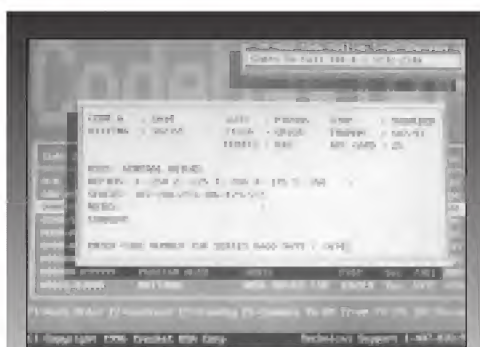
but not the specific key bitting. Notice that the key blank is cross referenced with Ilco, Silca and Curtis equivalent key numbers listed. Framon and HPC code machine information is also displayed.

Typing in the code number "2A34" and pressing "enter" produces the screen in *Photograph 4*. The listing of the key bitting pattern joins the key specifications that were already on the screen. In this particular case, the key bitting is: 342355. You also have new options for your function keys,

indicated at the bottom of the screen.

Among the useful options, the F5 key allows you to type in comments about a particular code. Pressing the F3 key will create an on-screen illustration of the key bitting cut pattern. If you own an ITL computerized code machine, you can use the F9 key to send key cutting information to your code machine.

If at the opening screen you would have pressed the F4 key instead of the F3 key, you would



**4. The listing of the key bitting pattern joins the key specifications that were already on the screen.**



**5. Pressing the F4 key would present the requester at the bottom of the screen that says, "ENTER NON-AUTOMOTIVE CODE NUMBER".**

have got the requester at the bottom of the screen in *Photograph 5*. It says, "ENTER NON-AUTOMOTIVE CODE NUMBER". The program is divided into automotive and non-automotive codes. The code number typed in after the requester is: A234. When the enter key is pushed, the program will only search non-automotive code series, even if there are automotive codes that use that number.

The program seeks out the first



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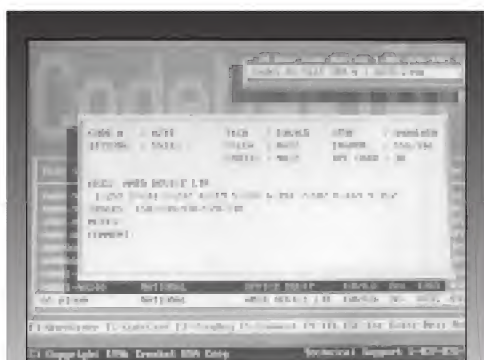
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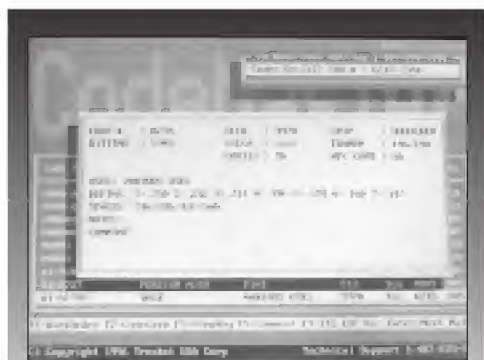


(non-automotive) code series to have a matching code number. *Photograph 6* shows the first one found. Near the bottom right hand part of the screen, you will see, "Enter=Next Match." If there are



**6. The program seeks out the first (non-automotive) code series to have a matching code number.**

additional code series that contain the code number that we are seeking, pressing the "Enter" key will cause the program to search for the next match. Repeating that action will continue the search until you find the correct code or you exhaust all the possibilities. *Photograph 7*, shows the next match.



**7. Repeating that action will continue the search until you find the correct code or you exhaust all the possibilities.**

### Linked Programs versus Multi-tasking

If you are familiar with Windows 95, it has a capability known as multi-tasking. That means that you can have more than one program running in separate windows on the screen at the same time. Ordinary DOS is not capable of multi-tasking. So what, you say? For the people who don't make use of the multi-tasking capability of Windows 95,

the lack of that capability in DOS will be no major inconvenience. If you absolutely must have Windows 95 style multi-tasking, you may ultimately forego any DOS based programs.

Although Codemaster was not designed to integrate into Windows 95's multi-tasking, it has its own built-in variation to the concept of multi-tasking. If you look back at *Photograph 1*, you will see descriptions of the function keys shown at the bottom of the screen. Many of these are actually links to other related programs. F2 indicates "CodeCard", but it is actually the link to the program: "MasterKard." F5 (WC) is the program "WonderCode." F6 (KM) indicates "Keymanager," and F7 (AM) is "AutoMaster." Most of the other function keys are for tasks within the Codemaster program itself. If you have some or all of those other Treskat programs already installed, the Codemaster program has a direct link already built into it.

Let me give an example on how those links can be used while you are still in the Codemaster program. Keymanager is partly a key blank identification program. If you also have it installed onto your hard drive, pressing the F6 key would call it up even though you were still in Codemaster. I mentioned previously that besides giving you the key biting combination, the program also tells you what key blank to use. Now Codemaster indicates Ilco, Silca and Curtis key numbers, which for the most part covers a majority of the key blanks out there. (Jet, ESP, Ilco-EZ and many others are mostly Curtis numbers.) If you used a different key blank brand, you could jump into Keymanager and convert the brands shown in Codemaster to the brand that you use. When you exit Keymanager, you would be returned to Codemaster to continue where you were without having to reload the Codemaster program. Although not true multi-tasking, it accomplishes a similar goal.

### Codemaster Enhancements

Two of the linked programs, MasterKard and WonderCode, add some interesting touches and make different use of the data already built into Codemaster. *Photograph 8*, shows MasterKard's opening screen. This program has nothing to

do with credit cards. It creates code cards for HPC code machines. It becomes quite valuable connected to a code program.

Let's say that you just looked up a code. If it was a standard old style GM key, you'd likely have the correct code card for your HPC code machine to immediately cut the key. If instead it was a code for an obscure import auto, there's a very good chance that you won't already have that code card. MasterKard to the rescue. No, not to order the correct code card with your credit card from your locksmith supply house. With this MasterKard you can actually print up an HPC code card for that obscure import auto key.



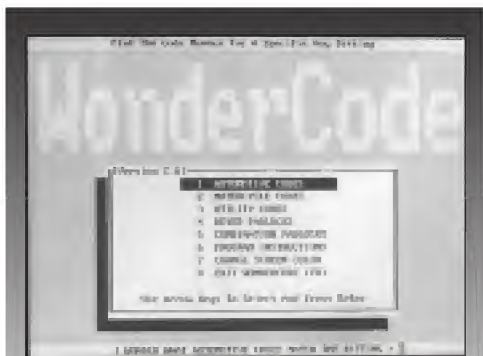
**8. MasterKard's opening screen which creates code cards for HPC code machines.**

If a particular code series is included in Codemaster, MasterKard can print the card automatically without separately inputting any depth and space data. That information will be taken directly from Codemaster. If you want to make up a custom card, you can input your own information. One limitation is that MasterKard will only work with laser printers. If you have a laser printer (or at least access to one), it can be a very useful program.

### WonderCode

WonderCode is a reverse code program. Instead of providing the code number and getting the key biting, you provide the key biting and get the code number. You may wonder what good that will do for you? It isn't exactly what would usually be thought of as traditional code work, but it gives you the opportunity to provide a new service to your customers.

We all know that it takes considerably more work to fit a key for a car when no code number is available as opposed to when it is. While most new cars come with key



**9. The opening screen for WonderCode. You can see that you need to identify the type of code before you input your key bitting.**

codes, very few used cars do. You can manually decode the key bitting for your customer, and then let WonderCode search and find the correct code number. For a slight fee (for some of your better customers you might do it for free)

you provide the customer with the proper code number for their key. In the future, if the original keys are ever lost that person can have a key made by code from a locksmith anywhere in the country.

Photograph 9, shows the opening screen for WonderCode. From the selections on the screen, you can see that you need to identify the type of code before you input your key bitting. Finding a padlock code that matches with the bitting of a Ford pin tumbler auto key won't do you any good. If you would have selected "AUTOMOTIVE CODES," you would get the requester that is visible at the bottom of the screen. If you select other types of codes, it would ask for that category instead.

After you type in the key bitting and press "enter," you would get a screen like that in Photograph 10. The code number, code series, application and key number are provided for every matching bitting. Just select the one that applies and you're on your way. You may notice the search time shown at the bottom left of the screen was only sixteen seconds. Like WonderCode,

Codemaster is also very fast.

Besides the full program, Codemaster can be purchased separately as non-automotive or just



**10. The code number, code series, application and key number are provided for every matching bitting.**

automotive codes. Codemaster and other locksmith related programs can be purchased by calling Treskat at: 800/645-5657. Free demo programs are available by request.

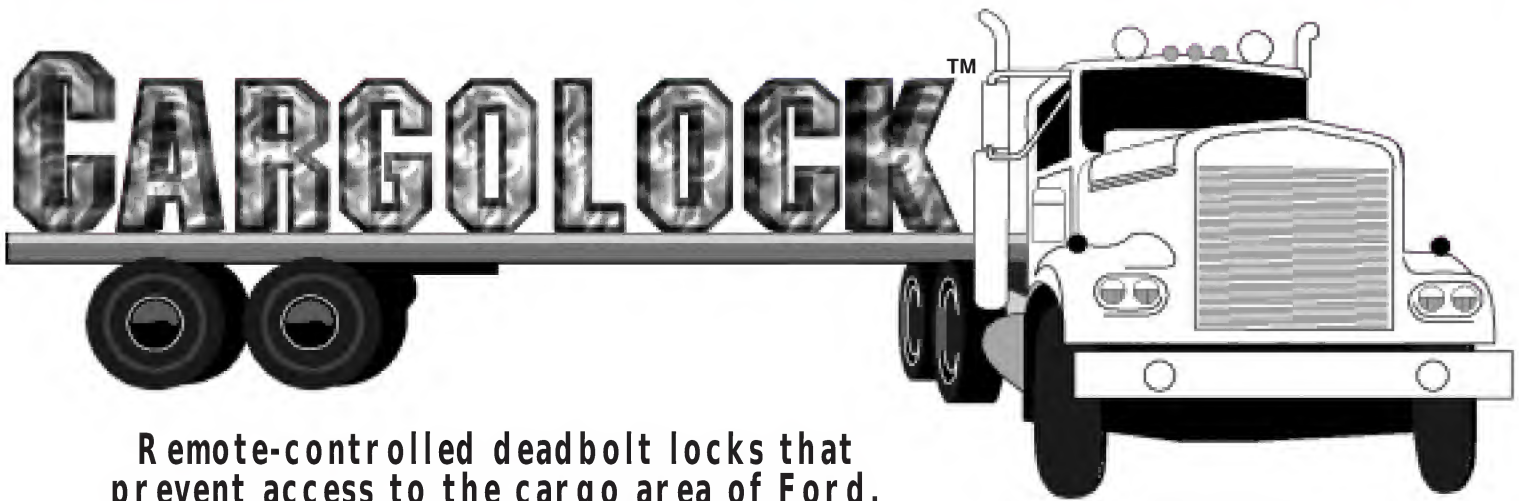
TNL



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**Remote-controlled deadbolt locks that prevent access to the cargo area of Ford, Chevrolet, and Dodge vans**

*by Robert Taylor*

**T**he Cargolock security system is designed to provide the owners of cargo vans with a security system that keeps thieves from breaking into their trucks and stealing valuable tools and equipment. This is accomplished by the use of electrically operated deadbolt locks installed inside the rear and side doors of the vehicle. The deadbolt locks can be operated 3 ways, by keychain transmitter, with a hidden rocker switch, or manually from inside the cargo area of the van. Each Cargolock security system comes with

a flashing L.E.D. for the dashboard, a starter kill relay to prevent vehicle theft, warning labels and all necessary wiring and hardware to complete the installation. It is also available without the remote control module if the vehicle is already equipped with one. Each Cargolock system is designed specifically for the year, make and model of the vehicle in which it is going to be installed. Detailed instructions are included.

Follow along through this installation procedure for a typical ford van.

Tape the template to the rear door as shown in *Photograph 1*. Mark the hole locations with a center punch and drill as indicated on the template.

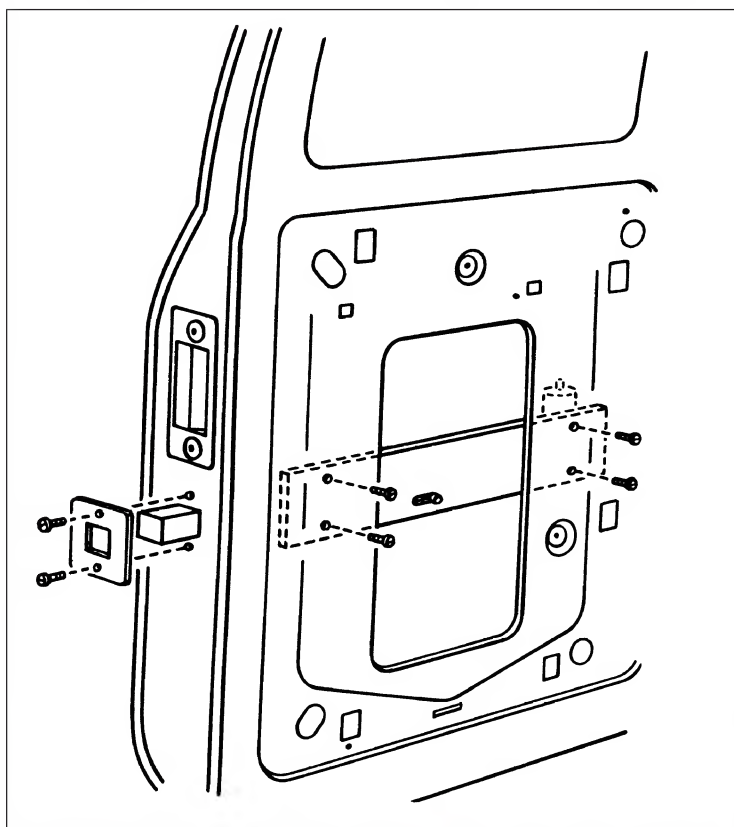
With the back door drilled, tape the door jamb template to the rear door jamb as shown in *Photograph 2*. Mark the hole location with a center punch and drill as indicated.

Install the deadbolt assembly inside the door and fasten it in place with four washerhead screws as shown in *Photograph 3*.

Install the square trimplate over the door jamb hole as shown in *Photograph 4*.

Locate and drill a hole in the opposite door jamb to receive the deadbolt. This can be easily done by placing a small patch of putty (included) on the door jamb opposite the deadbolt and then pushing the deadbolt into the putty patch so that it leaves an imprint.

**Continued on page 82**



**Illustration A. Line drawing of deadbolt assembly location.**

The line drawing in *Illustration A*, shows where the deadbolt mounting bracket is located in the left rear door of the vehicle.

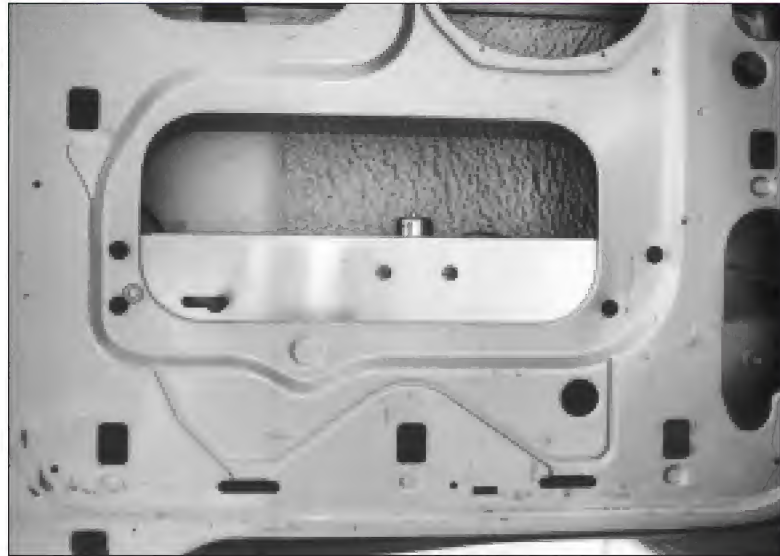


**Photograph 1. Mounting template for rear door.**

Continued from page 80



**Photograph 2.**  
Door jamb  
template.



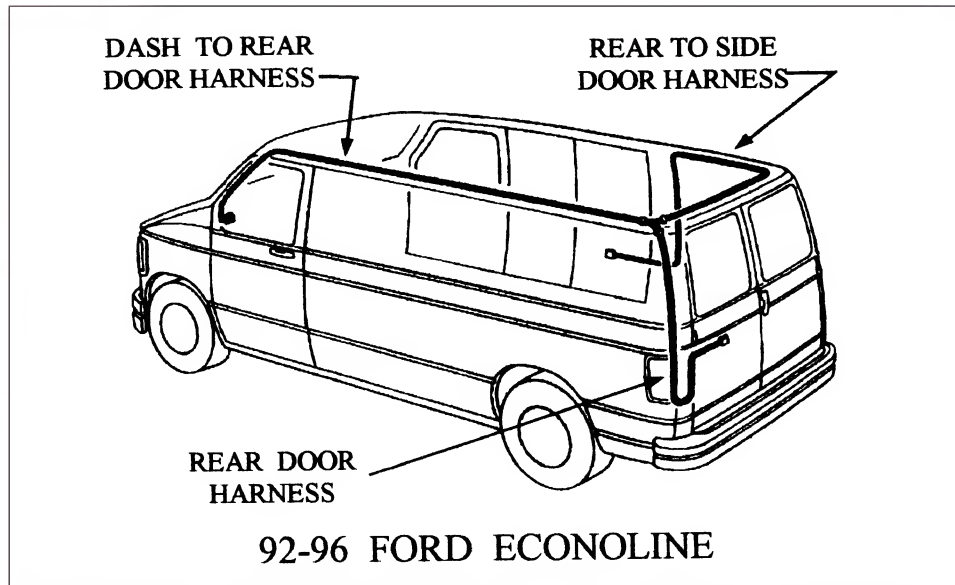
**Photograph 3.** Completed deadbolt installation.



**Photograph 4.** Deadbolt trimplate.



**Photograph 5.** Door jamb trimplate.



**Illustration B.** Wiring harness routing diagram.

Install the rectangular trimplate over the strike hole as shown in *Photograph 5*. The screw holes in the trimplate are oversized to allow for minor adjustments.

Repeat this same procedure for the side door.

The Cargolock security system comes with all of the wiring necessary to complete the installation. Each section of the wiring harness is individually packaged and labeled to indicate its function. In addition, all wires are color-coded and the individual sections plug into one another for quick and easy assembly. Route the wires as shown in *Illustration B*.

Install the remote module, lock/unlock relay, and starter kill relay under the dash. Solder or crimp

the wires from the control module and starter kill relay as indicated on the wiring schematic to the ignition wiring harness.

Install the hidden rocker switch in a suitable location under the dash or drivers seat.

Install the flashing led in the dash. The installation is complete, all that is left is to test operation of the system.

The Cargolock is extremely functional while being aesthetically pleasing. No more ugly padlocks need to be welded to the outside of the vehicle for added security. The Cargolock will provide hidden security that can be released instantaneously with the touch of a button.

For further information on the Cargolock security system please call 800-929-4700.



# Reed Report

**R**ecently, while scattershooting, I found Larry McCall. Larry is the VP of Marketing for L.J. Security Corp. in Pico Rivera, California. If you wish to talk to Larry, you can get him at 310-692-0636.

In my shop promotion seminar, I discuss how locksmiths can increase their bottom line by presenting short, informative talks on better security at their local clubs (Rotary, Kiwanis, Lions, etc.). Often, I am asked for a book on what I presented. One of these days I'll probably write one, but in the meantime, I have run across the following crime prevention presentation. My thanks to Jim's Mobile Repair and Lock Shop in Norman, Oklahoma for giving me permission to pass this on to locksmiths out there. Read it and then USE it. I promise it will make you money.

## CRIME PREVENTION

### RESIDENTIAL SECURITY RECOMMENDATIONS

#### FRONT DOOR:

- Should be of "solid core" construction.
- Should have a deadbolt lock and bolt should extend at least 1 inch from lock.
- Should have a case hardened steel insert (to resist cutting).
- Should have a case hardened steel cylinder guard (to resist pulling)
- Should have a 180 degree "peep" viewer.

#### REAR DOOR:

- Should be of "solid core" construction.
- Should have a deadbolt lock.
- External hinges should be "pinned" to prevent their removal to gain entry.

#### PATIO DOOR:

- With the door closed, drill a small hole at the bottom edge of the center side of the sliding portion; drop a steel pin in this hole, or install a locking device which prevents the door from being opened.
- With door open, insert three equally spaced sheet metal screws along the top track in which the door slides. Adjust the length of the screws so that the door will close with the top of the door almost touching the screw heads. This will prevent the door from being pried up and removed.



Yours For Better Security,

*Bill Reed*

Bill Reed

## Scatter Shooting while wondering whatever happened to ... Dr. Alois Crepensak

- Install a "Charley-Bar" behind the closed door. This will prevent the door from being pried opened.

#### WINDOWS:

- The most economical method for securing windows is by installing sheet metal screws in the window track, just above the top of the window when it is in the closed position.
- Installation of auxiliary window locks.
- Installation of "burglar bars" outside of window.
- Place "expanded metal" security mesh over windows.
- Replace window glass with Lexan glass.
- Keep shrubbery trimmed below window level; so it will not conceal someone attempting to gain entry.

#### LIGHTING:

- Be sure front porch light is functioning properly.
- Consider installing lights at rear of home; activated by inside switch.
- Place an inside light on a "timer" during your absence, to give the impression someone is home.

#### OPERATION IDENTIFICATION:

- Engrave your driver's license number on all valuables, to assist in the recovery process.
- Photograph delicate items, such as: jewelry, etc.
- Use a ruler in photo to indicate size of item.
- Keep list of items marked, description and serial numbers.

I will continue crime prevention's recommendations and security check list in next months Reed Report. **TRM**

**If you'd like to attend a Bill Reed seminar, choose from the following. For more info, contact Bill directly at (904) 476-2799.**

#### Seminar dates for the first half of '97:

|          |                    |          |                      |
|----------|--------------------|----------|----------------------|
| Feb. 2   | Ft. Lauderdale, FL | April 26 | Marysville, KS       |
| Feb. 22  | St. Louis, MO      | May 3    | Manchester, NH       |
| March 1  | Ft. Wayne, IN      | May 17   | Casper, WY           |
| March 15 | Houston, TX        | June 7   | Colorado Springs, CO |
| April 5  | Wilmington, DE     | June 21  | Billings, MT         |



# Decorative Hardware

**F**ancy levers and fancy finishes are just a few of the new introductions by some of the industries leading hardware manufacturers. In the never ending quest to keep abreast of new products being developed and presented to the public, here are just a few offerings new for '97.

### **SOLID BRASS KEYED ENTRY LOCKSETS FROM BALDWIN**

Baldwin Hardware Corporation introduces a new offering in the locking products market and the latest addition to Baldwin's Images® family



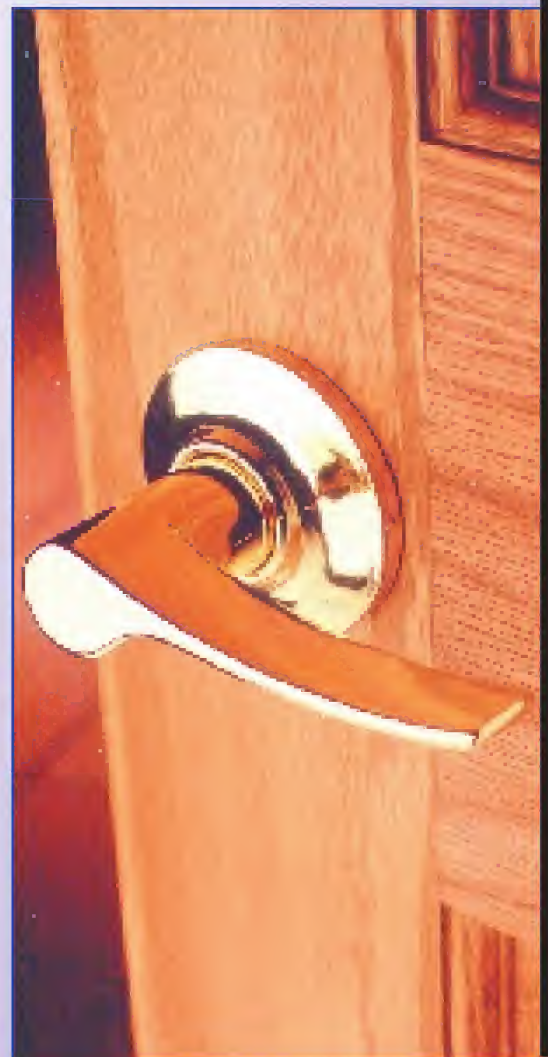
**Baldwin Hardware Corp.**  
Circle 366 on Rapid Reply

of home hardware. The first solid forged brass keyed entry locksets designed to fit front and back doors, patio and garage doors or any home door requiring a lock. All Images keyed entry locksets are available in The Lifetime Finish™ from Baldwin®. An innovative patent-pending process that protects against exposure to the elements and guarantees against tarnishing, flaking, pitting or discoloration for the life of the product.

Available in two finishes - bright brass and oil-rubbed bronze - and nine styles of knobsets, leversets and combination knob/leversets. The Images keyed entry locksets have been rigorously tested to meet Grade 2 requirements for security and durability. When teamed with Baldwin's Grade 1 low-profile deadbolts, they make an unbeatable combination of elegance and security.

### **HARLOC'S NEW PRAIRIE LEVER CONTEMPORARY LOCK**

Having assessed the needs of locksmiths in the lever category, Harloc, Inc. is showcasing the Prairie lever, which offers outstanding strength, durability, and a contemporary design. In an effort to incorporate features important to locksmiths, the Prairie lever is built on a newly redesigned chassis and has concealed holding screws and solid brass cylinder assemblies. Designed



**Harloc, Inc.**  
Circle 367 on Rapid Reply





with aesthetically pleasing free-flowing curves, the Prairie lever also provides ease of use for people of all ages.

The Prairie lever is available in a variety of functions and popular finishes. And like Harloc's entire product line, the Prairie is covered by a Limited Lifetime Warranty on both it's function and finish.

**WEISER LOCK INTRODUCES THE PRESTIGE SERIES**

Weiser Lock has just unveiled it's latest product innovation. The Prestige™ Series. This fashionable new standard in solid brass offers an elegant, yet affordable choice in door hardware.

The Prestige Series includes a complete line of handlesets, Entrysets™, and deadbolts for your exterior doors, as well as leversets and knobsets for interior doors. Each Prestige style has been designed with ergonomics in mind making the product comfortable and easy to use.

The Prestige Series is available in six elegant finishes including the exclusive Weiser Lock Brilliance™ exterior finish which guarantees the beauty of the product's bright brass finish will be preserved for a lifetime.

Both the Brilliance finish on the keyed exterior products and mechanics of all the Prestige Series products are warranted for a lifetime. Each Prestige keyed handleset can be keyed to any competitive door hardware product.

**JADO INTRODUCES NEW LATCH SYSTEM**

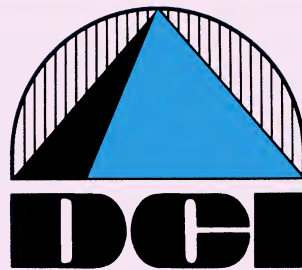
From entrance sets to interior door sets, JADO demonstrates the finest in traditional and contemporary design. With the installer in mind, the



**Weiser Lock**  
Circle368 on Rapid Reply



**Jado**  
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***We have it all.  
Quality, Value,  
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New 1:27 LATCH SYSTEM featured in all of our interior door sets, installs on any 2-1/8" prepped door in less than one and one-half minutes using only a Phillips screwdriver and an Allan wrench.

**THE MAXBRASS(TM) FINISH  
INTRODUCED BY OMNIA**

Omnia Industries, Inc. takes pride in introducing MAXBRASS™, a protective brass finish that is guaranteed to last for a lifetime against tarnishing, pitting and flaking. The finish is applied to both the exterior and interior trim of Omnia's popular mortise handle sets.

MAXBRASS™ is the result of an advanced technology which bonds semi-precious elements to their forged brass components. A vacuum deposition process (PVD), produces a dense but smooth and crystal-clear surface that assures a permanent brass sheen.

Omnia Industries manufactures architectural and builders' hardware, including a variety locksets and trim products, as well as a wide range of specialty items such as hinges, cabinet hardware and bath accessories. Sales are through leading distributors coast to coast.



**Omnia Industries, Inc.**  
Circle 370 on Rapid Reply

**MASTER LOCK'S NEW  
TWINBOLT(TM) DOUBLE-  
LOCKING DEADBOLT**

Master Lock's innovative TwinBolt™ provides double-locking deadbolt security with the single push of a button. The TwinBolt provides security and convenience, as it features a lower unit knob or level linked to an automatic deadbolt.

\* On the inside, the standard lock and deadbolt are activated at the push of a button.

\* On the outside, a single key unlocks both latches at once. (No key needed to lock deadbolt from outside).

\* For an emergency exit, simply operating the lever from the inside will unlock the deadbolt as well.

The lock has a fully adjustable chassis design - it fits distances from 2-7/8 inches to six inches between the standard lock and deadbolt. The TwinBolt works on almost any door - even if the borings don't line up exactly - and is quick to install.

Master Lock's TwinBolt lever meets the accessibility requirement of ADA. The TwinBolt also features



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**Master Lock**  
Circle 371 on Rapid Reply

Grade 2 light commercial security, keying compatibility, a full life time mechanical warranty and ten-year Durashine® finish warranty. **TNL**



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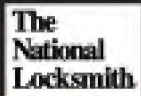
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# Gun Safe

*Firearm security in the home is a very big issue due to increased media coverage of accidental firearm tragedies. Because of this, home owners are much more conscious of firearm security and gun safe manufacturers are developing more and more products to meet the demand. Today, there are more gun safety and security related products than ever before. Here are just a few manufacturers targeting that market.*



CIRCLE NUMBER  
261

## *Amsec Gun Safes*

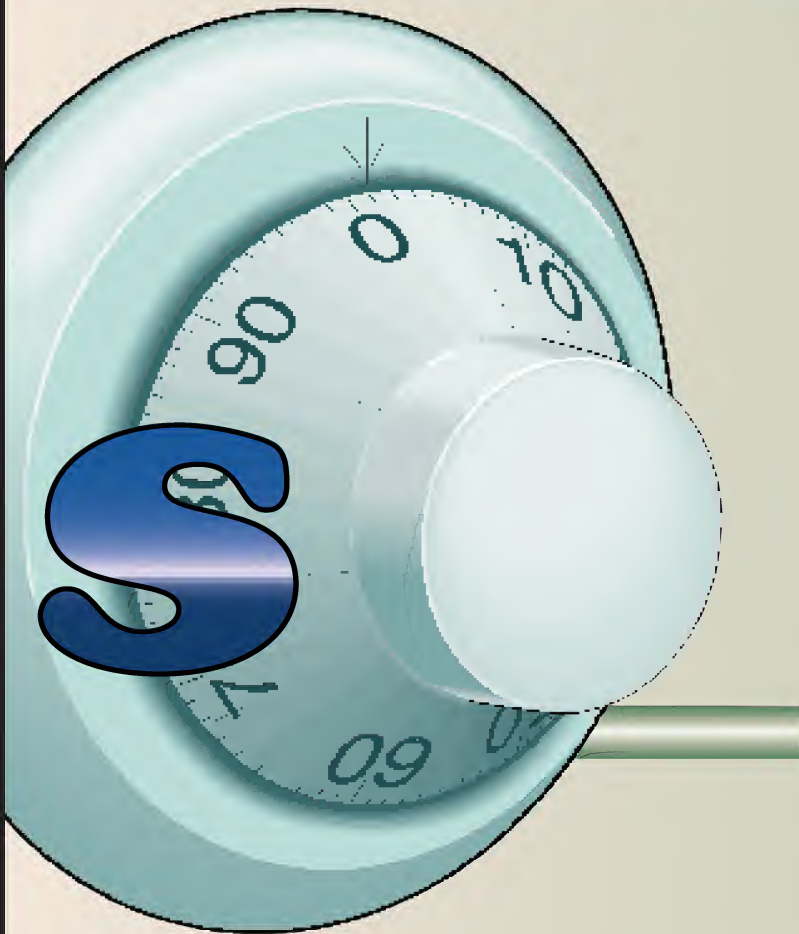
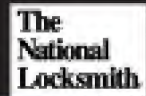
The Amsec Class Series Gun Safe is handsomely pin striped and complemented by a polished brass S & G spyproof key-locking dial and tri-spoke handle. Exterior colors are: Onyx, Sandstone, Chestnut, Hunter Green, Burgundy and Gray Metallics, Ivory and Navy. Interiors: tan or burgundy velour. Fireliner available.

CIRCLE NUMBER  
262

## *Gun Vault*

Gun Vault gun safes feature a patented keyless lock operated by touch, even in the dark. This allows for more than 26,000 re-programmable user-selected codes. Fingers are guided to the touchpad by raised Braille-like dots, and the door springs open when the code is entered. A tamper-resistant feature temporarily locks the mechanism after five wrong codes are entered. Should the user forget his code, a key lock is provided as backup.





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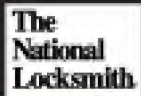
## NATIONAL

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.

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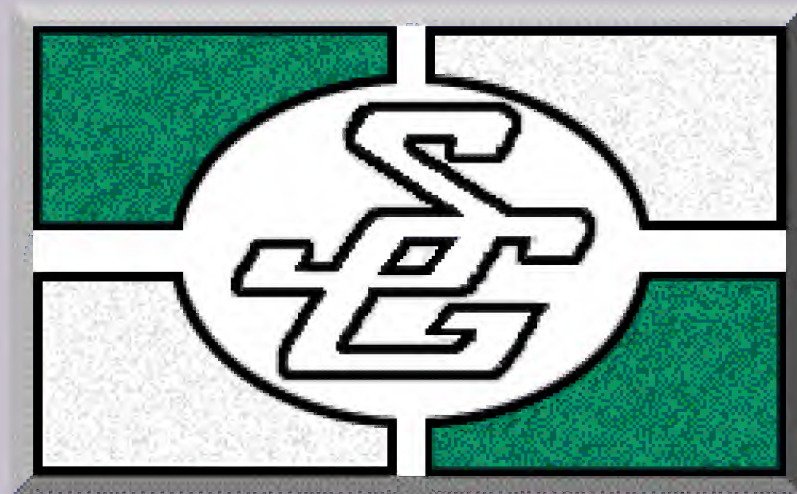
*Perma-Vault's Model PV-1-PL Pistol Locker*

The PERMA-VAULT Pistol Locker is an affordable hand gun safe to aid in the prevention of accidents. Pre-drilled holes on the underside of the safe, permits bolting in a closet or under a bed. The interior is cushioned with two foam inserts and is equipped with a tubular security cam lock.



*Cannon Safe Company*

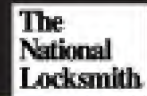
Cannon Safes new features include: full length internal hinge, new silk-screened logo, new super door, new high gloss finishes, new spring loaded bolt detent and a newly redesigned easy-out interior. Cannon safe continues to offer the most features at an affordable price and does not sell retail direct.



**Choose S&G Comptronic electronic safe locks for...security... technology...tradition.**

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### *Palmer Security Products*

Palmer Security Products manufacturers a unique line of security safes for firearms. They are available in a multitude of styles for mounting nearly anywhere. The small compact drawer unit is very popular with holders of concealed carry permits who are looking for a way to safely store a gun in a vehicle. In addition, the new tube safes are the strongest quick access handgun safes on the market.



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### *Bulldog Gun Safes*

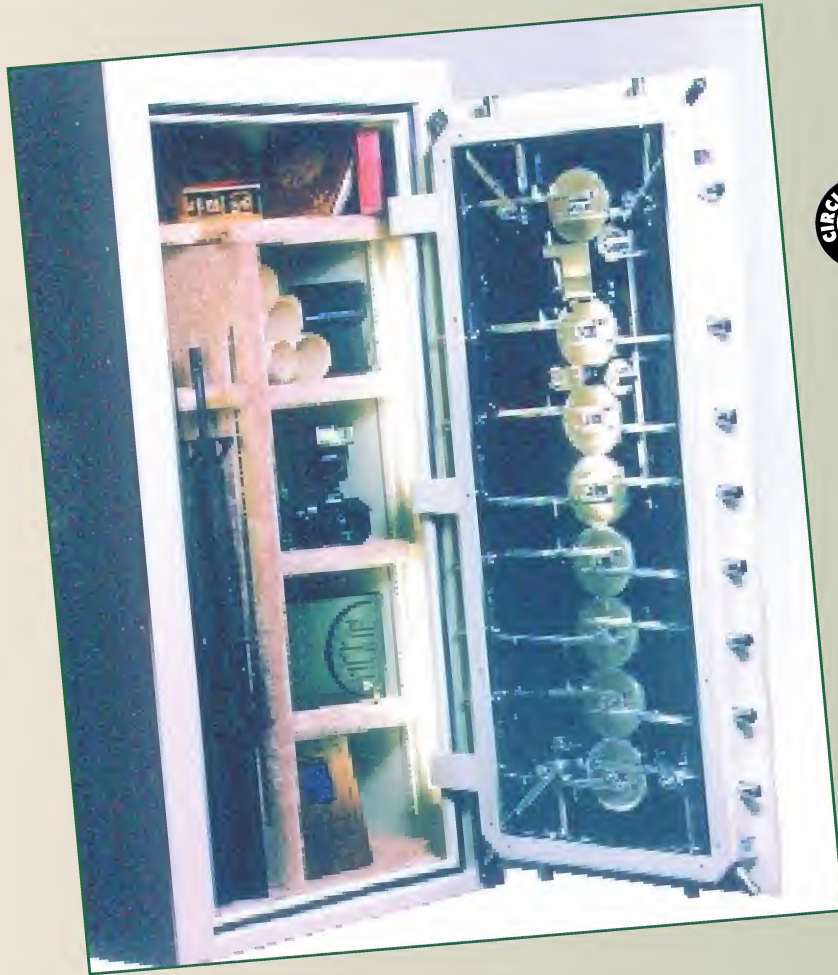
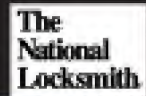
Bulldog Gun Safe Company, a division of Gardall Safe, offers a wide variety of Gun & Pistol safes. Rifle safes come in a variety of sizes, from 9 to 32 gun capacity. We also offer pistol safes and small utility safes for your every application. All Bulldog Gun Safes can be equipped with an electronic lock for ease of use. These locks are programmable by the customer in their home. For commercial accounts, multiple users, time delay, and manager overrides are also available. A lifetime break-in warranty covers all products if damaged during an attempted burglary.



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### *Yeager Mechanism*

Many consider Fort Knox "America's Best" gun safe! That's because no other manufacturer uses such a high performance 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. The 5 to 1 reduction on the gears acts as a transmission giving additional strength to each bolt, plus, a drill deflector runs the entire length of the door frame. Hard-plate with ball bearings recessed in critical areas for protection against a drilling attack along with a mechanical re-locker as back-up security is used. There are twenty-five UL Listed models that come with 1-1/4 inch thick, certified fire protection and lifetime warranty.



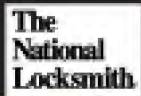
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CIRCLE NUMBER 268

### Winchester Tradition



The new Winchester Tradition is simply the best there is. After all, it's the only gun safe to carry Underwriters' Laboratories' Class 350 One Hour Fire rating and Residential Security Container rating. So when it comes to protecting your gun collection, family heirlooms and important documents from fire and theft, no other safe even comes close.

A 4-1/8" thick door with 2-1/2" thick sides and a Sargent & Greenleaf combination lock make the front of the safe virtually impenetrable. Nine 1" bolts (two on top, two on the bottom and five on the side) provide additional security. And with its stylish finish, the safe is as handsome as it is tough. It even comes with a bolt detent system which keeps the bolts retracted so they won't mar the finish.

### National Security Safe Company

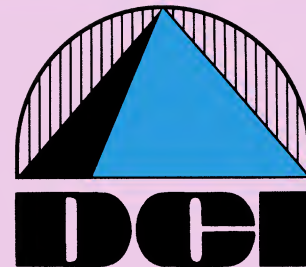
In the last decade National Security Safe Co. has set the standard in the gun safe industry. They continue to lead the way with exclusive features like, ball bearing hardplate (over 100 ball bearings), torch activated relocker, double welded seam, and many more. Also included is triple wall fire protection on every safe. National Security Safe Co., is proud to carry the approval of the "World's Finest Gun, Home and Office Safe."

CIRCLE NUMBER 269



**ASP - Your Auto Service Center for the World**

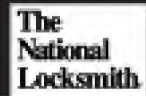
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**Don't panic!  
We have  
Security Exit  
Devices.**

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### Frontier Safe Company



Frontier Safe Company continues to improve the value of their line of gun safes. All models now have fire liners and a UL listed fire and smoke seal. Door thickness' range from a minimum of 3/8" to a massive 1" and bodies from 10 gauge to 5/16". The wide selection of models, colors, security, and convenience options are detailed in Frontier Safe's new full color brochure.



## The Innovation You Expect, with the Flexibility You Need!

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### Mul-T-Lock "Gun Safe"



The key operated mini safe manufactured by Mul-T-Lock can hold a few handguns, but certainly not a rifle. However being the manufacturer of high security locks and doors we can offer a gun collector a real "walk in safe."

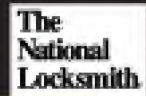
Simply by installing a Mul-T-Lock steel security door with a four-way deadbolt on the entrance of a linen closet, you get a big and excellent safe room for storage of guns and/or other valuable possessions. To increase the level of protection, and profit of the locksmith they suggest the locksmith laminate the closet wall with a steel sheet.



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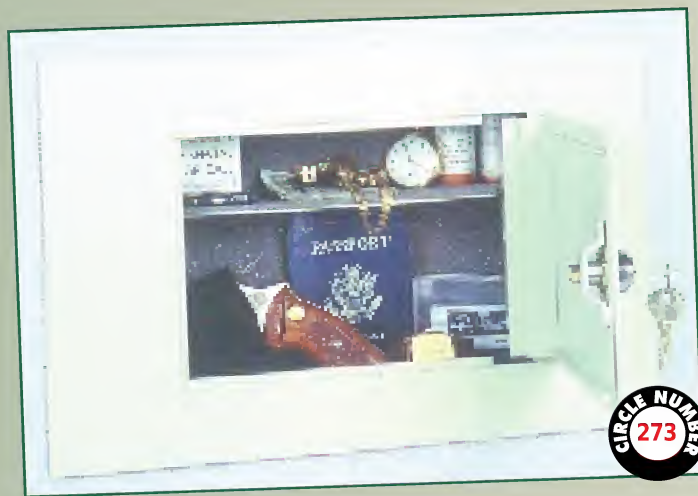
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## Liberty Safe

Liberty Safes, the number one producer of gun safes in America now has 6 series available and over 23 models to choose from, all of which are UL Listed for security. The new style of Liberty's top of the line series, the Presidential, sports the superior rated Omega certified Quadfire™ protection system and added security from drilling or punching with the new glass relocker. The Washington Series has been upgraded to include the 1-inch composite door, velour interior and Triplefire™ fire protection. The number one selling Lincoln Series now has a massive 7/8-inch composite door and Doublefire™ protection, standard. Liberty's new series, the Eagle, has a great finish at a great price while the Franklin sports a new 14 karat handle and impressive security features. Secure your future with America's favorite.



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# Overhead Door Closers

by  
**Lynn R.  
Eisenhauer**



**M**ost locksmiths are familiar with typical overhead concealed closers which are installed in a normal 1-3/4" by 4" aluminum tube header. These can be center hung, end or side load or independently hung with a slide arm arrangement.

Less commonly known are overhead concealed closers that offer the choice of concealment in the door or frame. The closer can be mortised into the top of the door with the concealed track channel mortised into the frame header. It can also be mortised into the frame header with the track channel mortised into the top of the door. In either application, the door and frame must be machined and prepared to accept the product before installing the door and frame at the job site (see above Photograph).

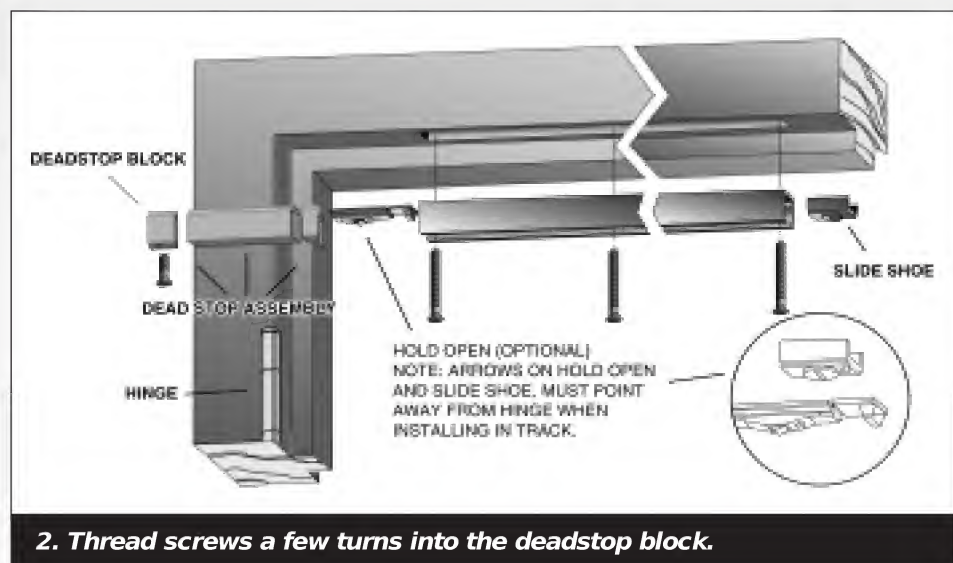
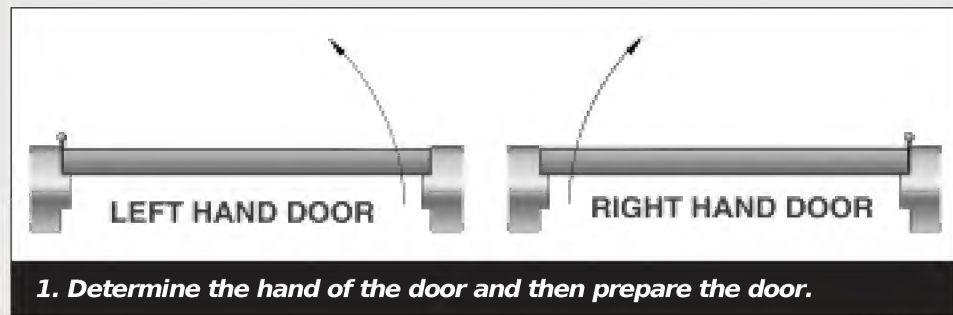
Overhead concealed closers of this type have been available for some time, but were typically found in limited applications. The inherent inefficiencies of their rack and pinion and the slide-arm assembly mechanism, and the small size required to fit the closer into the top of the door limited door size and weight. The only solution was to use an unsightly double-lever arm that defeated the intent of aesthetic and vandal-resistant concealment.

With the advent of the new cam and roller technology employed in DORMA's ITS 96 closers, this type of closer now has higher operating

efficiency, making it a more viable option for normal door and frame applications. ITS 96 closers are spring adjustable sizes 1-3 and are designed to control doors up to a maximum width of 36 inches. The higher level of operational efficiency permits use of a track arm assembly, making these closers good

choices for interior applications such as ballrooms, corridors, museums, executive office doors and other non-listed applications.

The ITS 96 Series is available in non-hold-open or adjustable hold open configurations with a cushioned



stop adjustable between 80 degrees to 130 degrees. The cushioned stop helps to prevent damage to the door and wall when the door is opened normally. It is not abuse-resistant, and can not replace a door stop in many situations. In high-abuse areas, a separate limiting stop may be advisable.

#### INSTALLATION

Both the door and frame must be properly prepared to accept the closer and track prior to installation. The first step in this installation, as with any overhead concealed closer installation, is to coordinate the door and frame machining with the appropriate templates. ITS 96 closers can only be used on independently hung doors because the closer itself will not serve as a pivot point for the door. Doors controlled with ITS 96 closers are usually hung on hinges. If a pivot-hung application is considered, it is important to check that there is no conflict between the closer components and top pivot leaves.

#### STEP-BY-STEP INSTALLATION


Perhaps the most common installation is on an unlabelled wood door and wood frame, with the closer in the door and the track in the frame.

1. First determine the hand of the door (*see Illustration 1*), then prepare the door and frame according to the template supplied with the unit.

2. Next, adjust closer spring tension. Closers are normally supplied with a minimum spring setting of size 1. This setting is compliant with Americans With Disabilities Act requirements for barrier-free openings. Depending on opening conditions however, closers adjusted for ADA-compliant doors may not provide enough closing force to close and latch the door. If this is the case, the spring tension must be increased. This must be done before the closer is installed in the door. The spring adjuster is inaccessible after installation.

3. Thread screws a few turns into the deadstop block (*see Illustration 2*). Insert components into track then fasten track to frame.

4. Place arm on closer according to hand of door. Secure arm with pinion screw (*see Illustration 3*).



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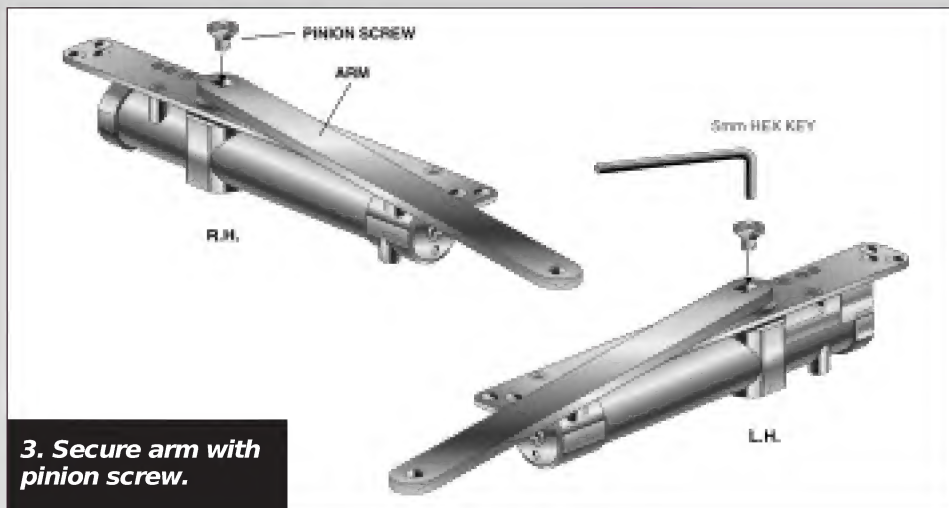
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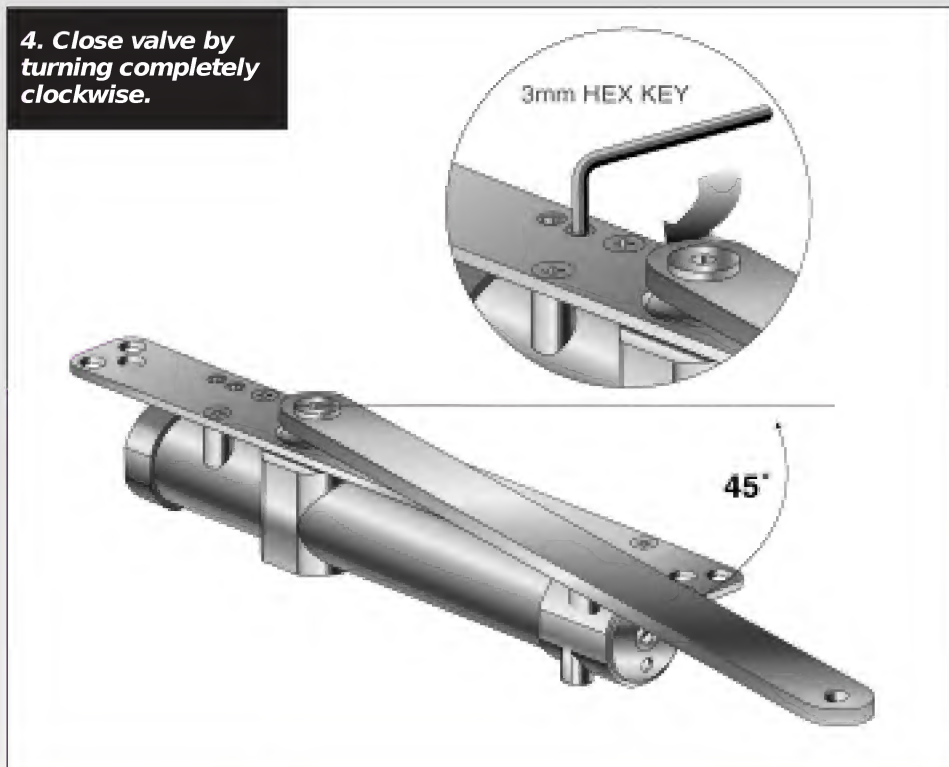


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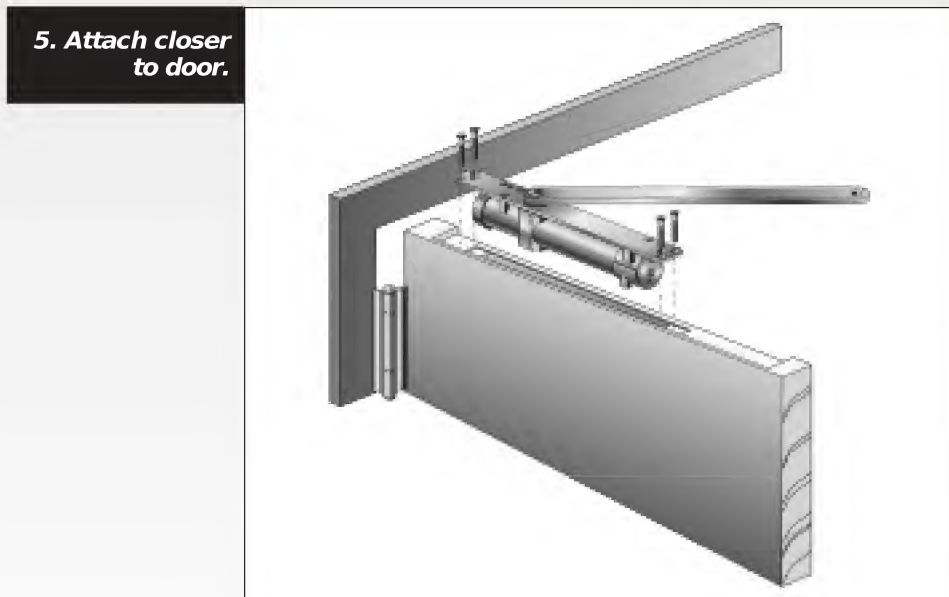
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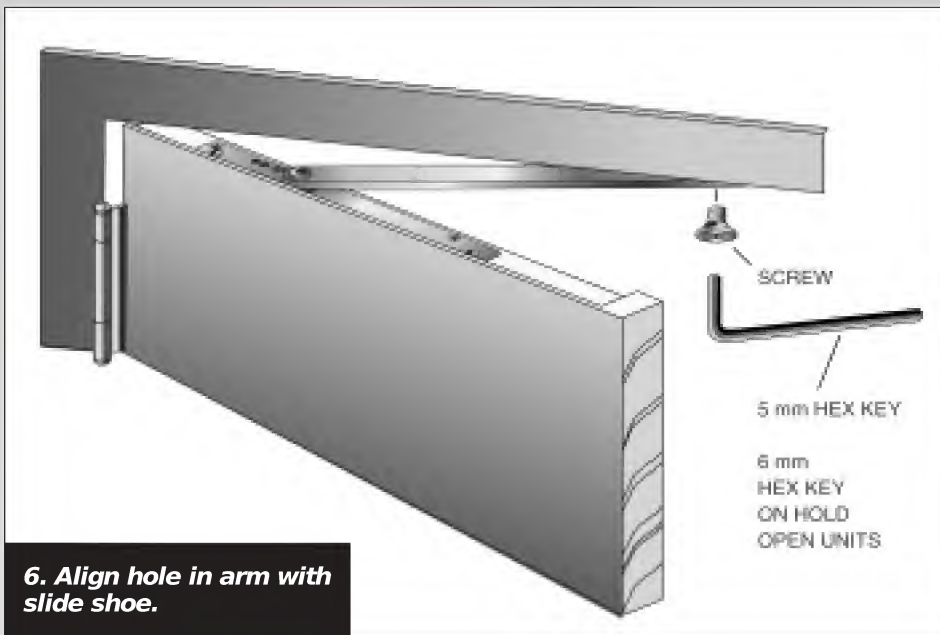
3. Secure arm with pinion screw.



4. Close valve by turning completely clockwise.



5. Attach closer to door.



**6. Align hole in arm with slide shoe.**



**7. Open door to desired opening between 80 degrees and 120 degrees.**

5. Close valve by turning completely clockwise. Rotate arm 45 degrees (see Illustration 4).

6. Attach closer to door (see Illustration 5).

7. Align hole in arm with slide shoe

and attach with screw provided (see Illustration 6).

8. Adjust deadstop. Open door to desired opening between 80 degrees and 120 degrees and tighten deadstop block (see Illustration 7).



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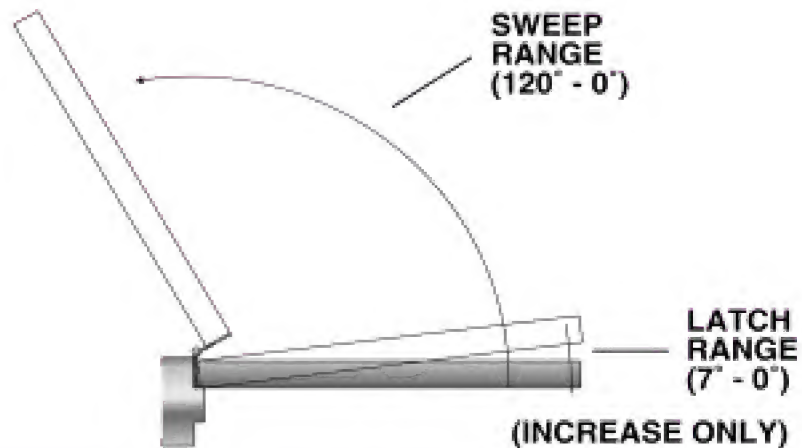


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**8. Adjust sweep and latch valves.**



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9. Adjust sweep and latch valves (see *Illustration 8*).

10. On hold-open units only, open door until slide block engages with hold open and loosen screws.

11. Place the door in desired hold-open position and tighten screws (see *Illustration 10*).

**CONCLUSION**

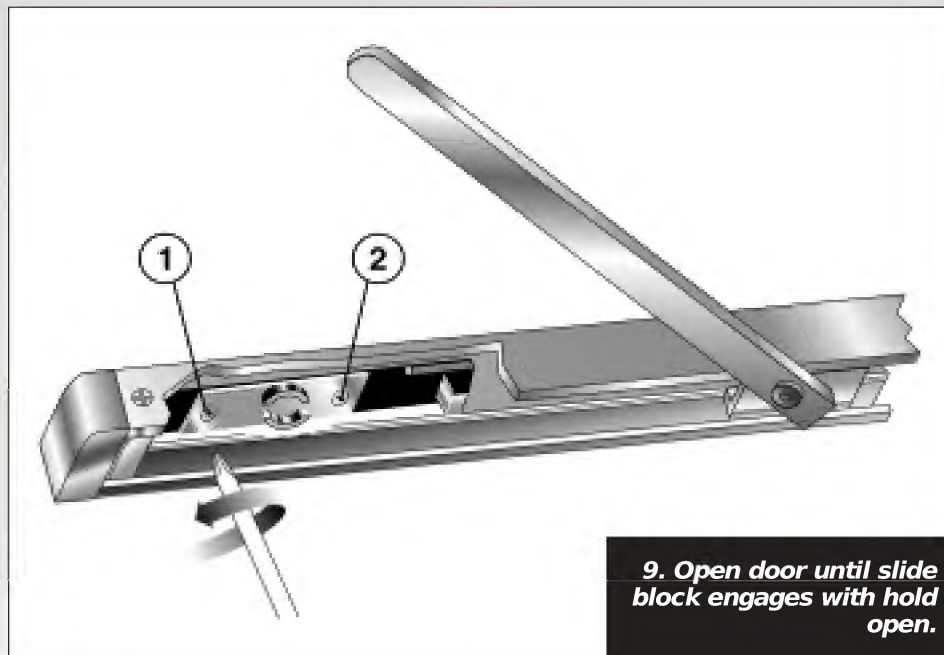
Overhead concealed closers are a viable option for many applications in which total concealment is desired. The ITS 96 extends the range of applications for overhead closers to include concealment in the door or header in metal or wood doors and frames.

The primary reason to use a concealed door closer is to provide an aesthetically clean look and vandal-resistant concealment. Surface mounted closer arms are always a vulnerable protrusion. It is common for people to hang on the closer arm and either bend or break it from its mounting. Concealed closers eliminate this problem, greatly reducing vandalism, operation problems and repair costs.

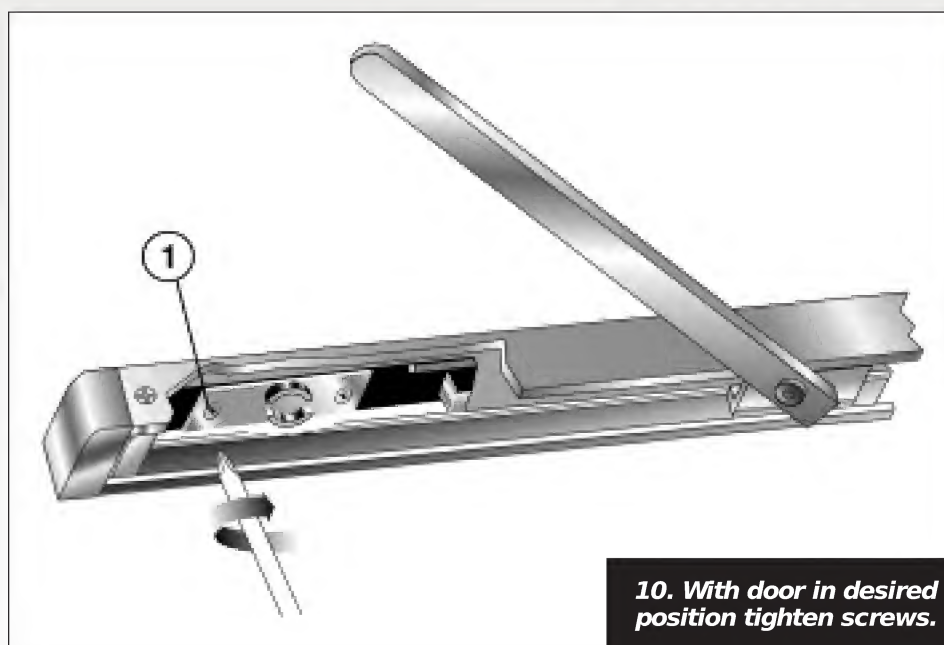
The installation of concealed closers is more difficult and time consuming than a standard surface mount, but the added benefits can be worth it.

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9. Open door until slide block engages with hold open.



10. With door in desired position tighten screws.

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# The WETTER Side

Draining the Swamp



by  
Sara  
Probasco

**D**ark, rainy days are unusual in southwest Texas, and when they do occur, customer traffic usually comes to a near stand-still. I remember similar behavior in the deep south when a rare sleet and snow storm would lightly blanket the ground. Northerners in our midst would laugh at such a "piddly" bit of white keeping us out of our vehicles and off the streets. I suppose the reaction of the locals, in such circumstances, is a combination of not being willing to "brave" unusual weather and figuring that since it will soon pass, there's no real reason to get out in it. Besides, we usually have plenty of indoor projects we never seem to get around to, right?

At our shop, we call these slow days our "M ayttag repairman" days — no doubt, you've seen the television ads. We try to fill such days with catch-up work around the shop and those whenever-you-get-time service calls that seem to lurk around the edges of our schedule board.

This day was no exception. Don had even taken advantage of the slack business to send one of our two service vans out to have some minor repairs done that we'd been putting off.

Then the call came in.

"Charles is in the hospital," the man said. "He asked me to bring him a few clothes and things from his home. The problem is, we can't find his keys, so I have no way to get in his house."

As we knew both parties personally, and we were aware of the circumstances, we had no qualms about fulfilling the request.

"Just pick open the front door and make a key for it," Don told Keith as he handed him the address. "Shouldn't take you more than a few minutes. Jack said he'd pick up the key here at the shop, after lunch." Don tossed him his vehicle keys. "Here, take my service van. If we get an auto lock-out or such, I'll call you on the mobile."

A couple hours later, the sound of squishy footsteps overrode my typing. Water was dripping on my desk, when I finally looked up from my work.

"Here's the ticket on that Getty Street job," Keith said, shaking water from an invoice as he placed it by my typewriter.

"My word, Keith, look at you. You're drenched," I said.

"Tell me about it," he replied, slicking his dripping hair back from his face. His eyes were wild, like a long-haired sheep dog I once had who, when wet, would run right up to me and shake.

"The job was a little more complicated than it seemed on the surface," he admitted.

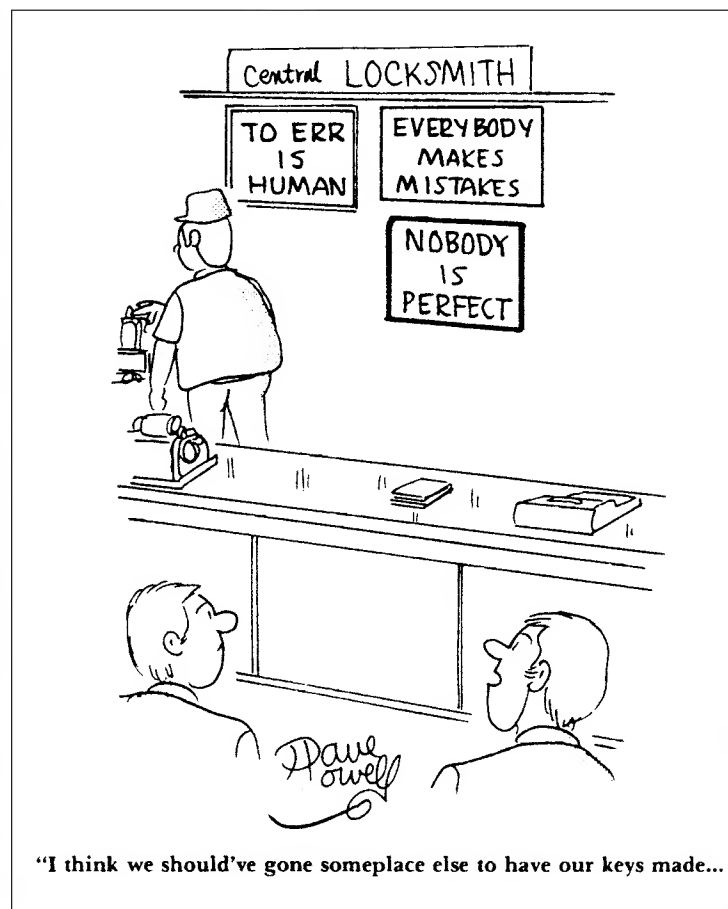
**U**pon arriving at the scene, Keith had noticed an eight-foot-high privacy fence equipped with a solid house door, rather than a gate. Securing this door were both a key-in-knob lock and a dead bolt. Naturally, both were locked and had to be picked open in a steady downpour of rain.

Once inside the yard, he had encountered a sub-fence, also fitted with a house door secured with key-in-knob and dead-bolt locks. Again, he had to pick them open. The rain kept falling.

Next came the enclosed back porch.

Keith gently tried the door knob, hoping this lock might have been left open, but the knob would not turn. The lock set was placed unusually low in the door, so he had to hunch down to get at it. The lock stubbornly refused to pick open. By now, he was drenched.

**J**ust as Keith felt the lock begin to cooperate, the service van's horn let out a blast, then another, and another, signaling an incoming call on the cellular phone. Keith hesitated, hating to turn loose of his tension wrench, now that he was beginning to make some progress. The horn continued to blow. With a sigh, Keith released the wrench, wiped the rain from his eyes, and sprinted up the path and through the two fence-doors, splashing in puddles as he dashed across the lawn to the waiting van.



"We have an infant locked inside a running vehicle at the Wag-a-Bag convenience store," Don told him. "You need to get right over there. The mother's about to have a screaming stroke."

**W**hen Keith got back from that job, he returned to working on the porch door. Time and again he tried, to no avail. Frustrated, he jammed in his pick gun and promptly broke off the tip. For the next twenty minutes, he knelt before the door in the rain vainly trying to coax the lock open with standard picks.

"Enough of this," he finally muttered to himself. Getting to his feet, he realized one leg had "gone to sleep." When it buckled beneath him, he crashed into the door. The door flew open, hurling him into the room.

Lying spread-eagle on the floor, Keith was suddenly aware of the strong, unmistakable odor of wet dog. He glanced to the right and saw nothing but an old table and a couple of chairs. He glanced to the left and saw nothing but deep shadows and the corner of a well-chewed, padded dog bed. A very large dog bed. The kind a Doberman or Rotweiler might use.

Cautiously, Keith got to his feet. His leg was no longer asleep. Nothing about him was asleep, at this point. In his mind's eye he could see the Devil Dog from Hell sitting in the black shadows of that corner, watching his every move with massive teeth and glowing red eyes.

Ahead of him, the kitchen door seemed a mile away. In the lower section was a large doggie door with a rubber flap. Slowly, Keith removed his picks from the outside door, noticing as he did that it was still locked — the latch had simply not been secure in the frame. Cautiously, he tiptoed to the kitchen and tried the door. The knob would not turn. He pushed, hard, on the door. It would not give. He glanced nervously over his shoulder, sure he had heard a low growl from the shadows. His hands were shaking so much he could scarcely hold his picks, as he hurriedly tried to pick it open. Nothing was working right.

**T**hinking he heard a sound, he froze. Then he frantically stuck his arm through the doggie door, reached up, opened the door from the inside and dashed in, closing the door behind him.

"It never occurred to me, at the time, that if there really had been a big

dog there, all he'd had to do was come through that opening, and he'd have had me. Lucky for me, a neighbor was keeping Fido while his master was in the hospital," Keith said with a sigh of relief.

"So you managed to get that lock out of the door and get a key made for it?" I asked.

"Right," Keith replied.

"I guess you made a key for that door and left all the others unlocked, for the time being?"

"That's the most frustrating thing of all," Keith said. "After I got a working

key made, on impulse I tried it in all the other locks — you know, just to see if we could key them alike for him later on. Guess what! They were already keyed alike. All I had really needed to do was make a key for that first fence-door, and I would have been home free. Of course, I had no way of knowing that, at the time."

"Like they say," Don chided, "too soon old, too late smart."

"Yeah," Keith replied, "but when you're knee-deep in alligators, it's hard to remember your main objective was to drain the swamp." **TNL**



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# TECHNITIPS



**Helpful tips  
from other locksmiths.**

by **Jake  
Jakubowski**

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## Attention Everyone!

This month marks the beginning of my fourth year as the editor of this column. When Marc Goldberg first asked me to take on the task of compiling and editing Technitips, I really thought that I would only be doing it on a temporary basis. So much for thinking!

The last three years have been interesting and informative ones for me. I can truly say that I have benefited tremendously from the information that has crossed my desk. I have also learned that you are a creative bunch of folks willing to share your discoveries with others. I have learned that for the most part, you are eager to acquire and share the knowledge that you have gained or developed, and use this column as the means to share that information and knowledge.

In addition to what I have learned, I am proud to have steered a few of those folks to

manufacturers who have picked up on the idea to develop products that are now being sold commercially. The locksmiths that "developed" those ideas now receive royalties from the manufacturer!

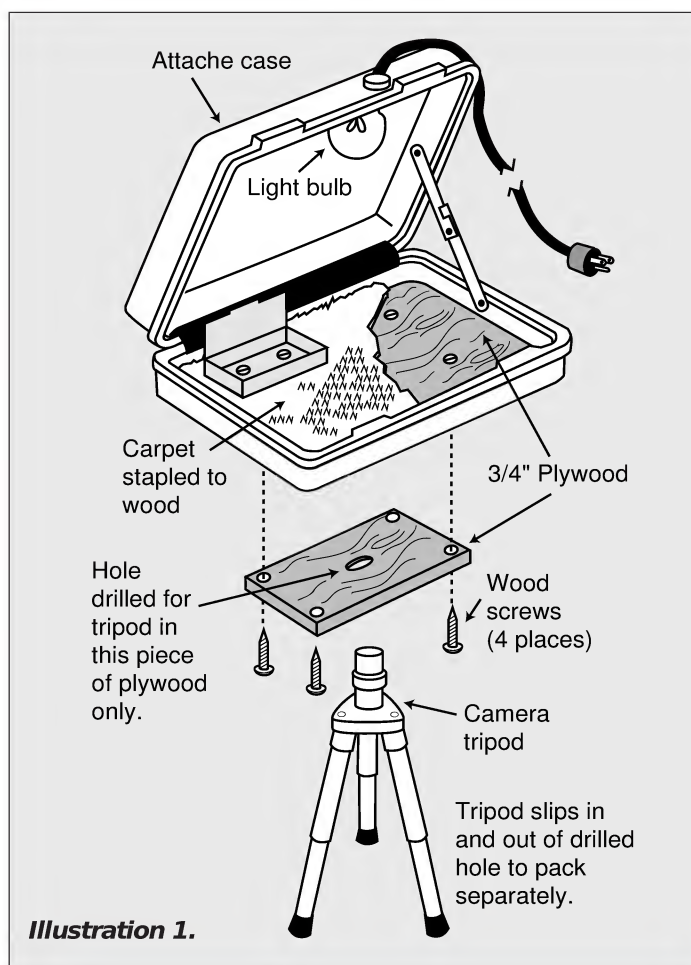
I know that all of you, have at one time or the other, come up with an idea that made your day go a little easier. Next time write it down and send it in to me. If I print it, you'll see your name in print, get some great prizes and qualify for *The National Locksmith* magazine's 1997 year-end Technitips contest drawing. If you're real lucky, your tip just may attract the attention of a manufacturer interested in developing your idea.

**ALL LOCK WINNER:  
Portable Work Bench**

Often, when called to rekey a home or business, I find that parking spaces near the job site are frequently non-existent. If I have to leave my van and walk any distance to get to the job, it is inconvenient to return to the van for a special tool or part that I did not carry with me.

After giving some thought to the problem, I developed the portable work station and tool box you see in *Illustration 1*. It is constructed from a briefcase, some plywood, a piece of scrap carpet, a few nails and a camera tripod. As you can see from the illustration, assembling this portable work table is simplicity in itself.

Now my portable work station and tool box goes with me on every rekey job that I do. I even take it with me when I do apartment rekey's where the door is right on the stairway, since



**Illustration 1.**

the legs of the tripod are adjustable and will give me a stable working surface nearly anywhere I set it up. I even installed a light to help when working at night or in a poorly lit environment.

Since most of the parts of this work station store inside the case when not in use, and the tripod folds down to such a compact mass, it doesn't take up too much valuable room in the service truck. I don't think the portability and convenience of this work station/tool box can be beat. This has sure made life easier.

Jerry Bertonneau  
California



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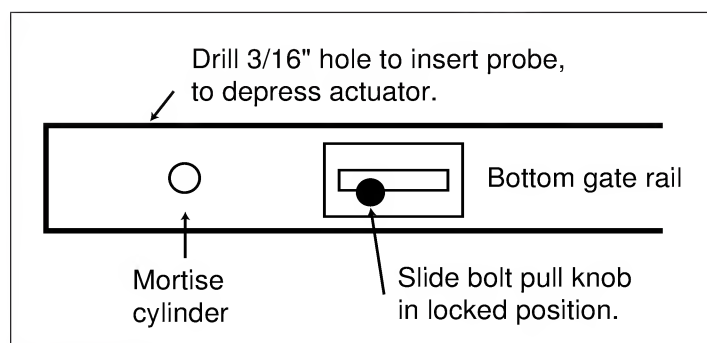


**THE TNL AUTO BOOK WINNER:  
Overhead Gate Opening**

The manager of a cafeteria in a large industrial plant called me with the complaint that he could not get one side of one of the cafeteria overhead gate to unlock. The gate used an Adams Rite lock with a locking mortise cylinder and a slide bolt pull knob to retract the bolts mounted on the bottom face of the door (see *Illustration 2*). When I arrived, I tried the key only to feel the tailpiece on the mortise cylinder sort of slide over whatever type of actuator the lock had on it. Either the tailpiece was badly worn, the actuator was shot or both.

After a little experimentation, I found that the pull-knob would unscrew from the slide bolt of the locking mechanism. After removing the knob, I also removed the four screws and pulled the guide plate away. I tried using a small mirror and light to see if I might be able to see the rest of the mechanism from my inspection hole... no such luck.

I decided to see if I could punch the bolt back. After a couple of fairly forceful whacks with a hammer and punch, I could see the bolt move. A couple more hits and the bolt retracted and the gate was open.



**Illustration 2.**

The problem with the lock was the first screw on the left side of the door bottom cover, screws into a nylon keeper which had stripped and would no longer hold the main bolt, allowing the cover to drop down about 1/8 inch. This allowed the cam to ride over the keeper without depressing it far enough to release the lock bolt.

Now that I know the problem, next time I would drill a 3/16 inch hole in the top of the bottom frame about 1 inch to the left of the mortise cylinder centerline (see *Illustration 2*). Then use a stiff metal rod to push the keeper down and open the door.

Jay Christie  
N. Carolina

**HPC PISTOL PICK WINNER:  
Trunk Lock Opening**

I had a customer that locked his keys in a 1993 Buick Park Avenue. What he neglected to tell me when he called was that the keys were locked in the trunk.

After opening the passenger door, I went to the trunk release button in the glove compartment. The switch didn't look like it could be easily accessed without dismantling the glove compartment.

Not wishing to do any more work than was necessary, I removed the cover from the fuse box to see if there might be a way to "pop" the trunk open electronically. The fuse for the trunk and gas filler cover (#2) was plainly marked as was the parking light fuse (#14) which is always "hot". I did not have a jumper with a small enough probe to fit down along side the two fuse lugs, so I pulled both fuses and jumped from #14 to #2. I then reached up and depressed the trunk release button in the glove compartment and the trunk was open.

In the past I have jumped from the battery to the release switch terminals and from the cigarette lighter to the release switch terminals. However, it

seems that on the newer luxury cars it is more difficult to get to the terminals on the trunk release switch than on the earlier models. I think this fuse-to-fuse method is much quicker and easier.

Chuck Donnelly  
New York.

[Editor's Note:

*Chuck, thanks for your tip with a new twist on an older idea. For those readers that may not want to "mess" with the electrical system, Buick's Roadside Assistance toll-free number is: 1-800-252-1112. I have found that they are generally willing to give you the key codes for most Buick's as far back as 1989 or so. I think a quick phone call is worthwhile before using by-pass methods - especially when you're not sure who may have tried to open the vehicle before you.]*

**S&G 4400 SERIES LOCK WINNER:  
Pulling An Odd Ball  
Steering Wheel**

When a customer called to have me originate keys for his Jeep, I made a door key by removing the lock and

determining the cuts for the key as I would with most vehicles. When I began disassembling the steering wheel, I discovered that the original wheel had been replaced with a smaller, sporty, after-market steering wheel.

After removing the Allen head bolts from around the horn pad, I found that I was looking down on three 1/4" bolts which seemed to hold a triangular shaped aluminum plate in place at the center of the steering wheel. None of the wheel pullers that I had on the van would fit the triangular bolt pattern that was necessary to pull this "sports" wheel off of the steering column shaft. In fact, none of the pullers that I had even had the two 1/4" X 28 SAE threads to match the holes at each corner of the triangle.

To accommodate my customer and complete this job, I went down to Auto Zone and asked one of the employees if they had anything in stock that would help me finish this job. The individual sold me a Harmonic Balance wheel puller and three 1/4" X 28 X 4" long bolts. This combination allowed me to pull the wheel, remove the lock cylinder and generate a key for the ignition.

The Harmonic Balance puller is used to pull the large pulley at the bottom front of the engine on many motors when working on timing chains, camshafts and replacing front oil seals. I now can remove the odd-ball steering wheel that I will run up against occasionally. The whole shooting match cost me under twenty bucks. At that price, I think it's a worthwhile addition to any locksmiths tool box, if they don't already have one.

Larry Wright  
South Carolina

**SILCA KEYBLANKS WINNER:  
Broken Buzzer Bypass**

I was called to a shopping center to fix the ignition on a 1981 Mercury Cougar. The guy said he had never had any trouble with the switch until then. When the key wouldn't go all the way into the switch, my customer said he tapped it with a small hammer.

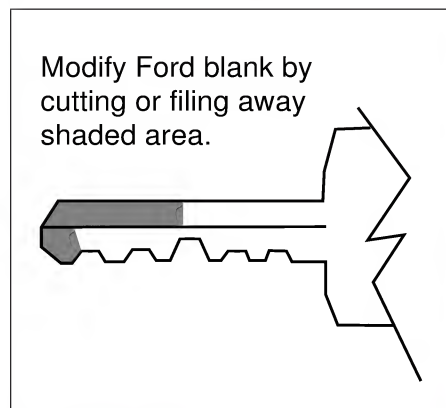
I got my Mag flashlight and looked down the keyway. I could see something brass shinning back at me, I figured this was the buzzer activator.

The first thing I tried was to use a small fishing hook that I had straightened and tried to fish the activator away from the back of the keyway. When that didn't work, I

duplicated the customer's key on a blank and cut away the top portion of the blade hoping I could bypass the scrunched activator. That didn't work.

I then took the modified duplicate I had cut and further modified it by filing off nearly all the tip (see *Illustration 3*). In fact I even filed away part of the flat in the last cut of the blank. I inserted the newer blank in the ignition and after a little jiggling, the plug turned and I was able to depress the retainer and remove the broken switch.

After I replaced the switch and got the customer on his way, I sat down in



**Illustration 3.**

the truck and tried to figure out what I had done. I found out that the buzzer activator had been forced to the back of the keyway in such a manner that the key with the top cut down was not able to seat properly. The key with the tip cut off allowed enough room for the cuts to align properly with a little manipulation.

Terry Upjohn  
Mississippi

**PRO LOCK PROFESSIONAL PICK  
SET WINNER:  
Custom Dresser Locking**

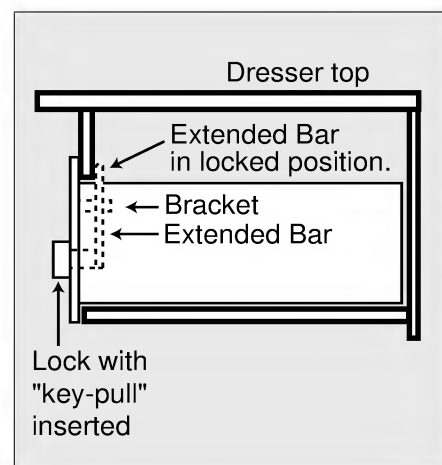
Our shop is located in a retirement area and the retirees here like to have locks installed on the top drawer of almost everything from sideboards to dressers. The only requirement is it must look nice.

Our solution was to use standard desk locks and located them in the same area as the existing pull knobs are. The locking bolt extends upward to secure the drawer when in the locked position. Since the bolts on regular desk locks are fairly short, we use a piece of 1/8" flat bar of the appropriate width and cut to the proper length, and weld, or braze the bar to the existing bolt.

When the locks are at the level of

the regular drawer pull, you often have a relatively long bar reaching to the top of the drawer. Because this rod could be easily bent outward, we use another piece of flat bar, a couple of spacers and screws to anchor the extension near the top inside of the drawer (see *Illustration 4*).

The reason we mount the locks so low is for the "look nice" part of the customer's request. After mounting the locks, we slot the original pull to accept the bow of the key and then trim the bow down to the proper size.



**Illustration 4.**

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Then we rivet, solder or epoxy the key in position. This way, the bow of the key becomes the drawer pull.

Shane Maloney, CMS  
Canada

**TECH TRAIN VIDEO WINNER:  
Brake Line Car Opener**

I came across a motorist that was just about to put his fist through his car window to get to his keys. I told him I could help him if he would give me a minute or two to locate something to open the door with.

I was driving my husband's mechanics van and not my locksmith van. Looking around the van, I found a piece of 1/4" metal break line, a pocket knife and a pair of Vise Grip pliers (three items I never go without now). After several tries, I managed to bend a piece of the brake line that would work. With the brake line, I depressed the lock button on the wing widow lock and used the pocket knife to jimmy the lock up. Since my arm was too short to reach the door's lock button, I used the Vise Grip's to reach the door's lock button and pull it up.

Now I always carry a small roll of copper tubing in my van. I have used it to make various tools to open a variety of vehicles.

J. R. Caster  
Louisiana

**SIEVEKING GM E-Z PULL WHEEL  
PULLER WINNER:  
Picking the Ultra Club**

I recently came across a way to pick the "ULTRA CLUB" High Security steering wheel lock. That's the one that has the round keyway with a row of pins every 90 degrees around the plug. They can be easily picked.

Using a 3/16" drill bit for a "pick" and a blunt ice pick for a turning tool (any stiff rod with a handle should work as a tension tool on this lock), I proceeded as follows.

Insert the shaft of the drill bit into the keyway as far as it will go. Apply clockwise turning pressure to the face of the lock with the turning tool (use the small dimple on the face of the cylinder to seat your turning tool). Now, jiggle and wiggle the drill bit until the plug turns just slightly. When the plug turns, remove the drill bit.

Now, relax the pressure on the plug from the tension wrench (the plug is not spring loaded and will not "snap" back to the locked position). As you relax the pressure of the tension tool the plug will begin to turn further

to the right. Once you have turned the plug 90 degrees the lock will unlock!

If the shaft of the drill bit will not enter the keyway, turn the bit end-for-end and "thread" the bit into the plug. Now apply turning pressure with your turning tool and rotate the bit. Often the plug will spin over with the business end of the bit in the lock.

If the plug spins only slightly toward the opening position, wrap the top of the lock with a plastic handled screwdriver or rubber mallet while varying the turning pressure.

It is unbelievable how simply this "high security" lock can be bypassed with the proper knowledge.

Leo Koulogianes  
Tennessee

**MAJOR PRODUCTS WINNER:  
Solving A Don-Jo Alignment  
Problem**

I was asked to install about a dozen Don-Jo PLP-211 Latch Protectors on some metal doors on the exterior of a factory. The first few gave me a problem when I tried to locate the hole in the frame of the door to accept the pin that prevents the door and frame from being separated when trying to pry the door open. Each time I would measure the location of the pin of the PLP-211 and transfer that measurement to the frame and each time, the measurement would be off to a greater or lesser degree. This would necessitate enlarging the hole to the next size or more.

Finally, I hit upon this solution: I would install each Latch Protector, close the door as far as it would go resting the anti-spread pin directly against the frame. Then, with a small block of wood over the area of the pin to protect the finish, give the block of wood a sharp wrap with my hammer.

That would cause the pin to mark the frame in the exact spot where I needed to drill my hole. It was then a simple matter of drilling the hole to the proper size, and I was done with that door.

Tom Sweltzer  
Nebraska

**SIEVEKING KEY GUIDE WINNER:  
Trunk Hinge Codes**

When trying to generate a key for the ignitions on a 1995, 1996 and possibly the 1997 Ford, Lincoln, Mercury, Grand Marquis and Crown Victoria, look in the trunk! The key code is on a strip of paper on one of the trunk lid hinges.

To open the trunk when no key are available, there is a trunk release mechanism on the drivers side arm rest that will release the trunk even when the switch is not on.

To the new locksmith: Be reminded that the best way to open these cars is at the rear door. The buttons lift up easily. Also when you clip the key, be sure to clip the last part of the code first (bow-to-tip). As far as the trunk key is concerned, the key can be impressed or progressed from the glove box lock.

D. Hamlet  
Alabama

**JAKE'S GRAB BAG WINNERS:  
On The Level**

I keep a small pocket level in my tool belt for the installation of door closers and panic bars. I simply mark the upper right hand corner screw hole as per the instructions. Then, rather than mark the remaining screw locations by measurement, I place a level on the device you are installing. When the level shows a "level" position, I mark the hole locations, remove the device and center punch drill locations. It really is a time saver.

Al Arteaga  
California

**Generating Chrysler "K" Keys**

To generate a trunk key for the Chrysler "K" car series, unscrew the license plate light which is directly under the trunk lock. Use a flashlight to look inside the hole and you will see the code stamped on the bottom of the lock cylinder.

If the nut obscures the first letter of the code, that letter is generally an "S". Cut your key, replace the light, collect your money and be on your way.

Michael S. Rollins  
Illinois

**Wire Nut Cap Replacement**

The common Graphite gun is a staple in many locksmiths tool boxes. Unfortunately, it is easy to lose the little rubber cap that comes on the gun.

A workable replacement that will not come off easily is a small wire nut (the gray one). Just twist the wire nut over the end of the graphite tube and it is there to stay! If you should lose it, a new one only costs a few cents.

Peter F. Schifferli  
New York



# THRU THE KEYHOLE

*A Peek at Movers & Shakers in the Industry*

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**Mas-Hamilton Group, Inc.  
Makes Strong Statement  
To The Security Industry  
With Bold New Look!**

The Mas-Hamilton Group, the premier manufacturer of high-security access control locking devices, announced the unveiling of a brand new "look" which retains the same recognizable corporate logo and stealth fighter graphic and incorporates a new corporate color scheme.

Historically, a manufacturer of locking devices of the highest order for the U.S. Government, Mas-Hamilton recently directed its technological expertise at the commercial market with the release of

the Cencon System 2000 in 1995 and the Auditcon in 1996. While sales for these products have been very successful, Mas-Hamilton Group has perceived the need to refine its corporate image and marketing image to adequately reflect the magnitude of the changes within the Company.

The new image will incorporate a rich, reflex blue in all its marketing literature and corporate correspondence materials, with the new marketing messages - "Take a closer look..." and "Defining the Future" emblazoned throughout. In addition, each existing and new product line will embody power color schemes to make each product easily identifiable to the mass commercial market. This new image will be employed from top

to bottom, bringing cohesion and focus to all marketing efforts of Mas-Hamilton Group.

"We're genuinely excited about the establishment of our new corporate image. We have realized through market research and numerous conversations with various customers throughout the country that the market perceives us as primarily a manufacturer of U.S. Government locks. With our new image firmly in place, we hope that our message to the commercial market is clear - "Mas-Hamilton Group is the global market leader for the best in government and commercial security devices." J.D. Hamilton, President and CEO of Mas-Hamilton Group, Inc.

TNL

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# KEY CODES

## Kenworth Code Series G101-G598

G101 - G598

HPC 1200CM: Code Card - CF207

Continental Micro Code Card - XF207

Cutter - CW1011

Stop - Red Tip Stop (Ford 5-Cut)

**Framon:**

Cut Start - .144

Cut to Cut - .092

Spacing Block - #3

Cutter - FC8445

Key Clamping - Ford 5-Cut Clip

**Key Blank:**

Strattec - 596807

Gauged - Tip to Bow

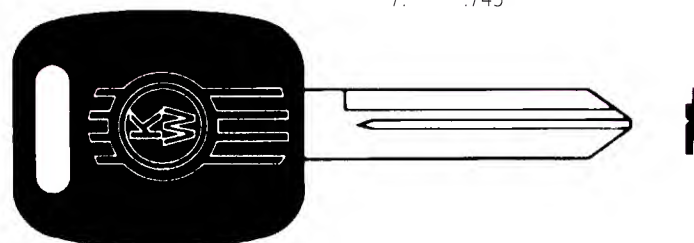
Spacing and Depths using Universal Micrometer Card #58.

**Spacings:**

- 1. .193
- 2. .285
- 3. .377
- 4. .469
- 5. .561
- 6. .653
- 7. .745

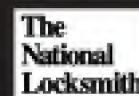
**Depths:**

- 1. .338
- 2. .313
- 3. .288
- 4. .263



**NOTE:** Ignition lock contains first five tumblers, door locks contain last five tumblers.

|      |        |       |       |      |        |       |       |      |        |       |       |
|------|--------|-------|-------|------|--------|-------|-------|------|--------|-------|-------|
| G101 | 211212 | 11212 | 21121 | G129 | 212123 | 12123 | 21212 | G157 | 312344 | 12344 | 31234 |
| G102 | 311213 | 11213 | 31121 | G130 | 312124 | 12124 | 31212 | G158 | 112421 | 12421 | 11242 |
| G103 | 211221 | 11221 | 21122 | G131 | 212131 | 12131 | 21213 | G159 | 112422 | 12422 | 11242 |
| G104 | 311223 | 11223 | 31122 | G132 | 112132 | 12132 | 11213 | G160 | 112423 | 12423 | 11242 |
| G105 | 311224 | 11224 | 31122 | G133 | 212133 | 12133 | 21213 | G161 | 112424 | 12424 | 11242 |
| G106 | 211231 | 11231 | 21123 | G134 | 212134 | 12134 | 21213 | G162 | 112431 | 12431 | 11243 |
| G107 | 211232 | 11232 | 21123 | G135 | 212211 | 12211 | 21221 | G163 | 112432 | 12432 | 11243 |
| G108 | 311233 | 11233 | 31123 | G136 | 312212 | 12212 | 31221 | G164 | 212433 | 12433 | 21243 |
| G109 | 311234 | 11234 | 31123 | G137 | 212213 | 12213 | 21221 | G165 | 212434 | 12434 | 21243 |
| G110 | 211242 | 11242 | 21124 | G138 | 112231 | 12231 | 11223 | G166 | 112442 | 12442 | 11244 |
| G111 | 311243 | 11243 | 31124 | G139 | 312232 | 12232 | 31223 | G167 | 212443 | 12443 | 21244 |
| G112 | 311244 | 11244 | 31124 | G140 | 312233 | 12233 | 31223 | G168 | 213112 | 13112 | 21311 |
| G113 | 211312 | 11312 | 21131 | G141 | 312234 | 12234 | 31223 | G169 | 213113 | 13113 | 21311 |
| G114 | 311313 | 11313 | 31131 | G142 | 112242 | 12242 | 11224 | G170 | 213121 | 13121 | 21312 |
| G115 | 211321 | 11321 | 21132 | G143 | 212243 | 12243 | 21224 | G171 | 113122 | 13122 | 11312 |
| G116 | 311322 | 11322 | 31132 | G144 | 312244 | 12244 | 31224 | G172 | 113123 | 13123 | 11312 |
| G117 | 211323 | 11323 | 21132 | G145 | 212311 | 12311 | 21231 | G173 | 113124 | 13124 | 11312 |
| G118 | 211324 | 11324 | 21132 | G146 | 112312 | 12312 | 11231 | G174 | 213131 | 13131 | 21313 |
| G119 | 311331 | 11331 | 31133 | G147 | 112313 | 12313 | 11231 | G175 | 113132 | 13132 | 11313 |
| G120 | 211332 | 11332 | 21133 | G148 | 112321 | 12321 | 11232 | G176 | 113133 | 13133 | 11313 |
| G121 | 311334 | 11334 | 31133 | G149 | 312322 | 12322 | 31232 | G177 | 113134 | 13134 | 11313 |
| G122 | 211342 | 11342 | 21134 | G150 | 212323 | 12323 | 21232 | G178 | 213211 | 13211 | 21321 |
| G123 | 311343 | 11343 | 31134 | G151 | 212324 | 12324 | 21232 | G179 | 113212 | 13212 | 11321 |
| G124 | 311344 | 11344 | 31134 | G152 | 112331 | 12331 | 11233 | G180 | 113213 | 13213 | 11321 |
| G125 | 212112 | 12112 | 21211 | G153 | 212332 | 12332 | 21233 | G181 | 113221 | 13221 | 11322 |
| G126 | 312113 | 12113 | 31211 | G154 | 312334 | 12334 | 31233 | G182 | 213223 | 13223 | 21322 |
| G127 | 212121 | 12121 | 21212 | G155 | 112342 | 12342 | 11234 | G183 | 213224 | 13224 | 21322 |
| G128 | 312122 | 12122 | 31212 | G156 | 212343 | 12343 | 21234 | G184 | 113231 | 13231 | 11323 |



## Kenworth Code Series G101-G598

|      |        |       |       |      |        |       |       |      |        |       |       |
|------|--------|-------|-------|------|--------|-------|-------|------|--------|-------|-------|
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| G186 | 213233 | 13233 | 21323 | G237 | 121323 | 21323 | 12132 | G246 | 322113 | 22113 | 32211 |
| G187 | 213234 | 13234 | 21323 | G238 | 121324 | 21324 | 12132 | G247 | 122121 | 22121 | 12212 |
| G188 | 113242 | 13242 | 11324 | G239 | 121331 | 21331 | 12133 | G248 | 322123 | 22123 | 32212 |
| G189 | 113243 | 13243 | 11324 | G240 | 121332 | 21332 | 12133 | G249 | 322124 | 22124 | 32212 |
| G190 | 213244 | 13244 | 21324 | G241 | 321334 | 21334 | 32133 | G250 | 122131 | 22131 | 12213 |
| G191 | 213311 | 13311 | 21331 | G242 | 121342 | 21342 | 12134 | G251 | 122132 | 22132 | 12213 |
| G192 | 113312 | 13312 | 11331 | G243 | 121343 | 21343 | 12134 | G252 | 322133 | 22133 | 32213 |
| G193 | 113313 | 13313 | 11331 | G244 | 321344 | 21344 | 32134 | G253 | 322134 | 22134 | 32213 |
| G194 | 113321 | 13321 | 11332 |      |        |       |       |      |        |       |       |
| G195 | 213322 | 13322 | 21332 |      |        |       |       |      |        |       |       |
| G196 | 213323 | 13323 | 21332 |      |        |       |       |      |        |       |       |
| G197 | 213324 | 13324 | 21332 |      |        |       |       |      |        |       |       |
| G198 | 113342 | 13342 | 11334 |      |        |       |       |      |        |       |       |
| G199 | 213343 | 13343 | 21334 |      |        |       |       |      |        |       |       |
| G200 | 313344 | 13344 | 31334 |      |        |       |       |      |        |       |       |
| G201 | 113421 | 13421 | 11342 |      |        |       |       |      |        |       |       |
| G202 | 113422 | 13422 | 11342 |      |        |       |       |      |        |       |       |
| G203 | 113423 | 13423 | 11342 |      |        |       |       |      |        |       |       |
| G204 | 113424 | 13424 | 11342 |      |        |       |       |      |        |       |       |
| G205 | 113431 | 13431 | 11343 |      |        |       |       |      |        |       |       |
| G206 | 113432 | 13432 | 11343 |      |        |       |       |      |        |       |       |
| G207 | 213433 | 13433 | 21343 |      |        |       |       |      |        |       |       |
| G208 | 213434 | 13434 | 21343 |      |        |       |       |      |        |       |       |
| G209 | 113442 | 13442 | 11344 |      |        |       |       |      |        |       |       |
| G210 | 213443 | 13443 | 21344 |      |        |       |       |      |        |       |       |
| G211 | 221121 | 21121 | 22112 |      |        |       |       |      |        |       |       |
| G212 | 321122 | 21122 | 32112 |      |        |       |       |      |        |       |       |
| G213 | 321123 | 21123 | 32112 |      |        |       |       |      |        |       |       |
| G214 | 321124 | 21124 | 32112 |      |        |       |       |      |        |       |       |
| G215 | 221131 | 21131 | 22113 |      |        |       |       |      |        |       |       |
| G216 | 121132 | 21132 | 12113 |      |        |       |       |      |        |       |       |
| G217 | 321133 | 21133 | 32113 |      |        |       |       |      |        |       |       |
| G218 | 321134 | 21134 | 32113 |      |        |       |       |      |        |       |       |
| G219 | 221211 | 21211 | 22121 |      |        |       |       |      |        |       |       |
| G220 | 121212 | 21212 | 12121 |      |        |       |       |      |        |       |       |
| G221 | 121213 | 21213 | 12121 |      |        |       |       |      |        |       |       |
| G222 | 121221 | 21221 | 12122 |      |        |       |       |      |        |       |       |
| G223 | 321223 | 21223 | 32122 |      |        |       |       |      |        |       |       |
| G224 | 321224 | 21224 | 32122 |      |        |       |       |      |        |       |       |
| G225 | 121231 | 21231 | 12123 |      |        |       |       |      |        |       |       |
| G226 | 121232 | 21232 | 12123 |      |        |       |       |      |        |       |       |
| G227 | 321233 | 21233 | 32123 |      |        |       |       |      |        |       |       |
| G228 | 321234 | 21234 | 32123 |      |        |       |       |      |        |       |       |
| G229 | 121242 | 21242 | 12124 |      |        |       |       |      |        |       |       |
| G230 | 121243 | 21243 | 12124 |      |        |       |       |      |        |       |       |
| G231 | 321244 | 21244 | 32124 |      |        |       |       |      |        |       |       |
| G232 | 221311 | 21311 | 22131 |      |        |       |       |      |        |       |       |
| G233 | 121312 | 21312 | 12131 |      |        |       |       |      |        |       |       |
| G234 | 121313 | 21313 | 12131 |      |        |       |       |      |        |       |       |
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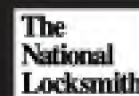
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## Kenworth Code Series G101-G598

|                         |                         |                         |  |
|-------------------------|-------------------------|-------------------------|--|
| G254 122311 22311 12231 | G263 122342 22342 12234 | G272 322434 22434 32243 |  |
| G255 122312 22312 12231 | G264 322343 22343 32234 | G273 122442 22442 12244 |  |
| G256 122313 22313 12231 | G265 422344 22344 42234 | G274 322443 22443 32244 |  |
| G257 122321 22321 12232 | G266 122421 22421 12242 | G275 123112 23112 12311 |  |
| G258 322323 22323 32232 | G267 122423 22423 12242 | G276 123113 23113 12311 |  |
| G259 322324 22324 32232 | G268 122424 22424 12242 | G277 123121 23121 12312 |  |
| G260 122331 22331 12233 | G269 122431 22431 12243 | G278 123122 23122 12312 |  |
| G261 322332 22332 32233 | G270 122432 22432 12243 | G279 123123 23123 12312 |  |
| G262 422334 22334 42233 | G271 322433 22433 32243 | G280 123124 23124 12312 |  |



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|                         |                         |                         |  |
|-------------------------|-------------------------|-------------------------|--|
| G281 123131 23131 12313 | G290 323224 23224 32322 | G300 123313 23313 12331 |  |
| G282 123132 23132 12313 | G291 123231 23231 12323 | G301 123321 23321 12332 |  |
| G283 123133 23133 12313 | G292 123232 23232 12323 | G302 323322 23322 32332 |  |
| G284 123134 23134 12313 | G293 423233 23233 42323 | G303 423323 23323 42332 |  |
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| G288 123221 23221 12322 | G297 323244 23244 32324 | G307 423344 23344 42334 |  |
| G289 323223 23223 32322 | G298 123311 23311 12331 | G308 123421 23421 12342 |  |
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| G293 423233 23233 42323 | G302 323322 23322 32332 | G312 123431 23431 12343 |  |
| G294 323234 23234 32323 | G303 423323 23323 42332 | G313 123432 23432 12343 |  |
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| G298 123311 23311 12331 | G307 423344 23344 42334 | G317 323443 23443 32344 |  |
| G299 123312 23312 12331 | G308 123421 23421 12342 | G318 124211 24211 12421 |  |
| G300 123313 23313 12331 | G309 123422 23422 12342 | G319 124212 24212 12421 |  |
| G301 123321 23321 12332 | G310 123423 23423 12342 | G320 124213 24213 12421 |  |
| G302 323322 23322 32332 | G311 123424 23424 12342 | G321 124221 24221 12422 |  |
| G303 423323 23323 42332 | G312 123431 23431 12343 | G322 124223 24223 12422 |  |
| G304 323324 23324 32332 | G313 123432 23432 12343 |                         |  |
| G305 123342 23342 12334 | G314 423433 23433 42343 |                         |  |
| G306 423343 23343 42334 | G315 323434 23434 32343 |                         |  |
| G307 423344 23344 42334 | G316 123442 23442 12344 |                         |  |
| G308 123421 23421 12342 | G317 323443 23443 32344 |                         |  |
| G309 123422 23422 12342 | G318 124211 24211 12421 |                         |  |
| G310 123423 23423 12342 | G319 124212 24212 12421 |                         |  |
| G311 123424 23424 12342 | G320 124213 24213 12421 |                         |  |
| G312 123431 23431 12343 | G321 124221 24221 12422 |                         |  |
| G313 123432 23432 12343 | G322 124223 24223 12422 |                         |  |
| G314 423433 23433 42343 |                         |                         |  |
| G315 323434 23434 32343 |                         |                         |  |
| G316 123442 23442 12344 |                         |                         |  |
| G317 323443 23443 32344 |                         |                         |  |
| G318 124211 24211 12421 |                         |                         |  |
| G319 124212 24212 12421 |                         |                         |  |
| G320 124213 24213 12421 |                         |                         |  |
| G321 124221 24221 12422 |                         |                         |  |
| G322 124223 24223 12422 |                         |                         |  |



## Kenworth Code Series G101-G598

|      |        |       |       |      |        |       |       |      |        |       |       |
|------|--------|-------|-------|------|--------|-------|-------|------|--------|-------|-------|
| G323 | 124224 | 24224 | 12422 | G374 | 131312 | 31312 | 13131 | G383 | 131342 | 31342 | 13134 |
| G324 | 124231 | 24231 | 12423 | G375 | 131313 | 31313 | 13131 | G384 | 131343 | 31343 | 13134 |
| G325 | 124232 | 24232 | 12423 | G376 | 131321 | 31321 | 13132 | G385 | 131344 | 31344 | 13134 |
| G326 | 124233 | 24233 | 12423 | G377 | 131322 | 31322 | 13132 | G386 | 132112 | 32112 | 13211 |
| G327 | 124234 | 24234 | 12423 | G378 | 131323 | 31323 | 13132 | G387 | 132113 | 32113 | 13211 |
| G328 | 124242 | 24242 | 12424 | G379 | 131324 | 31324 | 13132 | G388 | 132121 | 32121 | 13212 |
| G329 | 124243 | 24243 | 12424 | G380 | 131331 | 31331 | 19133 | G389 | 132122 | 32122 | 13212 |
| G330 | 124244 | 24244 | 12424 | G381 | 131332 | 31332 | 13133 | G390 | 132123 | 32123 | 13212 |
| G331 | 124311 | 24311 | 12431 | G382 | 131334 | 31334 | 13133 | G391 | 132124 | 32124 | 13212 |
| G332 | 124312 | 24312 | 12431 |      |        |       |       |      |        |       |       |
| G333 | 124313 | 24313 | 12431 |      |        |       |       |      |        |       |       |
| G334 | 124321 | 24321 | 12432 |      |        |       |       |      |        |       |       |
| G335 | 124322 | 24322 | 12432 |      |        |       |       |      |        |       |       |
| G336 | 124323 | 24323 | 12432 |      |        |       |       |      |        |       |       |
| G337 | 124324 | 24324 | 12432 |      |        |       |       |      |        |       |       |
| G338 | 124331 | 24331 | 12433 |      |        |       |       |      |        |       |       |
| G339 | 124332 | 24332 | 12433 |      |        |       |       |      |        |       |       |
| G340 | 324334 | 24334 | 32433 |      |        |       |       |      |        |       |       |
| G341 | 124342 | 24342 | 12434 |      |        |       |       |      |        |       |       |
| G342 | 124343 | 24343 | 12434 |      |        |       |       |      |        |       |       |
| G343 | 324344 | 24344 | 32434 |      |        |       |       |      |        |       |       |
| G344 | 124421 | 24421 | 12442 |      |        |       |       |      |        |       |       |
| G345 | 124422 | 24422 | 12442 |      |        |       |       |      |        |       |       |
| G346 | 124423 | 24423 | 12442 |      |        |       |       |      |        |       |       |
| G347 | 124424 | 24424 | 12442 |      |        |       |       |      |        |       |       |
| G348 | 124431 | 24431 | 12443 |      |        |       |       |      |        |       |       |
| G349 | 124432 | 24432 | 12443 |      |        |       |       |      |        |       |       |
| G350 | 324439 | 24433 | 32443 |      |        |       |       |      |        |       |       |
| G351 | 324434 | 24434 | 32443 |      |        |       |       |      |        |       |       |
| G352 | 231121 | 31121 | 23112 |      |        |       |       |      |        |       |       |
| G353 | 131122 | 31122 | 13112 |      |        |       |       |      |        |       |       |
| G354 | 131123 | 31123 | 13112 |      |        |       |       |      |        |       |       |
| G355 | 131124 | 31124 | 13112 |      |        |       |       |      |        |       |       |
| G356 | 231131 | 31131 | 23113 |      |        |       |       |      |        |       |       |
| G357 | 131132 | 31132 | 13113 |      |        |       |       |      |        |       |       |
| G358 | 131133 | 31133 | 13113 |      |        |       |       |      |        |       |       |
| G359 | 131134 | 31134 | 13113 |      |        |       |       |      |        |       |       |
| G360 | 231211 | 31211 | 23121 |      |        |       |       |      |        |       |       |
| G361 | 131212 | 31212 | 13121 |      |        |       |       |      |        |       |       |
| G362 | 131213 | 31213 | 13121 |      |        |       |       |      |        |       |       |
| G363 | 131221 | 31221 | 13122 |      |        |       |       |      |        |       |       |
| G364 | 131223 | 31223 | 13122 |      |        |       |       |      |        |       |       |
| G365 | 131224 | 31221 | 13122 |      |        |       |       |      |        |       |       |
| G366 | 131231 | 31231 | 13123 |      |        |       |       |      |        |       |       |
| G367 | 131232 | 31232 | 13123 |      |        |       |       |      |        |       |       |
| G368 | 131233 | 31233 | 13123 |      |        |       |       |      |        |       |       |
| G369 | 131234 | 31234 | 13123 |      |        |       |       |      |        |       |       |
| G370 | 131242 | 31242 | 13124 |      |        |       |       |      |        |       |       |
| G371 | 131243 | 31243 | 13124 |      |        |       |       |      |        |       |       |
| G372 | 131244 | 31244 | 13124 |      |        |       |       |      |        |       |       |
| G373 | 231311 | 31311 | 23131 |      |        |       |       |      |        |       |       |



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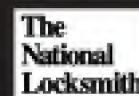
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| G395 132134 32134 13213 | G404 132243 32243 13224 | G413 132331 32331 13233 |
| G396 132211 32211 13221 | G405 432244 32244 43224 | G414 132332 32332 13233 |
| G397 132212 32212 13221 | G406 132311 32311 13231 | G415 432334 32334 43233 |
| G398 132213 32213 13221 | G407 132312 32312 13231 | G416 132342 32342 13234 |
| G399 132231 32231 13223 | G408 132313 32313 13231 | G417 132343 32343 13234 |
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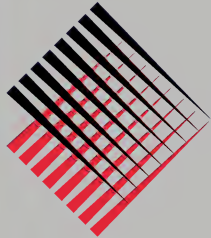
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|                         |
|-------------------------|
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| G423 132431 32431 13243 |
| G424 132432 32432 13243 |
| G425 132433 32433 13243 |
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| G427 132442 32442 13244 |
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| G429 133112 33112 13311 |
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| G431 133121 33121 13312 |
| G432 133122 33122 13312 |
| G433 133123 33123 19312 |
| G434 133124 33124 13312 |
| G435 133131 33131 13313 |
| G436 133132 33132 19313 |
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| G456 433434 33434 43343 |
| G457 133442 33442 13344 |
| G458 433443 33443 43344 |
| G459 134211 34211 13421 |
| G460 134212 34212 13421 |



## Kenworth Code Series G101-G598

|      |        |       |       |      |        |       |       |      |        |       |       |
|------|--------|-------|-------|------|--------|-------|-------|------|--------|-------|-------|
| G462 | 134221 | 34221 | 13422 | G513 | 242313 | 42313 | 24231 | G522 | 242343 | 42343 | 24234 |
| G463 | 134223 | 34223 | 13422 | G514 | 242321 | 42321 | 24232 | G523 | 242344 | 42344 | 24234 |
| G464 | 134224 | 34224 | 13422 | G515 | 342322 | 42322 | 34232 | G524 | 242421 | 42421 | 24242 |
| G465 | 134231 | 34231 | 13423 | G516 | 242323 | 42323 | 24232 | G525 | 342422 | 42422 | 34242 |
| G466 | 134232 | 34232 | 13423 | G517 | 242324 | 42324 | 24232 | G526 | 242423 | 42423 | 24242 |
| G467 | 134233 | 34233 | 13423 | G518 | 242331 | 42331 | 24233 | G527 | 242424 | 42424 | 24242 |
| G468 | 134234 | 34234 | 13423 | G519 | 242332 | 42332 | 24233 | G528 | 242431 | 42431 | 24243 |
| G469 | 134242 | 34242 | 13424 | G520 | 242334 | 42334 | 24239 | G529 | 212432 | 42432 | 24243 |
| G470 | 134243 | 34243 | 13424 | G521 | 242342 | 42342 | 24234 | G530 | 242433 | 42433 | 24243 |
| G471 | 134244 | 34244 | 13424 |      |        |       |       |      |        |       |       |
| G472 | 134311 | 34311 | 13431 |      |        |       |       |      |        |       |       |
| G473 | 134312 | 34312 | 13431 |      |        |       |       |      |        |       |       |
| G474 | 134313 | 34313 | 13431 |      |        |       |       |      |        |       |       |
| G475 | 134321 | 34321 | 13432 |      |        |       |       |      |        |       |       |
| G476 | 134322 | 34322 | 13432 |      |        |       |       |      |        |       |       |
| G477 | 134323 | 34323 | 13432 |      |        |       |       |      |        |       |       |
| G478 | 134324 | 34324 | 13432 |      |        |       |       |      |        |       |       |
| G479 | 134331 | 34331 | 13433 |      |        |       |       |      |        |       |       |
| G480 | 134332 | 34332 | 13433 |      |        |       |       |      |        |       |       |
| G481 | 434334 | 34334 | 43433 |      |        |       |       |      |        |       |       |
| G482 | 134342 | 34342 | 13434 |      |        |       |       |      |        |       |       |
| G483 | 134343 | 34343 | 13434 |      |        |       |       |      |        |       |       |
| G484 | 134421 | 34421 | 13442 |      |        |       |       |      |        |       |       |
| G485 | 134422 | 34422 | 13442 |      |        |       |       |      |        |       |       |
| G486 | 134423 | 34423 | 13442 |      |        |       |       |      |        |       |       |
| G487 | 134424 | 34424 | 13442 |      |        |       |       |      |        |       |       |
| G488 | 134431 | 34431 | 13443 |      |        |       |       |      |        |       |       |
| G489 | 134432 | 34432 | 13443 |      |        |       |       |      |        |       |       |
| G490 | 434433 | 34433 | 43443 |      |        |       |       |      |        |       |       |
| G491 | 242112 | 42112 | 24211 |      |        |       |       |      |        |       |       |
| G492 | 242113 | 42113 | 24211 |      |        |       |       |      |        |       |       |
| G493 | 242121 | 42121 | 24212 |      |        |       |       |      |        |       |       |
| G494 | 342122 | 42122 | 34212 |      |        |       |       |      |        |       |       |
| G495 | 242129 | 42123 | 24212 |      |        |       |       |      |        |       |       |
| G496 | 242124 | 42124 | 24212 |      |        |       |       |      |        |       |       |
| G497 | 242131 | 42131 | 24213 |      |        |       |       |      |        |       |       |
| G498 | 242132 | 42132 | 24213 |      |        |       |       |      |        |       |       |
| G499 | 242133 | 42133 | 24213 |      |        |       |       |      |        |       |       |
| G500 | 242134 | 42134 | 24213 |      |        |       |       |      |        |       |       |
| G501 | 242211 | 42211 | 24221 |      |        |       |       |      |        |       |       |
| G502 | 342212 | 42212 | 34221 |      |        |       |       |      |        |       |       |
| G503 | 242213 | 42213 | 24221 |      |        |       |       |      |        |       |       |
| G504 | 242231 | 42231 | 24223 |      |        |       |       |      |        |       |       |
| G505 | 342232 | 42232 | 34223 |      |        |       |       |      |        |       |       |
| G506 | 242233 | 42233 | 24223 |      |        |       |       |      |        |       |       |
| G507 | 242234 | 42234 | 24223 |      |        |       |       |      |        |       |       |
| G508 | 342242 | 42242 | 24224 |      |        |       |       |      |        |       |       |
| G509 | 242243 | 42243 | 24224 |      |        |       |       |      |        |       |       |
| G510 | 242244 | 42244 | 24224 |      |        |       |       |      |        |       |       |
| G511 | 242311 | 42311 | 24231 |      |        |       |       |      |        |       |       |
| G512 | 242312 | 42312 | 24231 |      |        |       |       |      |        |       |       |



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## Kenworth Code Series G101-G598

|      |        |       |       |      |        |       |       |      |        |       |       |
|------|--------|-------|-------|------|--------|-------|-------|------|--------|-------|-------|
| G531 | 242434 | 42434 | 24243 | G582 | 244231 | 44231 | 24423 | G591 | 244321 | 44321 | 24432 |
| G532 | 242442 | 42442 | 24244 | G583 | 244232 | 44232 | 24423 | G592 | 244322 | 44322 | 24432 |
| G533 | 242443 | 42443 | 24244 | G584 | 244233 | 44233 | 24423 | G593 | 244323 | 44323 | 24432 |
| G534 | 243112 | 43112 | 24311 | G585 | 244234 | 44234 | 24423 | G594 | 244324 | 44324 | 24432 |
| G535 | 243113 | 43113 | 24311 | G586 | 244242 | 44242 | 24424 | G595 | 244331 | 44331 | 24433 |
| G536 | 243121 | 43121 | 24312 | G587 | 244243 | 44243 | 24424 | G596 | 244332 | 44332 | 24433 |
| G537 | 243122 | 43122 | 24312 | G588 | 244311 | 44311 | 24431 | G597 | 244342 | 44342 | 24434 |
| G538 | 243123 | 43123 | 24312 | G589 | 244312 | 44312 | 24431 | G598 | 244343 | 44343 | 24434 |
| G539 | 243124 | 43124 | 24312 | G590 | 244313 | 44313 | 24431 |      |        |       |       |
| G540 | 243131 | 43131 | 24313 |      |        |       |       |      |        |       |       |
| G541 | 243132 | 43132 | 24313 |      |        |       |       |      |        |       |       |
| G542 | 243133 | 43133 | 24313 |      |        |       |       |      |        |       |       |
| G543 | 243134 | 43134 | 24313 |      |        |       |       |      |        |       |       |
| G544 | 243211 | 43211 | 24321 |      |        |       |       |      |        |       |       |
| G545 | 243212 | 43212 | 24321 |      |        |       |       |      |        |       |       |
| G546 | 243213 | 43213 | 24321 |      |        |       |       |      |        |       |       |
| G547 | 243221 | 43221 | 24322 |      |        |       |       |      |        |       |       |
| G548 | 243223 | 43223 | 24322 |      |        |       |       |      |        |       |       |
| G549 | 243224 | 43224 | 24322 |      |        |       |       |      |        |       |       |
| G550 | 243231 | 43231 | 24323 |      |        |       |       |      |        |       |       |
| G551 | 243232 | 43232 | 24323 |      |        |       |       |      |        |       |       |
| G552 | 243233 | 43233 | 24323 |      |        |       |       |      |        |       |       |
| G553 | 243234 | 43234 | 24323 |      |        |       |       |      |        |       |       |
| G554 | 243242 | 43242 | 24324 |      |        |       |       |      |        |       |       |
| G555 | 243243 | 43243 | 24324 |      |        |       |       |      |        |       |       |
| G556 | 243244 | 43244 | 24324 |      |        |       |       |      |        |       |       |
| G557 | 243311 | 43311 | 24331 |      |        |       |       |      |        |       |       |
| G558 | 243312 | 43312 | 24331 |      |        |       |       |      |        |       |       |
| G559 | 243313 | 43313 | 24331 |      |        |       |       |      |        |       |       |
| G560 | 243321 | 43321 | 24332 |      |        |       |       |      |        |       |       |
| G561 | 243322 | 43322 | 24332 |      |        |       |       |      |        |       |       |
| G562 | 243323 | 43323 | 24332 |      |        |       |       |      |        |       |       |
| G563 | 243324 | 43324 | 24332 |      |        |       |       |      |        |       |       |
| G564 | 243342 | 43342 | 24334 |      |        |       |       |      |        |       |       |
| G565 | 243343 | 43343 | 24334 |      |        |       |       |      |        |       |       |
| G566 | 243421 | 43421 | 24342 |      |        |       |       |      |        |       |       |
| G567 | 243422 | 43422 | 24342 |      |        |       |       |      |        |       |       |
| G568 | 243423 | 43423 | 24342 |      |        |       |       |      |        |       |       |
| G569 | 243424 | 43424 | 24342 |      |        |       |       |      |        |       |       |
| G570 | 243431 | 43431 | 24343 |      |        |       |       |      |        |       |       |
| G571 | 243432 | 43432 | 24343 |      |        |       |       |      |        |       |       |
| G572 | 243433 | 43433 | 24343 |      |        |       |       |      |        |       |       |
| G573 | 243434 | 43434 | 24343 |      |        |       |       |      |        |       |       |
| G574 | 243442 | 43442 | 24344 |      |        |       |       |      |        |       |       |
| G575 | 243443 | 43443 | 24344 |      |        |       |       |      |        |       |       |
| G576 | 244211 | 44211 | 24421 |      |        |       |       |      |        |       |       |
| G577 | 244212 | 44212 | 24421 |      |        |       |       |      |        |       |       |
| G578 | 244213 | 44213 | 24421 |      |        |       |       |      |        |       |       |
| G579 | 244221 | 44221 | 24422 |      |        |       |       |      |        |       |       |
| G580 | 244223 | 44223 | 24422 |      |        |       |       |      |        |       |       |
| G581 | 244224 | 44224 | 24422 |      |        |       |       |      |        |       |       |

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# TEST DRIVE!

Sliding patio doors are by far the most vulnerable entry point in any residence, and one of the most difficult to secure. Due to the aluminum and glass design, a multitude of products would be needed to properly secure and deter forced attacks. It would be impossible for a single product to deter every known forced attack procedure. With that in mind, the best place to begin reinforcement is at the weakest point of the door... the locking latch.

For the life of me, I can't understand why manufacturers of sliding patio doors have not redesigned their doors and locking latches. Since the manufacturers do not seem interested in improving the security of its products, you need to be. And the pitiful locking latch is the place to start.

Designed to do nothing more than hold the door closed against a strong wind or the pawing hands of an infant, the original equipment manufacturers locking hardware leaves a lot to be desired.

## PRODUCT:

Introducing a lock manufactured by MIWA that will greatly increase the security and versatility of the latching area on sliding patio doors, its called the PatioGuard.

The PatioGuard is a unique lock that can be used as a deadbolt, hook latch or swinging door lock. The lock even incorporates a single cylinder outside key control so the PatioGuard can be locked or unlocked from the outside. The unit is suitable for patio doors, screen doors, storm doors and storage sheds. In fact, the PatioGuard is ideal for any swinging or sliding door under 1-3/8" thick.

# The PATIOGUARD <sup>by MIWA</sup>

## FEATURES:

The PatioGuard features a thumb latch on the inside and a keyed cylinder on the outside. The locking bolt is a unique design in that it is both a hook bolt and deadbolt that will fit both right hand and left hand installations. The lock is available in three finishes; White; Brushed Aluminum and Duranodic. The lock is 4" X 1-1/8" X 3/4" and will fit in doors from 3/4" thick to doors 1-3/8" thick. A spacer plate, screws and dual strike plate is included.

## OPERATION & INSTALLATION:

The PatioGuard has a surprisingly strong solid feel to it. The bolt throw is very smooth with a positive locking action. Even the keyed cylinder operated smoothly.

The installation was a bit more time consuming than anticipated. This was due in part because of the inherent design of glass sliding patio doors. Extra caution should always be taken whenever any drilling or screwing needs to be done around glass. Avoid hitting the glass at all costs. One mistake can quickly turn a profit opportunity into a loss leader. A total of seven holes need to be drilled to install the PatioGuard and each one should be carefully planned out.

## CONCLUSION:

Overall, this is a very nice product. It looks attractive when installed, will greatly increase the security of the door and allows both inside and



outside locking and unlocking options. The only criticism that can be made is, it would have been nice if the keyed cylinder could have been keyed to a more popular residential keyway, such as: Kwikset, Schlage, Falcon, Weiser, etc. This option would have made the PatioGuard lock the quintessential.

At a suggested retail price of \$33.00, the PatioGuard is a product that is affordable for everyone. And, the increased security and available colors to match almost any finish should make it attractive as well.

For more information on the PatioGuard by MIWA call: 800-397-4631 or a dealer near you.

## IN SUMMARY:

The PatioGuard features a thumb latch on the inside and a keyed cylinder on the outside. The locking bolt is a unique design in that it is both a hook bolt and deadbolt that will fit both right hand and left hand installations.

**PRICE:** \$33.00

## TEST DRIVE RESULTS:

A very nice product that looks attractive when installed, will greatly increase the security of the door and allows both inside and outside locking and unlocking options.