

The National Locksmith®

\$5.00

CODES
YAMAHA MOTORCYCLE
& GM 10-GUT
— page 101 —

August 1995
Volume 66, No. 8

**Easy 1994 Altima
Service**

page 24

**No Sweat Metal Desk
Lock Install**

page 40

**Electronic Kit Takes
Chaos Out Of
Installation**

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**Choose The Right Cam Locks
For Revving Up Profits**

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**plus ISC BONUS
SUPPLEMENT**

**Quick Solutions For
Hotel Security**

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Editor/Publisher Marc Goldberg
Managing Editor Tom Serogy
Art Director Jim Darow
Production Director Edgar Shindelar
Technical Editor Jake Jakubowski
Technical Writers Carl Cloud, Steve Gebbia, CML, Eugene Gentry, Bill Heine, Michael Hyde, Giles Kalvelage, Brian Kleiner, Ph.D., Dale Libby, Tom Mazzone, Dave McOmie, Don Probasco, Sara Probasco, Robert Sieveking
Director of Sales & Marketing Jeffrey Adair
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Accounting Manager Diane DeGrace
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On The Cover

When it comes to cam locks, there is more than a handful of choices! Read on to discover new profit potential in cam and accessory locks. These locks courtesy of Fort Lock Co.



Commentary

Laughingly, I say the locksmith's job is a simple one, right? Just stick the key in the machine and copy it. Heck, what could be easier?

Of course, you might get called out for a job on a car. But how hard can that be? Just stick the Slim Jim in the door and wiggle it. Heck, my brother-in-law got arrested for doing it faster than you.

Can't you come out right *now* and open my safe? We're supposed to open the store in fifteen minutes, but all the cash is locked up. How hard can this job be? Just bring your sandpaper so you can feel the tumblers click into place!

Keys...you make all kinds, right? Well, I know this one says "Do Not Duplicate," but I promise my boss says it's ok for me to have a copy of this one.

Sagging hinges and a warped door frame you say? That's why my lock doesn't work? Well, your job is easy then! Just adjust the lock and don't charge me too much.

Masterkeys open everything, right? And I'm locked out of my house, so just come over here right now and bring your masterkey. It won't take a second so it shouldn't be expensive.

I've been having a little problem with this door. It doesn't want to close. You say the hydraulic fluid leaked out of the closer? No problem then, just put some more in, right?

This is really an easy job for you, huh? I want these three doors to run off electric strikes, only try not to make too much noise while you're working. These are concrete door frames you say? Just use the quiet drill bits.

How much did you say??? I don't want locks made of gold, I just want something to keep out the burglars. You mean the locks at Handy Andy are imported from China and they're not as good as the heavy duty locks you carry? Boy, you guys must make a lot of money!



Marc Goldberg
Editor/Publisher

*You're a
locksmith?
Boy, you guys
must make
a lot of money!*

America Online: NATL LOCK
Use the above address if you are on AOL.

Internet: natllock@aol.com
Use the Internet address if you are not on AOL.

Marc Goldberg

LETTERS

Comments, Suggestions and Criticisms

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

America Online: NATL LOCK

Use the above address if you are on AOL.

Internet: natlock@aol.com

Use the Internet address if you are not on AOL.

Fast Updates On Line

Dear Marc:

Congratulations on entering into the 1990's with all the rest of us. Please add me to your list of on line customers for fast updates and news on what's hot. You have the best magazine out of all of them on the market. I've been receiving it now almost 15 years and wouldn't miss it for the world! Keep up the good work!

Craig Lynn
Via E-Mail

Frustrated Ford Fan?

Dear Marc:

So, Ford wants locksmiths to service vehicles on their roadside program? I don't think so...

Here's what happened to me.

I read somewhere, a couple of months ago, Ford was recruiting locksmith for roadside assistance, so I called.

When I finally, after several transfers, got to talk with someone, they were quite frank with me - "We're not taking any locksmith on - you might want to try back in a couple of weeks, but they really don't want any..."

I appreciated the honesty, as it fit in with what I already thought.

They only wanted some fool

locksmith to be available at 2 a.m. when the regular service center was closed so the customer could "pick up" a \$2.50 key at the locksmith's shop.

Then, two months later, I read an article in the May 95 issue that Ford is accepting locksmiths, call this # ... (*The National Locksmith*, May 1995, page 8.)

Ring ... roadside service, if you know the extension... I punch in 420...ring...Muzak...Ford contractor information, ring...roadside service, if you know.... Ya', I know now, for sure!

Harry E. Mahan, CJS
South Carolina

Editor's Note: I wish I could tell you different, Harry, you're not the only one to complain. At first we were told that we neglected to put an "X" at the beginning of the 420 extension. Thus, we were told, locksmiths got the wrong extension.

When we tried, guess what? We got the same answer you did - "We're not taking on any more service companies at this time."

We've tried contacting Jim Hurst at Ford, and ended up leaving messages. To date we haven't had a return call.

Being a GM owner, I have little experience with Ford. I sure hope this type of communication (or lack thereof) isn't representative of their entire company!?

Keys And A Head Of Lettuce To Go

Dear Marc:

Guess what? Even our local grocery store chain store (Winn Dixie) cuts keys now. I'm not complaining (so no flames please) I just thought this would help explain the long wait in the checkout line.

Keypros
Via E-Mail

Thumbs Down For Yellow Pages

Dear Marc:

We have been in business for 26 years with what I consider a moderate amount of success... at least we have managed to feed a few employees for that number of years and pay their insurance, etc., and have *never* been in the Yellow Pages other than the "free" one-line listing that comes with your business line. I will have to agree that this is the single biggest rip-off the locksmith has to contend with on a daily basis. Why don't we all stick together and dump this needless expense?

Breck H. Camp, CML
Via E-Mail

Thumbs Down Two For YP

Dear Marc:

I concur with Breck Camp on the YP. The local shops here in Springfield, MO, use the following trick to dupe the customer: Each employee gets his or her own license, plus their own phone number and have them all feed to the same shop. That way when someone calls looking for a so called competitive bid they get three or four different people answering, but all from the same shop. I know, it happened to me here at the University. I was going to bid out some off campus apartments to some of the locals because they were not on my main MK system. My point is, I looked up their numbers in the YPs, all they had was a phone number under locksmith.

Richard W. Soloman
Via E-Mail

Free YP Ad Pays Off

Dear Marc:

The YPs here in St. Louis only cost me money \$800+ a month for 1/4 page under Safes and a lot of aggravation

answering calls from people that were too cheap to buy a new safe (looking for used under \$200) and those that wanted it opened for \$25. My ad is now a single line in column, the free ad! My business is a little less now but my phone is free for the big jobs to come in when they will. How much is my business off? About a third of what that ad cost while I was still advertising in the Yellow Pages a couple of years ago. Thank God the Yellow Pages are the only ones profiting from the madness!

Ray Hearn
Via E-Mail

Another Word On YP?

Dear Marc:

The guys who say they use only the free liner make me laugh. They all must have shops and I bet that most of these shops are old and well established. More power to them. But I'm a mobile operation. And my dad and granddad, God bless their souls, were not locksmiths. I learned 'smithing by going to school, apprenticing, correspondence courses, and, the best teacher, experience. If it were not for the YP, I would have gone under a long time ago. As a member of ALOA, I have scruples. And one of them is that I will not give or offer kickbacks. I will not prostitute myself. And, unfortunately, there are a number of 'smiths who will kick back. The guy who claims he gets big accounts by going in and giving a brochure and a handshake must be a real character. The only way he can do that consistently is by cutting some other 'smiths neck off. That is by lowballing. That's my two cents.

Bill Paroby
ViaE-Mail

Final 2 Cents

Dear Marc:

I gotta put in my 2 cents regarding Yellow Pages...expensive...you betcha...I pray for the day when all the shops in Central Pennsylvania drop their YP ads. I guarantee you that's the day I start getting REAL wealthy. As for me, during the past 17 years they have been my "life's blood."

Different strokes for different folks.

Jack
E Mail




SCHWAB CORP.

Fire protection for your vital records.

**It's not
safe unless it's
Schwab Safe.**

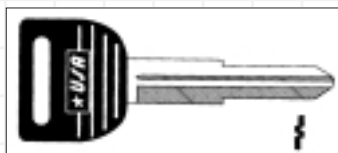
[Click here for more information](#)

NEWSMAKERS

New Products and Industry News

New Keys By Star Key Industries

Star Key Industries, Inc. announces the introduction of a new plastic headed key line — Plastic Headed Stars. Nine popular automobile keys are immediately available.



STAR	ILCO	AUTO
DA25/P	X123	Nissan, Subaru
HD91/P	X182	Honda, Acura
TR33/P	X137	Toyota
TR37/P	X159	Toyota
TR40/P	X174	Toyota
TR47/P	X217	Toyota
MZ13/P	X178	Mazda
MIT1/P	X176	Mitsubishi
H67/P	1193FD	Ford

For **FREE** Information
Circle 230 on Rapid Reply

Alarm Stickers By Ridgewood House

Vibrant green and yellow self-adhesive vinyl alarm stickers, similar to those used



by major burglar alarm companies, are available to locksmiths from Ridgewood House. The 1-3/4" x 3-3/8" stickers can be mounted on the inside or outside of glass surfaces or outside of solid surfaces to help deter vandals and burglary attempts, even if the

individual does not have an electronic alarm system. An item which offers up to 730 percent profit potential for locksmiths, the stickers come four to a pack in skinwrapped, 5-1/2" x 10-3/4" peggable, highly visible, red, black and yellow display cards to help spur impulse sales. They are also available in bulk without cards. Stock is available on a contingency basis for 30 days.

For **FREE** Information
Circle 231 on Rapid Reply

Midland 2-Way Portable Radio

Midland International introduces a full-featured, value-priced, frequency-synthesized two-way FM portable radio for land mobile service. The 99-channel, VHF Model 70-148, has a frequency range from 146-174 MHz, selectable RF power outputs of 2 and 5 watts, pushbutton channel selection with LCD display and an internal preset squelch. 48 channels can be programmed for semi-duplex operation.

The new hand-held radio also offers PC programming and cloning capability and provides scanning by either a programmed scan list or triple watch (two user-selectable priority channels and a home channel). Optional 600 and 1100 mAh rechargeable nickel-



cadmium batteries give up to 6 and 11.4 hours of operation respectively under normal operating conditions at full power. The units durable construction meets MIL 810 C/D/E shock and vibration requirements.

For **FREE** Information
Circle 232 on Rapid Reply

DoorScope By RB Enterprises

The DoorScope optical security instrument from RB Enterprises virtually eliminates the conventional door peephole by allowing a person to stand up to 7' away from the inside of a door and still see a camera's eye view of what's outside.

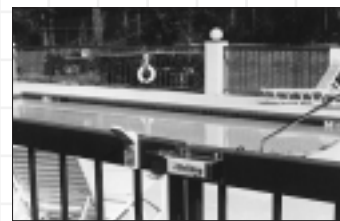


With a wide angle of visibility, DoorScope allows for quick, accurate and reliable identification of all visitors with no distortion, thereby enhancing protection from unwanted intrusion, robbery, assaults, unauthorized access and other crimes. Available in ABS plastic and aluminum, the unit can meet security needs of homes, apartments, condos, offices, banks, and many other private and commercial operations. DoorScope is available in designer colors of charcoal, antique gold, silvergrey, white, gold or silver aluminum.

For **FREE** Information
Circle 233 on Rapid Reply

Bulldog Automatic Lock

Walk-through swing gate security is now push-button easy with GTP's new Bulldog automatic solenoid security gate lock.



The Bulldog is ideal for gates protecting swimming pools, tennis courts, playground areas, controlled employee entrances, boat docks, marinas and other limited access areas which call for a highly effective security lock.

Designed for mounting on all types of gates, and meets Federal safety code standards for swimming pool enclosures and accommodates open-in or open-out installations.

The Bulldog operates on low voltage (12V), powered from a transformer and battery box, for distances up to 1000'. The Bulldog's battery back up allows it to operate hundreds of times during a power failure. The Bulldog can also be operated with an optional solar battery charger, is ideal for any area where power is unavailable.

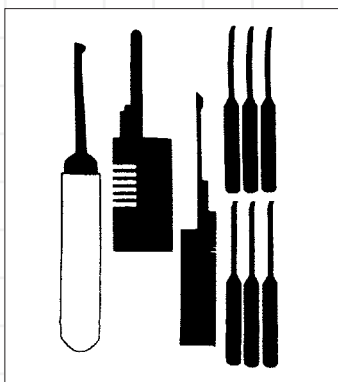
Bulldog provides controlled entry with a doorbell button or optional digital keypad, key switch or card entry. Multiple access systems can also be used.

For **FREE** Information
Circle 234 on Rapid Reply

Continued on page 10

Continued from page 8
GM Ignition Pick By A-1

A-1 Security Mfg. Corp.'s PS-1 ignition pick and decoding system for General Motors vehicles allows locksmiths to pick and decode steering columns in minutes. After removing



rabbit ears, tension probes are used to apply sidebar tension, enabling quick picking. The lock is then decoded with the tool, allowing the locksmith to cut a new key from codes. Rabbit ears can be resecured

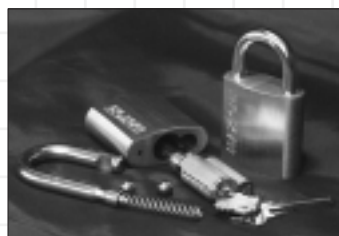
in minutes, using an anaerobic Speedbond, (included) which will resecure ears tighter than originally.

For FREE Information Circle 235 on Rapid Reply

Maxfort Rekeyable Padlocks

Maxfort Corporation manufactures a complete line of Rekeyable Padlocks for the locksmith industry. These padlocks are available with most of the popular keyways in the market.

Model 90 key retaining rekeyable padlocks are available in both 45mm & 50mm size. Just depress a single spring loaded pin, and the cylinder can be removed



for replacement or rekeying. Model 91 non-key retaining design enables cylinder removal with only a screw driver. Model 92 is an I.C. body padlock that accepts I.C. cylinders of Falcon, Arrow, KSP cylinders. Model 93 is a Multiple Cylinder padlock accepts ASSA and Medeco cylinders with proper adapters. The new Model 94 interchanges with both American Lock and Master Lock keyways.

For FREE Information Circle 236 on Rapid Reply

Pistolpad #7000 By Palmer

Palmer Security Products announces the addition of the Model #7000-A to its Pistolpad line of security chests.

The 7000-A is a four door storage locker designed for use in prisoner transfer areas, booking rooms, interrogation areas, courtrooms, gun ranges and other areas requiring temporary storage of firearms. The multicompartment chest can

attached either vertically or horizontally.

For FREE Information Circle 237 on Rapid Reply

Schwab Corp.'s New Cabinet Line

Schwab is now pleased to announce the introduction of their revolutionary new cabinet line for the protection of paper and media records. The new line is designed to be practical and powerful as well as contemporary.

In addition to the new contemporary styling,



each Schwab cabinet is engineered to meet to the strictest industry requirements for fire protection. In fact, the new line has an improved insulation system that makes each unit lighter weight than other products offering similar protection.

Each Schwab cabinet comes with a standard key lock. However, dial and digital combination locks are available upon request. The new line comes in a variety of sizes for paper and media record protection.

For FREE Information Circle 238 on Rapid Reply

New Jet Key Blanks

For General Motors, Jet is pleased to announce the addition of B86 and B86-NP key blanks to fit the 1995 cars. Also now available is IN29 to fit Ilco's disk tumbler locks.

The Silver Line has been

Continued on page 12

Lockmasters has a 44 year history of training security professionals.

[Click here for more information](#)



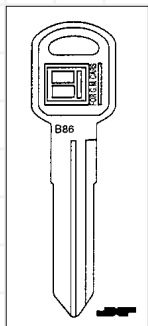
hold eight handguns, two per compartment.

Unlike other lockers on the market, the width of the compartment allows handguns to be placed on their side, eliminating accidental tipping or scratching.

Model 7000-A is made of 12 and 14 gauge steel and each compartment is lined with foam padding. It is also individually keyed, with two keys provided for each lock. Master keying is available.

Mounting holes allow attachment to countertops and walls, and multiple units may be stacked and

Continued from page 10



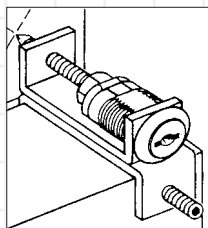
expanded with the addition of Yale's SA through SK and SMK keyways. Sectional keyways simulating the original designs are available in nickel silver for Yale's GA through GK, GMK, Sargent's LA through LN and RA through RN. Jet's Silver Line offers Locksmiths the largest selection in the world of nickel silver keys, cloned to look like the original products. Their written guarantee to be consistently superior to the original manufacturer's production is still retained on all keys in the Silver Line.

For **FREE** Information Circle 239 on Rapid Reply

Maxim Technologies Window Locks

Maxim Technologies, Inc. has introduced a new line of

window locks specifically designed for aluminum and vinyl double hung vertical or horizontal windows. It is an over the counter product requiring no tools for installation. Both models, the WM84L key driven or the WM84 thumbturn driven, are made of cold rolled steel and have a durable powder coated finish. Either model allows a window to be secured in a fully closed or a vented position. Applicable also on sliding doors up to a 1 1/2" thickness.



For **FREE** Information Circle 240 on Rapid Reply

Lund Keybook Key Control

The new compact Lund Keybook provides 10 keyhooks with numbered key



tags. This key control system is simple and easy to use for office and home. A numerical index card records all information pertaining to each lock (or locks). The Lund Keybook is a convenient 9-3/4" x 11-1/2" high quality binder that can be easily stored in a letter or legal size locked file drawer. It's a very effective way to control smaller numbers of keys in an organized, low cost manner.

Lund Equipment Co., Inc. has designed key control systems for 60 years and was a pioneer in the industry. They make key control systems for up to 3400 keys. Metal key cabinets are available in sizes from portable 10 key capacities — to wall cabinets, floor cabinets, table models and

4-drawer file cabinets with up to 3400 key capacities.

For **FREE** Information Circle 241 on Rapid Reply

Ballistol Lubricant By Amora Tech, Inc.

Ballistol can be used for restoring and protecting rusty and corroded metal, protecting wood and leather, and neutralizing acidity and corrosion on electrical contacts. Because Ballistol is non-toxic, environmentally friendly, and bio-degradable, its use around plants, animals, and children is not harmful. Ballistol will not dry out or gum up. It emulsifies with water and continues to protect even when diluted.

Other uses of Ballistol include insect repellency, silver & brass cleaning, fiberglass gel coat shining, tar & insect removal. Ballistol is available in liquid or aerosol form with no CFC's used as a propellant.

For **FREE** Information Circle 241 on Rapid Reply



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Well, It's About Chime!

Make some noise, increase security and make money. Installing annunciators is easy and profitable



by Jake Jakubowski

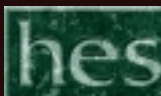
The literal explosion of sophisticated security monitoring devices in the market place today borders on the mind-boggling. There are security cameras that can spot a food stain on a necktie from nearly a mile away, chain link fencing that is actually a large audio gathering device that will not only alert a remote

monitoring station to an intrusion, but will activate recorders to document what is being said by the intruders!

High tech surveillance is a fact of life today as we see a proliferation of video/audio monitoring security to monitor the activities in department stores, malls, restaurants, schools, hospitals and specialty shops.



1. Annunciators can be used to alert people under a variety of applications and conditions.



And, I didn't even get around to mentioning burglar alarms, fire alarms, gas-leak detectors, anti-theft monitors, metal detectors and voice-stress analyzers. All of which have become nearly so ubiquitous that we're hardly aware of them. But, that's part of the idea - isn't it?

The point is: We've come a long way from keepin' a mean ol' junk yard dog around to let us know we got

uncomplicated and inexpensive monitoring devices that will stand guard over a single door or watch multiple doors at the same time. They're easy to install, generally trouble-free and operate off self-contained magnets, batteries and/or AC plug-in transformers.

Simple magnetic annunciators require no back-up power and operate effectively as a stand-alone, single

employee access to restricted areas or signal a remote receiver if someone enters the meat freezer in a restaurant.

Why am I telling you all about chimes? Well, I'm telling you because I'm getting ready to spring another of my "non-traditional alternatives" on you. I'm trying to show you where to discover another need... and how to fill it. After all, as locksmiths we are a part of the Security Industry and as Security Professionals we should be aware of as many ways as possible to respond to our customers security needs.

'Sides, friends and neighbors, thar's gold in them thar a-nun-see-aters, y'all heaho. An' this ol' boy's gonna show y'all how to git some in y'all's pocket! Gold, that is!

The simplest, easiest to install (about ten minutes) annunciator that you can buy is a non-electric, magnetic type like that sold by Audio Alert Systems of America. Alert Systems E-Z Tone model is a low profile unit that will cost you about \$16.95, with a minimum order of four units. The Chime Alert model which has interesting advertising possibilities, costs the same per unit. Just stop and think how well either of these products might fit in with the next sale you make for a rekey on a store front door.

AMSECO offers the EBP-405C which is an infrared door announcer with a mechanical counter to run a continuous tally - that's resettable - on customer entries. (See photograph 2.) The EBP-405C comes complete with all mounting hardware and installation instructions.

This unit operates by emitting a continuous invisible infrared beam to a reflector that returns the beam to the receiver. When this beam is interrupted by a customer entering the premises, a chime sounds to alert the person or persons on duty of the entry. The EBP-405C will cost you about \$89 and can be installed with normal tools in under an hour.

The AV-100 from Rodann Electronics incorporates state-of-the-art passive infrared technology that detects the infrared energy emitted by the human body when in motion, and within a given detection area (depending on how high the detector is mounted from the floor), the detector (transmitter) sends a



2. AMSECO's EBP-405C unit not only announces an entry, it keeps count as well.

company coming, welcome or otherwise!

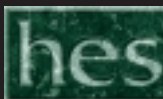
The main problem with all the neat - and very effective - "Gee Whiz!" stuff is it's still out of the reach of the pocketbooks of many small to medium-sized businesses that need help with their physical security. Sure, most of them may have a burglar alarm, and some may even have a video monitoring system. What they don't have, as a rule, is something to let them know that someone came into the shop while they were in the back room or, that someone opened the door to the supply room - when no one should have been in the back room to begin with.

That's where chimes or other types of annunciator devices come into play. These are relatively simple,

door attendant; while other units utilize battery operated Passive Infrared (PIR) wireless transmitters and plug in receivers. Still other units are hard wired between the PIR transmitters and receiving units and are powered by an AC transformer. The more sophisticated units can be wired to activate a variety of bells, whistles, chimes or lock actuators depending on your customer's needs. (See illustration 1.)

These units are ideal for any application where it is necessary to announce someone's arrival, count customers, operate entry or exit locks or simply alert an inattentive clerk that a customer may need assistance.

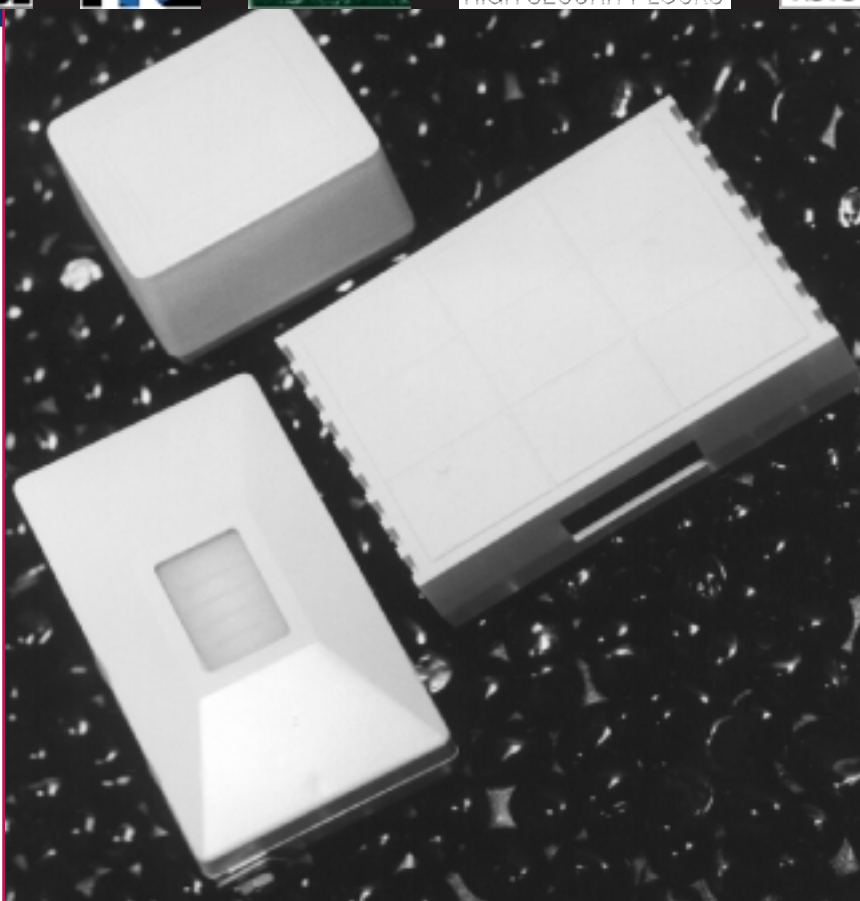
Other economical applications of these units can be used to "watch" display cases, count customers or



signal to the receiver which activates the chime. (See photograph 3.)

The AV-100 is powered by an economical 16.5 Volt, UL Listed, plug-in transformer and is capable of operating several chimes, buzzers or bells including a customer counting device if needed. The AV-100 comes with universal mounting brackets that allow for easy ceiling, wall, or side mounting of the sensor/transmitter. The wiring is uncomplicated and the AV100 can be installed in most locations in about half an hour.

The AV-100 costs you about \$ 49.95, plus shipping. Rodann also carries wireless annunciators - units that are capable of monitoring more



3. The AV-100 by Rodann Electronics.

than one door at a time and high decibel exit alarms. Rodann offers literature and technical assistance to

their customers.

Detec Security Systems offers a variety of "Mr. Chime" door announcers and accessories. Their more popular "Door Attendant" (Model DA4 is a wireless, infrared transmitter that can send a signal to a receiver over 100' away). The transmitter or detector is powered by a 9-volt battery and the receiver is powered by a low-cost plug-in transformer. (See photograph 4.)

The DA4 can be used on roll-up warehouse doors, display cases and for restricted area protection. The DA4 costs you about \$40.

You'll notice that I gave only approximate prices on these products. *Continued on page 19*

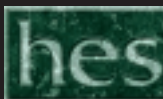
Major

MANUFACTURING, INC.

Installation Tools

The Professionals Choice

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4. The Detec DA4 door enunciator.

Continued from page 17

I did this for two reasons. One, by the time you read this some of those prices may have changed. The second reason is: I want you to sit down with a pencil and paper and take the cost figures for any one - or all - of those products, add to those figures, your normal percentage of mark-up, your service call fee and your installation charges, if any. Now, subtract your landed costs (product cost, plus shipping). The amount you have left is



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called "gross profit". How's that figure for a "non-traditional alternative" and less than an hour's work?

Where do you find prospects for door annunciator sales? I thought you'd never ask! Schools, churches, restaurants, dress shops, beauty shops, convenience stores, department stores, commercial buildings, real estate offices and more are all prospects for annunciator sales. What makes them even better prospects is the fact that they're already spending money with you for rekey work, locks, safe combination changes, door closer sales, panic hardware and their other security needs.

Surely, they're not going to quit doing business with you because you suggest an add-on

security sale while you're there; Are they? Especially, the sale of a device that will help them save moneys or increase their security! After all, they're already your customer. What better prospects for security products can you ask for?

Of course, you've got to keep your eyes and ears open for the next opportunity to sell an annunciator or exit alarm to your customer. If you hear them express a need or see that the need for an annunciator exists, don't be a ding-dong, and stand there with your hands behind your back or your head hangin' down. Jes' chime in and let the customer know that you can fill their need. If you do, you're likely to find that the next chimes you hear will be the sound of shekels jingling in your pocket!

For more information on the systems mentioned above, contact:

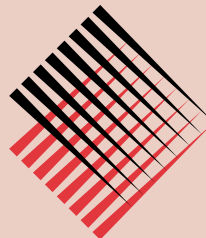
Audio Alert Systems of America at (800) 633-4656.

AMSECO at (800) 421-1096.

Rodann Electronics (800) 366-7010.

Detec Security Systems (800) 967-2446.

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GENERAL SECURITY

Test Article #94

Arrow J And K Interconnected Locks

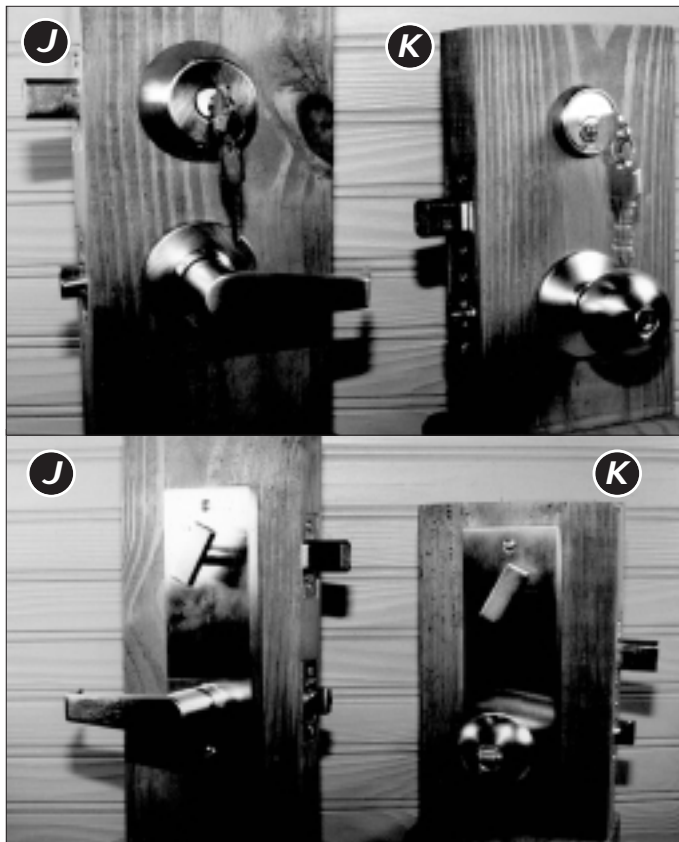
by Giles Kalvelage

Last month, we discussed the safety and convenience of interconnected locksets. For review, an interconnected lockset usually has a cylindrical lockset and a deadbolt. When the inside knob or lever is activated, the deadbolt will retract automatically. This lock provides deadbolt security, cylindrical lockset convenience, and meets residential and many commercial life safety codes. (Life safety codes are dependent on other factors such as occupancy load, type of occupancy, and linear and square footage to the exit discharge.)

This month's topic will highlight Arrow's J and K Series interconnected locksets. Arrow refers to these locksets as Multiple Security Double Locks. The J Series, utilizing mostly standard M-Series Lockset and E/D or IC single cylinder tubular deadbolt parts, uses two 2-1/8" cross bores at exactly 4" centers. (See photograph 1.) Virtually, the only differences between this lockset and an M Series lock and any of Arrow's tubular deadbolts are that they must be mounted exactly 4" apart, the interior lockset spindle is slightly of different design, and the escutcheon and mounting plate of the

M Series lockset along with the inside deadbolt thumbturn are replaced by a J Series inside back plate and interior escutcheon.

The interior escutcheon on both series of locks contains the hub, cam and gears necessary to retract the deadbolt when the inside knob is activated. The tailpiece of the upper cylinder mounts into the thumbturn of the interior escutcheon. When rotated, the tailpiece activates an upper gear that turns a cam near the center of the escutcheon, in turn, with the help of the cam driver on the ANSI K Series, activates or deactivates the deadbolt. On the 4" center J Series, no cam driver is



1. The exterior and interior views of the J and K series interconnected locksets.

needed. (See photograph 2.)

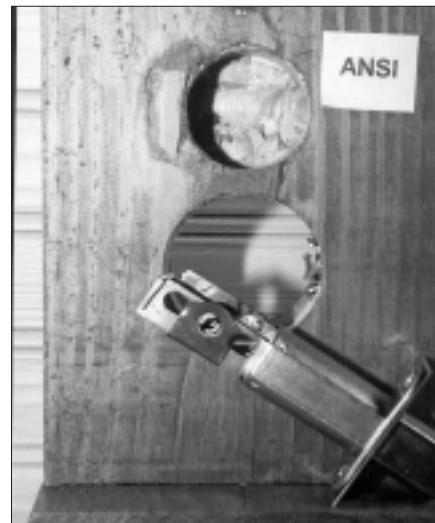
The K Series interconnected lockset is known as the ANSI multiple



2. Inside the escutcheon of the J and K (ANSI) series. Notice the cam driver on the K series.



3. The bolt and latch are adjacent on the K model.



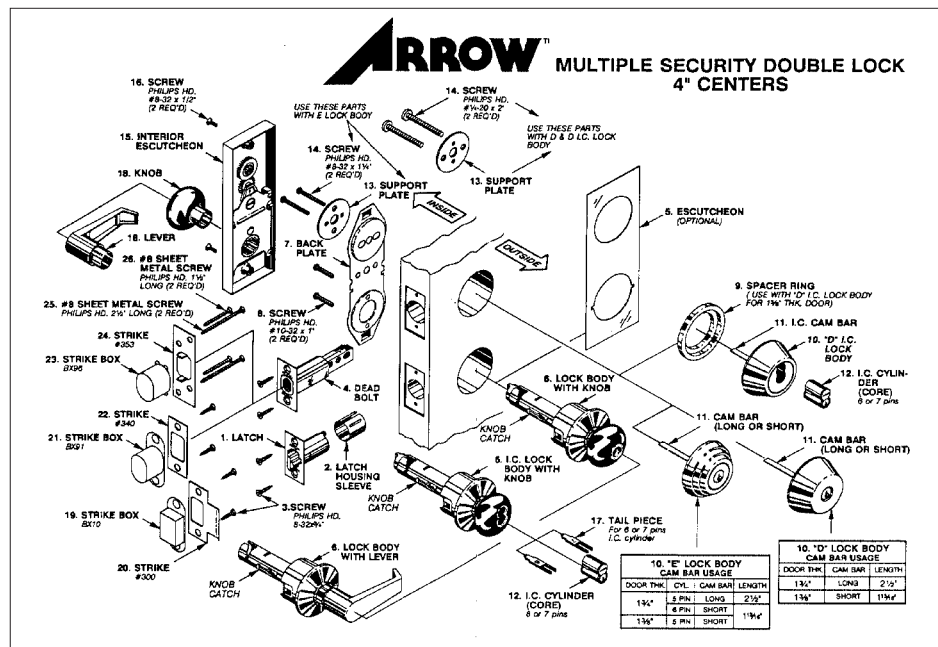
4. A guard clip deters the old "ice pick" attack.



security double lock. This is because both the deadbolt and latch will use an ANSI sized strike (4-7/8" X 1-1/4"). Use a bit of caution when ordering the K Series locks - while the lockset is field reversible, the strike is handed! The handing accommodates the variation in hole sizes required for the deadbolt and the spring or deadlatch.

On the ANSI lock, the latch and deadbolt are mounted adjacent to each other on the edge of the door. (See photograph 3.) The upper lock on the outside of the door is not a standard tubular deadbolt - but a rim cylinder. While the interior escutcheon is the same as the 4" center J Series, a cam driver must be inserted into the cam which throws and retracts the deadbolt. A guard clip is placed over the deadbolt to add a bit of security from "ice pick" attacks from the outside of the door. (See photograph 4.)

The ANSI K Series is used widely on metal doors and doors with metal frames - especially when the metal frame has an ANSI prep. Keep in mind, however, if the door and jamb have been pre-drilled for lockset only, the ANSI K Series strike will not line up with the latch from the original



5. Exploded view of the J series installation.

knobset. In this case, unless the door is being replaced by an uncut door, or a wrap around plate is used, it may be better to use the 4" center J Series lockset, modifying the jamb for a deadbolt hole. If the jamb is wooden and the existing strike is smaller than ANSI, the jamb can be easily modified to accept the new strike.

Installation

Illustration five shows an installation drawing for the 4" center J Series Double Locks.

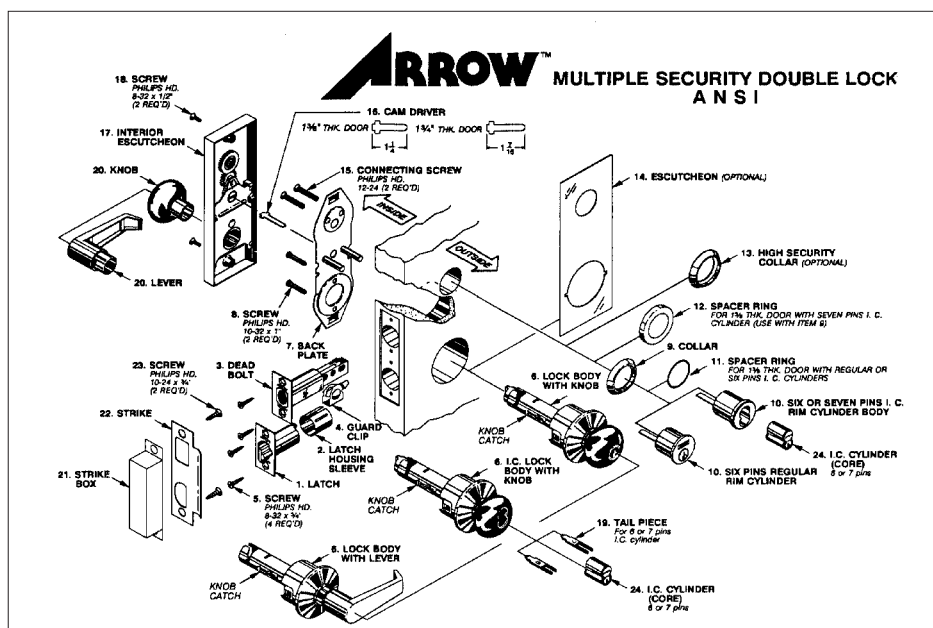
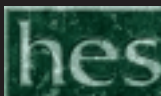
Illustration six shows an installation drawing for the ANSI K Series Double Locks.

The doors must be prepared

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6. Exploded view of the K series installation.

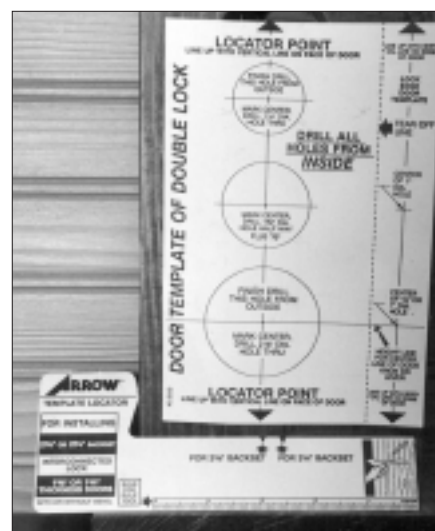
according for the type of lockset being installed. It is best to use the templates provided. Read the instructions provided on the templates. While they are not difficult, they are not the same as found in most cylindrical lockset boxes. (See photograph 7.) Using the inside of the door, it is necessary to find the horizontal line first, recommended to be 38" above the finished floor, then find the backset, marking it in two places to find your vertical line, then use the template to find your cross bore locations. If the jamb is already equipped with a strike, or has been "pre-prepped," use that height as an indicator on where to cut a new door. Using the same procedures, tear off the edge of the template to locate the edge bores.

The J Series uses a standard 2-1/8"

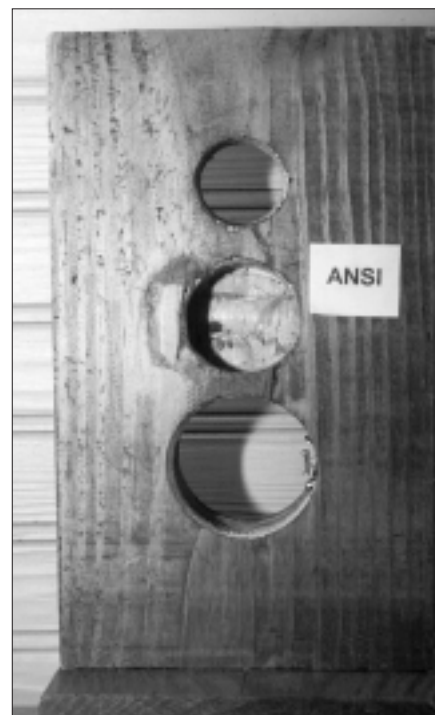
cross bores, exactly 4" on center. The edge bores will be 1" for the deadbolt, 1" or 7/8" for the latch.

The ANSI K Series uses a series of cross bores. The lower, or lockset cross bore will be 2-1/8" diameter through the door. The upper hole, located at 4-1/4" center to center above the lockset cross bore, is 1-1/4" in diameter through the door. This hole is for the rim cylinder. The middle hole, located 2-1/4" center to center above the lockset cross bore, does not go entirely through the door! This is important.

Drill 1-5/8" diameter hole only 1/2" deeper than half way through the door. (See photograph 8.) For 1-3/4" doors, this is 1-3/8", for 1-3/8" doors this is only 1-3/16". This does not leave much door material remaining on the outside to cover the hole: 3/8"



7. The supplied template.



8. The center hole of the K series lock does not go all the way through the door.



9. The photograph above illustrates the differences between the H and J series door preps and mounting plates.



10. Back plates.



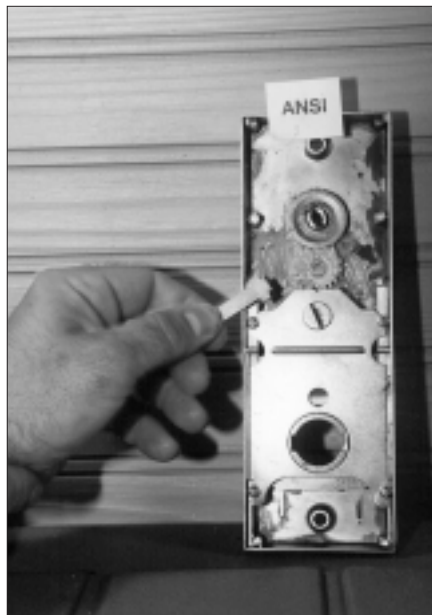
of material on an 1-3/4" door, 3/16" on a 1-3/8" door. Mark your drill bit with tape to avoid drilling too deeply. If your drill bit is tipped with an auger, do not forget to calculate the auger tip into your penetration. Should the door be drilled too deeply, the installation requires the use of the optional exterior escutcheon - available, but not provided.

The edge bores, though located only 2-1/4" apart will be 1" for the deadbolt hole, 7/8" or 1" for the latch hole.

After the door is prepared, install the latch and deadbolt assemblies. On the ANSI K Series, make sure the guard clip has been placed on the deadbolt. The full side should be facing toward the outside of the door.

If the inside knob or lever is on the spindle, depress the spring catch and remove the inside knob. Adjust the outer rose to 1/8" from the housing for an 1-3/8" thick door, 5/16" for a 1-3/4" door. The standard multiple security double locks are not recommended for doors thicker than 1-3/4".

Insert the lockset through the bottom hole from the outside of the



11. Install the appropriate cam driver onto the K series.

door. As with most Grade 2 cylindrical locksets, make sure that the housing fits properly around the latch. Secure the lockset in place with the back plate and two mounting screws. Note that the back plate for the ANSI K Series has two posts not found on the J Series. These posts mount into the

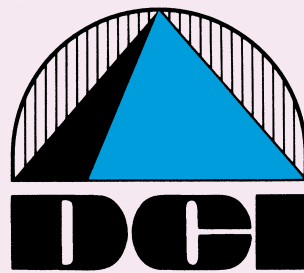


12. Inside the escutcheon plate.

deadbolt to secure it from pulling from the door during an attack. This is not required on the J Series as the deadbolt cylinder mounting screws provide the same service. (See photograph 9.)

Insert the rim cylinder or the

Continued on page 115



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AUTOMOTIVE SECURITY

Test Article #95

The 1994 Nissan Altima



1. The 1994 Nissan Altima.

by Michael Hyde

This month we take a look at the Nissan Altima. (See photograph 1.) The Altima is a popular selling car for the price range of \$13,000 to 19,000. The car is equipped with dual airbags and uses the standard Nissan keyway. This car, as with most

Japanese cars, utilizes one master key for all locks. The valet key is simply a thicker key that will not enter the trunk or glove box lock. The keying kit from ASP is A-16-100.

Opening

The car is easily opened by

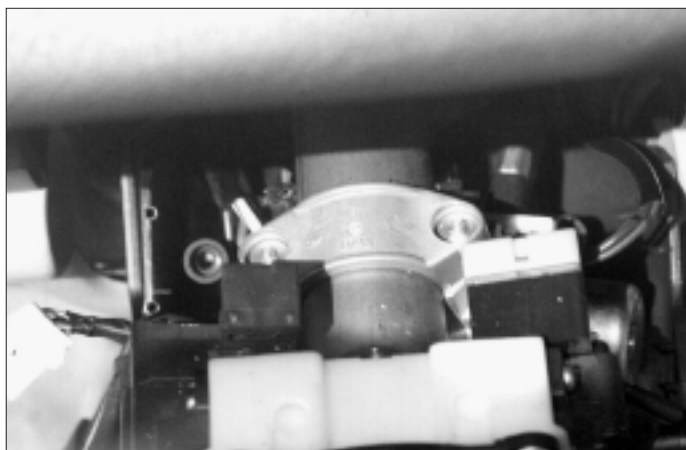
inserting an "Under The Window Tool" or "Caddy Killer" on the passenger door. Insert the tool as far forward as possible on the door and position the tool to hit the power door lock button, to unlock the door. (See photograph 2.)



2. Use an Under The Window tool to open the vehicle.



3. Removing the two piece clam shell shroud exposes the lock.



4. The lock must be removed for servicing.

All Altima's have a manual lever for releasing the trunk lid.

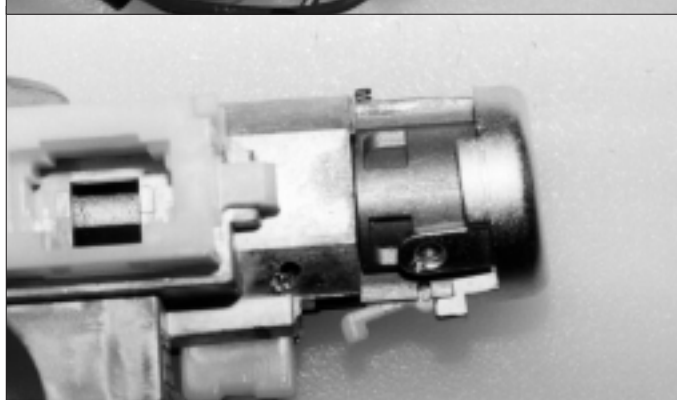
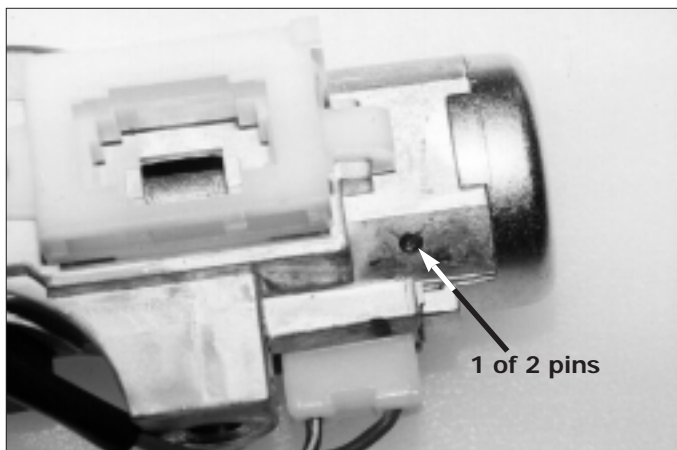
Ignition

The ignition lock can be serviced without having to remove the steering wheel and airbag. First, remove the little plastic trim piece around the ignition cylinder face. Remove the four screws that hold the plastic "clam-shell" together. Unsnap the two piece's and remove. (See photograph 3.)

The complete ignition assembly

must be removed to service it. The assembly is held onto the column by two shear-head bolts. Remove the bolts and disconnect the necessary harnesses to release the lock. (See photograph 4.)

To disassemble the ignition you will have to remove the

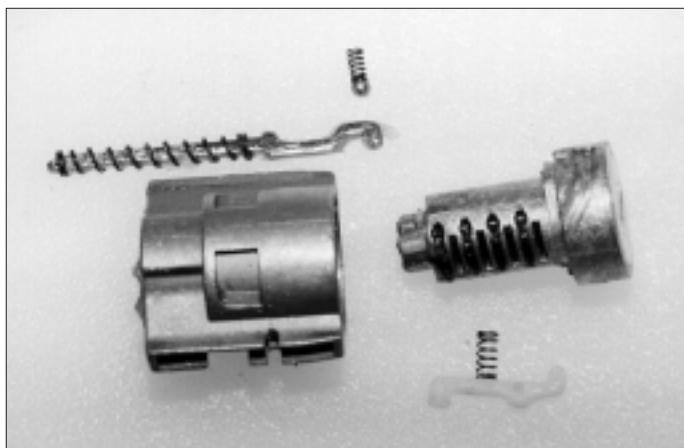


5. Drill and pry out the two roll pins to remove the lock cylinder. Be careful of flying springs. They cannot be lost.

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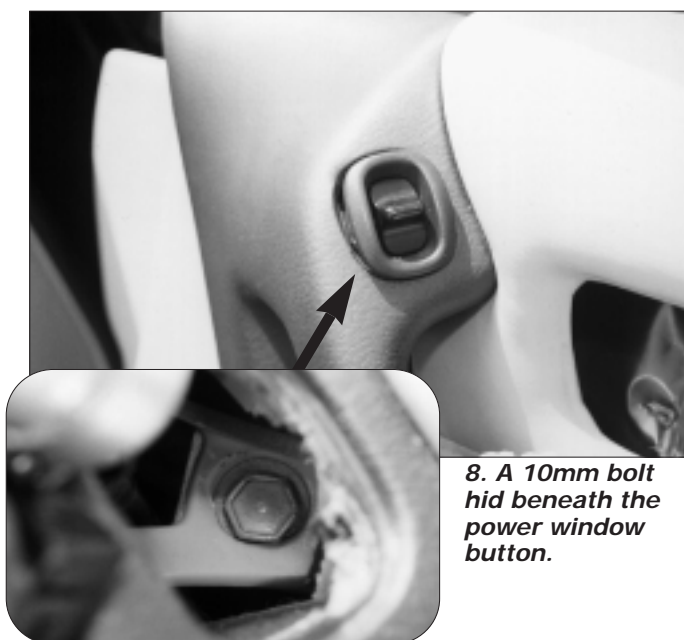
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6. The disassembled lock.



7. Make sure and remove all of the fasteners before removing this door panel.



8. A 10mm bolt hid beneath the power window button.



9. Unsnap and remove the handle.



10. Release and remove the anti-theft support arm and lock. The arm is held on using a 10mm nut. The lock is held in place using a horseshoe clip.

two solid roll pins that hold the cylinder in the housing. Drill a 7/64" hole next to each pin and pry the pin out. (See photograph 5.)

Once you have removed both pins, you can now pull

the cylinder and housing face off of the assembly. When sliding the cylinder out be careful as there is a spring loaded activator on each side of the cylinder. Slide the housing face off the cylinder to disassemble the cylinder plug. There are two small detent activators on each side of the cylinder plug itself. Be careful and take your time to remember where each piece fits into. (See photograph 6.)



11. The door lock disassembled. If necessary, the tumblers can be read through the drain hole on the bottom of the cylinder.



12. A horseshoe clip holds the trunk lock in place.

Door Lock

For this article we are using the passenger door. The door lock cylinder is separate from the door handle. To remove the door cylinder you must remove the door panel. The panel has three screws on the bottom that need to be removed, and one trim clip on the right side. There is also one 10mm bolt located below the armrest that must be removed. (See photograph 7.)

Next unsnap the power window button and behind it you will need to

remove the 10mm bolt. (See photograph 8.)

The trim piece around the inside handle release will unsnap as it is not held on with a screw. (See photograph 9.)

Once the trim panel is removed you can see the



13. Remove the rubber gasket from the lock. Then use a small screw driver to unsnap the face cap tabs. The lock can now be disassembled.

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linkage rods and bell crank. To remove the lock cylinder you must remove the 10mm nut that holds in the anti-theft support arm. The nut is easily accessible through the hole in the sheet metal. The cylinder is held in place with a standard type of horseshoe clip. (See photograph 10.)

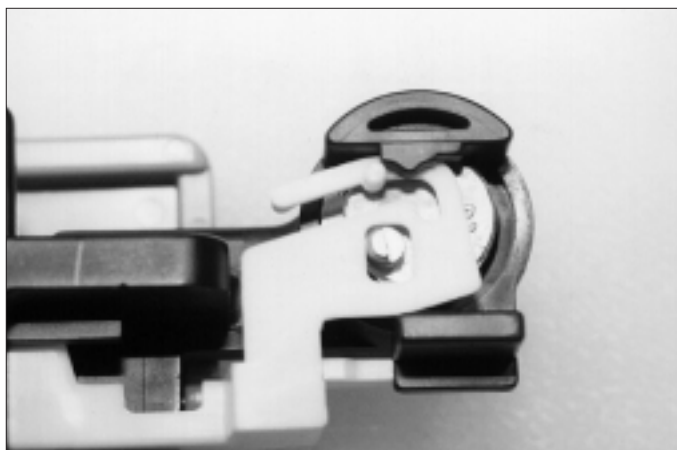
The lock cylinder has a large drain hole area to see the tumblers through. The lock can be disassembled by removing the "E" clip on the tailpiece and by removing the face-cap. The replacement cap is ASP #P-16-205. The lock contains all eight wafer tumblers needed for a master key. (See photograph 11.)

Trunk Lock

The trunk lock has a name plate cover over it when not in use, the cover slides out of the way to insert the key. The lock is held in place by a horseshoe style clip and is accessible from inside the trunk. (See photograph 12.)

Once the lock assembly is out of the car you can see about half the wafers through the drain hole. The cylinder plug has a black plastic trim piece in the front of the lock assembly.

Remove the rubber gasket on the back side of the lock and use a small screwdriver to gently unsnap the trim piece legs. The trunk lock contains all eight wafer tumblers to make a master



14. Hit this retainer to remove the glove box plug.

key. (See photograph 13.)

Glove Box Lock

The glove box lock is time consuming to disassemble. You must remove the 15 screws on the back side of the glove box door in order to get to the lock cylinder. Once the lock assembly is removed from the door, you will be able to see the retaining tumbler on the backside of the lock. Push in on the retaining tumbler and slide the cylinder plug out. The plug has chambers for all eight tumblers but is only loaded with 4 tumblers. (See photograph 14.)

First Key Generation

In 1993, Nissan stopped placing the key code on the door lock tailpiece and no longer has a key code sticker in the glove box. The fastest way to make a key to this car is to open the trunk, via the lever release, and remove the trunk lock. Disassemble the lock and decode the wafer tumblers to make a master key. The doors, trunk and ignition locks all contains the same wafers, in the same positions. Using this method, average time for first key is 15 minutes. **TNL**

Specifications:

Code Series: X 1-8000
 Key Blanks:
 Iico X123/DA25, X124/DA28, X197/DA30, X210/DA31
 Silca DAT13, DAT14, DAT15, NSN11
 HPC Card: XF67
 MACS: 2
 Shoulder to center of first cut: .118"
 Cut to Cut: .085"
 Depths: 1=.276", 2=.256", 3=.236", 4=.217"
 Tumbler Placement:

1	2	3	4	5	6	7	8	
x	x	x	x	x	x	x	x	Ignition, Doors, Trunk
x	x	x	x					Glove Box

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ELECTRONIC SECURITY

Test Article #96

CCTV - The Site Survey

by Charles Stephenson

The basics of CCTV have been presented over the past few months, and hopefully you have installed a demonstration system in your own show room. With some good fortune and salesmanship you probably have been invited to visit a home or business for the purpose of preparing an estimate for a CCTV surveillance system.

However, the book cannot be closed without the final chapter. Starting with the first article, we have progressed from learning the terminology, to the components, to an installation. To complete our section on CCTV, I will leave you with an easy and effective method for designing a system for your customer.

To aid in the process, I have prepared a site survey which will help guide you through what questions to ask during your first few visits. Answering these questions in advance will keep you from wasting valuable time and money later, backtracking to gather missing information. In time, selling CCTV systems will become second nature as soon as you master the key questions the prospect must answer. The following is a list of questions and considerations needed to complete your site survey.

Before beginning, however, establish the security objectives and budget as early as possible. This will set the parameters or boundaries for answering the site survey questions. For example, a small business wishing a CCTV system may desire a large screen color monitor and multiplexer. However, if they do not lend themselves towards the application and/or they are beyond the customer's budget, it is not reasonable to include them in your proposal.

Next, do a site inspection, carefully graphing or sketching each area to be covered. Jot down notes on possible ways to run the wire. Include measurements of the wire runs and each area to be covered by a camera. Check for possible camera locations,

noting exactly what it is the customer wants viewed. Look for obstructions that may have to be moved or require alternative camera positions. Consider where you will draw power from, making sure that it is not on a switched circuit. In fact, look for several alternate power sources, as it's always better to plan ahead; and physically check that each source is viable. All in all, not only are your skills as a security professional being tested, so is your skill at determining what it is your customer is really trying to accomplish within the boundaries they have provided.

1. What does your prospect want to see on the monitor(s)?

- Prospective customers will not be able to see everything—nor can they afford to. Your goal, then, is to develop a list of priorities. Remember, the price of the system escalates rapidly when more than four cameras are required.

- Will a switcher be needed? If so, what kind?

- Is a multiplexer required?

2. How much visual detail will be required?

- For example, is it necessary to be able to read a license plate (numbers are 2 1/2" tall) or to see items being picked up? Is color needed?

3. Where are the cameras to be located?

- If located inside, will a covert camera be necessary? Are security housings needed?

- If outside installation is required, the camera may need a housing, with heater, blower, transformer, and mounting bracket.

- A sunshield may be required if the camera is mounted in direct sunlight.

- Consider the ambient light conditions, like parking lot lights, street lights, rising and setting sun, or lights dimmed

after hours. Consider the need for an auto iris lens.

- Will a pan/tilt mechanism be required?

- Will 4 cameras cover the areas to be viewed if you are selling a basic kit system?

- Will the prospect want to add more cameras in the near future?

4. What size (mm) lens will each location require?

- Determine the height and width of the subject area to be viewed and the distance from the camera. Refer to the lens chart for the proper lens size. NOTE: A larger format lens will work on a smaller format camera, but not vice versa.

5. Explain that some cameras provide one-way audio (optional on covert models).

- Does the prospect want two-way audio capability?

6. Will the prospect require alarm inputs such as passive infrared alarm, glass breakage, hold-up switch, etc.?

7. Where will the monitor(s) be located?

- This factor determines the length of cable needed for each camera.

- Does the prospect need a second monitor or a hard-wired remote control of the master monitor.

8. Does the prospect need to record the camera(s)?

- If yes, how much of the information do they need recorded?

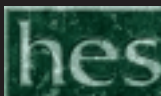
- Does the prospect only need an event recorder or will a time-lapse VCR be required?

9. Ask the prospect for a copy of their blueprints if available.

- Special lens, such as a zoom.

- Wire routing aesthetics.

Continued on page 115



BEGINNER'S CORNER

Basic Locksmith Tools

Thanks to those that have written me by E Mail. This is really a fast way to communicate. My address is Leangene@aol.com. There have been some inquiries as to what are some of the basic tools needed by a beginning locksmith. And on the internet there have been some interesting postings by people asking how to make a lock pick. Now I'm wondering why anyone would want to make a lock pick unless they have ulterior motives. A bona fide locksmith would purchase a lock pick set and it would be better than a home made pick.



by Eugene Gentry

As for basic tools, you do collect them as you progress in locksmithing. Some times you do not know exactly what you need until a certain job comes up and you find you are lacking a particular tool. This is the time to buy that tool so that you are ready next time.

A new locksmith tends to buy tools that he does not need and will never use. For instance, I used a standard small vice grips for impressing. Then I purchased an impressing handle which was supposed to help me do a better, faster job. Unfortunately, I was used to the feel of the small vice grip and never took the time to get used to the handle. So, instead I purchased an impressing vice grip that holds the key blank better. The handle, as good as it may be for others, is now sitting in a drawer. Also, I've been tempted to buy a computer designed pick set, but I only use three different picks in my set now.

Let's start at the beginning. A proper tool box is needed to carry your tools, one that will keep your tools organized so you can find them



1. A good tool box is necessary for carrying and organizing tools.

fast. (See photograph 1.) A plastic fish box with trays works well as a starter box. My first box had two trays with compartments for the smaller tools or supplies.

Then I went to a slightly larger box purchased at a home improvement store that had six trays with separate compartments. This has been a main stay for a long time.

Here are some suggestions for other tools and supplies that may be useful to carry in your tool box: (See photograph 2.)

- Plug followers (various sizes)
- Weiser shim pick
- Punch



2. Tools are a locksmith's identity. Here are various tools that I keep in box. Included are various picks, broken key pullers, and try out keys.



- Cylinder cap remover (Schlage/Weiser)
- Key blank decoders(various)
- Pen flash light
- Magnetic pick up tool
- Impressioning file plus various small files
- Retaining ring pliers
- Kwikset cylinder removal tool
- Schlage spanner wrench
- Pieces of spring steel to make springs
- Lock scope(for reading wafers)
- Plug spinner (When you pick the lock backwards)
- Broken key removal set
- Two dental picks (For broken keys)
- Pick set
- Dial calipers (.001 graduations)
- Tweezers
- Small flat and Phillips screw drivers
- Dust cover tool (holds gate open

on auto locks so you can pick or remove broken keys)

- Shims
- Lever lock pick set
- Warded padlock pick set
- Assorted lock bolts, screws, tail pieces
- In the bottom or larger compartment:
- Pick gun
- Small hammer
- Needle nose pliers
- Clip removal tool (for car door panels)
- Clip removal tool (for door handle and window)
- Small Dremal (battery power)
- Impressioning vice grips

These are many of the tools you will find that you need for general locksmithing that you can carry in one box. You will need another tool box to carry your large tools such as hammer, larger screw

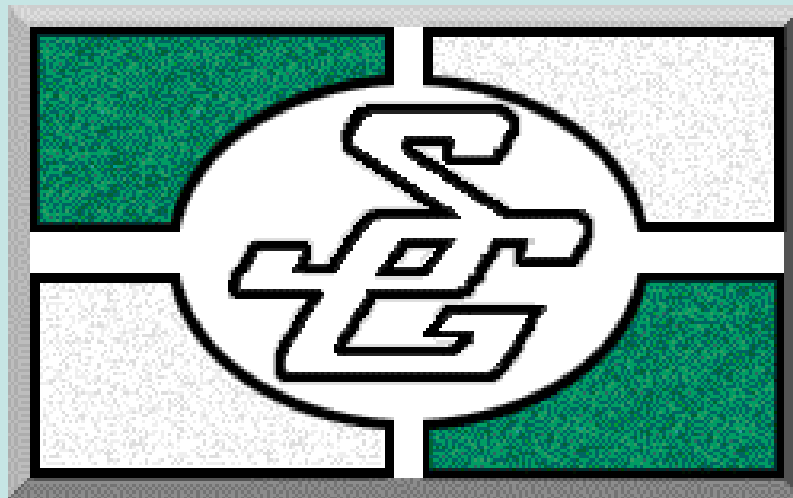


3. Other tools that are useful and can be carried in another box include a caliper, otoscope, moto tool, and a pen light.

drivers, drill, drill bits, chisels and etc. (See photograph 3.)

If you plan on doing automotive lock work or safe work you will need different tools for these specialties.

Lastly, one item that comes in handy on occasion is a bolt cutter. These come in various sizes, but even the smallest is too large to be carried in a tool box. **IN!**



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Cover Feature

HIGH REV CAMLO

by Tom Seroogy

My day's going kinda smooth. I finish up a couple of Medeco rekeys, install a Simplex push button lock, and repair an Adams Rite MS bolt on the front door of my favorite account - Jorgensen Steel.

I begin packing up my tools and make ready to leave. Notice I say, "make ready to leave." I don't actually leave yet. You see, this is just phase one of a three phase leaving process. It took me five years to develop, but at Jorgensen I now have it down pat.

The typical sequence of events is as follows: One, I pack up and start heading out the door. Two, the plant supervisor catches me and says, "Before you go, I just remembered one more thing..." So, I unpack and start all over. Three, I finish the job, pack up and leave before they see me for the next, "Before you go, I just remembered..."

Knowing how ingrained this pattern is at most large companies, especially Jorgensen, I take advantage of it.

About 1/2 to 1 hour before I really need to leave I pack up all but one tool box and place them in a convenient, out of sight, location (closet, hallway, office or such), typically near the next work location. Then I pack up the last tool box and head out the door, making sure to catch the eye of the plant supervisor. Needless to say, he flags me back and has more work that he "just remembered." After receiving the additional work, I simply continue working where I last left off.

I'm sure this scenario is not new to many of you, except maybe those of you just starting out. And I'm also quite certain that the last little bit of work that he "just remembered," isn't going to be pleasant. In fact, for me, it was always - "Can you get a key for that desk?"

Of course, pointed out is the only desk of 250 that doesn't have a lock in it. So, what do I do? Simple. I've made cam and cabinet lock

1. Various lock kits are available through distributors for Hon and Anderson Hickey file cabinets. These samples were provided by H. Hoffman Co. of Chicago, Illinois.

installations a normal part of my visit to Jorgensen by carrying a ready supply of cam, cabinet and file cabinet locks. The effect has been excellent. I can do the job while I'm already there, I don't have to make a small order for only one or two desk locks, I make plenty of money and, best of all, I enjoy it. Man, there's nothing like revving up business with a few new cam lock installations.

Now, I know most of you are saying, "He's nuts."

That's okay, my wife and kids have known it for years. Besides, I'd rather be a wealthy nut than a poor sour grape.

Before we go on, let's make some quick observations about putting in desk and cabinets locks:

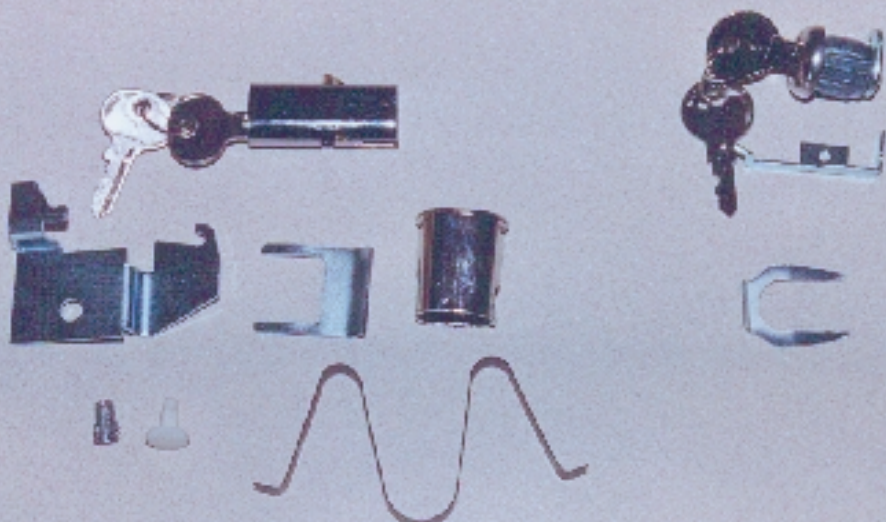
First, if they say they can - they won't.

Second, if they say they do - they don't.

Third, if they can and do - it's probably because you did your job well.

For many of us, desk/cabinet lock installation is a time consuming and frustrating job. Matching lock with application is difficult. By the time the job is complete we often find ourselves in the role of salesman, installer and manufacturer, losing money the whole way.

The fact of the matter is, easy and profitable cabinet lock installation is directly dependent on your product knowledge and application skills. Unfortunately, there isn't a set of guidelines one can write for applications. Each one varies. Some cabinets have rabbeted doors, others are surface,





LOCK PROFITS

Cabinet lock installation is normally a money losing proposition - Unless prepared!

others are flush, some are wood, some are metal, some offer a decent strike or catch for the lock, others require that one be manufactured, etc.

Evaluating the application is determined by your skill and experience as a locksmith. Product knowledge, however, is a matter of reviewing manufacturer catalogues and speaking with their distributors, as well as a little trial and error.

Single Drawer Vs. Locking System

Because many cabinets allow locking and unlocking of all drawers from one lock, customers often assume that by having you put in one lock, the whole desk, file cabinet or storage cabinet will lock.

Therefore, before starting, check to see if there is existing lock linkage or bars. Many file cabinets come with locking bars less the lock hardware. The lock hardware can often be purchased aftermarket in a kit form.

Hon cabinets (and many private label brand cabinets), for example, often include the locking bar but not the locking hardware. OEM for the Hon cabinet is ESP, and while ESP's contract does not allow them to distribute the locking hardware, they do provide a large variety of other file cabinet locks. If needing a lock hardware kit for the Hon cabinet, Hudson does provide a lock kit available through most major lock distributors. (See photograph 1.)

If the customer wants an entire desk or cabinet to lock using one lock and existing lock linkage and hardware does not exist, it may be necessary to provide a lock on each

drawer. If the customer is not keen on having a separate lock for each drawer, both ESP and National Cabinet Lock offer the locksmith central gang desk locking systems for wood cabinet applications. These are very effective and attractive for locksmiths with decent carpentry skills. (See photograph 2.)

Keying

Another consideration before deciding on a lock is keying requirements. Does the customer want the system integrated with an existing keying system, high security, keyed alike or keyed different.

While most cam locks are wafer tumbler, a few manufacturers, like National Cabinet Lock, have a series of pin tumbler cam locks. Medeco and ASSA offer their high security cam locks for a variety of applications. Fort and Chicago offer tubular lock systems and tubular variations to achieve high security and key control. (See photograph 3.)

Schlage offers a desk lock incorporating Schlage 6-pin knob cylinders. This, of course, allows you to key or master key the desk locks to any existing Schlage keying system, including Primus. (See the Schlage desk lock article on page 44.)

To key into many existing lock systems, Fort now offers a cam lock with a universal keyway.

Specifications

Probably the biggest problem in choosing the proper cabinet lock is knowing the measurements and peculiarities of a lock that effect its application. Following are the lock specifications and characteristics that will help determine the viability of their use in an application.

Cam Locks

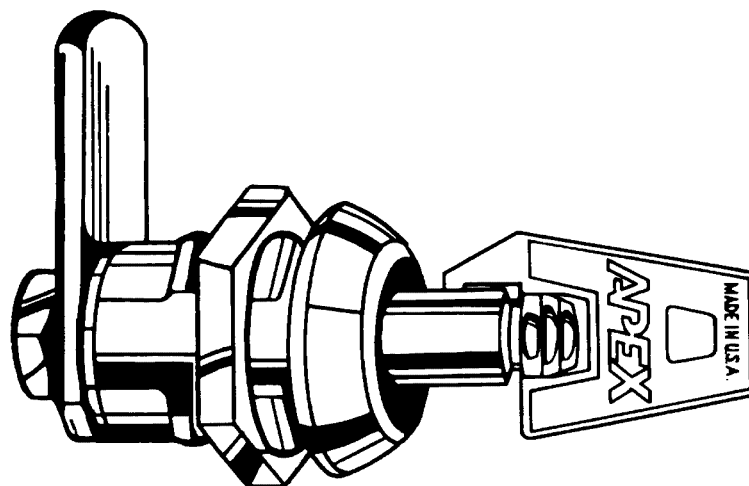
Cam Locks are typically wafer tumbler, but pin tumbler versions are available. High security versions for both pick resistance and key control are also available. Cam locks can be keyed differently or keyed alike depending on the application requirements. Cam locks also come in key retained

2. Where multiple drawer locking is required, try a central gang locking system such as this one by ESP.





3. There's never a lack of keying possibilities. Pictured from left to right is Medeco (left), the Fort Lock high security Apex system (center), and Chicago's System 64 tubular lock system.



and non-key retained versions.

Three factors effect cam lock installation: Length, cam style and cam rotation.

The cam lock length is determined by the thickness of the material it's being installed into and the position of the strike or latching area. Cam locks typically come in lengths of 5/8", 7/8", 1-1/8", and 1-1/2", although this varies per the manufacturer.

While there isn't a "standard" for listing a cam lock's

length, the measurement is generally measured as the distance between the back of the face cap to the inside of the cam. Unfortunately, manufacturers do vary in their method for determining lock length, and this needs to be considered and confirmed before choosing a lock. Always refer to a manufacturers' catalog for exact length specifications, and don't forget to include any bezels or trim plates that are often included with the package. (See illustration 4.)



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applications, because the mounting hole is round, a "Double D" spur washer should always be used when mounting the lock. For drawers and doors made of sheet steel, a "Double D" punch can be used. (See Steve Gebbia's article on page 40.)

It should be noted that many manufacturers carry specialty cam locks. Fort, for example has a mini cam lock that is just 7/16" in diameter, and about the size of an olive (I'm eating lunch). (See photograph 5.) While there is always a lock for an application, without doing the research and knowing what is available, many applications seem insurmountable and unprofitable.

(It should be noted that mailbox locks are cam locks. Many manufacturers offer mailbox locks, including packages with multiple style tailpieces.)

Desk/Drawer Locks

Desk and drawer locks are another common lock style lock. Generally these locks have a simple, horizontal or vertical

sliding bar that moves into a strike area on the desk or cabinet. Most of these locks are held in place by either two or four flat head wood screws (obviously for wood desk applications). When retrofitting an existing or missing lock, make sure that the center-to-center dimensions for the mounting screws are the same.

The standard mounting hole size for these locks is 7/8" diameter, although, this too, will vary slightly by manufacturer. The biggest factor in determining the proper desk lock is simply how long the barrel or cylinder must be. This, of course, is determined by the thickness of the drawer/door on which it is being installed. The most common length is 7/8" or 15/16". (See photograph 6.)

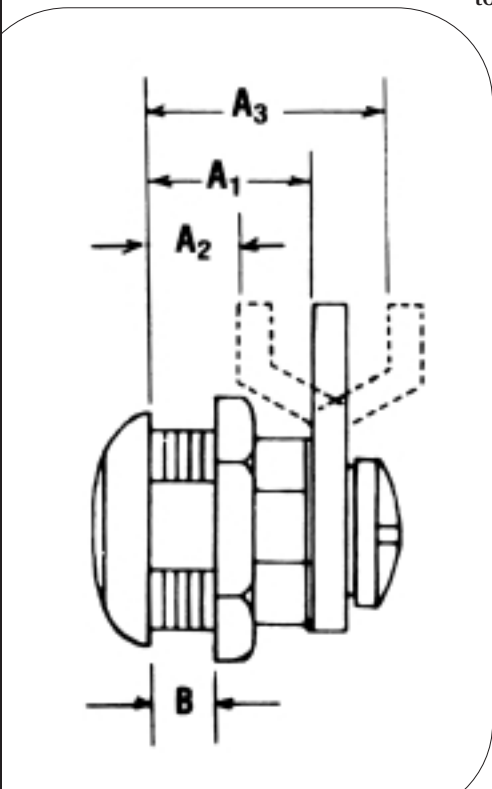
Also varying with each manufacturer is the length of the bolt. If a bolt is too long, it may not be able to lock the drawer without first modifying the existing strike area. If the bolt is too short, it may not reach the strike area.

A nice option offered by Schlage in the last year is their

Cam styles will also effect application. Most manufacturers include a selection of tailpieces to accommodate most applications. Common are the straight tailpiece, an offset tailpiece and a 90° tailpiece. Many manufactures also offer hook and specialty bent tailpieces. Again, check manufacturer catalogs for correct application.

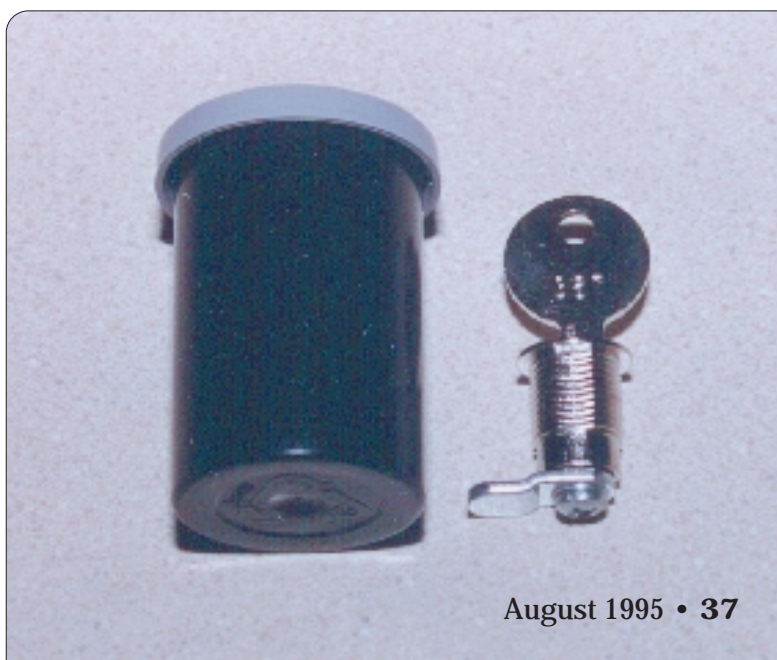
Finally, cam rotation is important. When installing the lock the cam must have room to turn behind the strike when locked, and move out of the way when unlocked. In some cases it is desired that the cam turn a full 180°, while in others a 90° turn is sufficient. Most manufacturers include cam stops for both applications.

Cam locks are generally mounted in wood or metal drawers or doors. For most wood installations, a 3/4" hole is required. The sides of the cam lock are squared off. This is to prevent the lock from being easily turned without a key, deterring forcible entry. In wood



4. Various manufacturers use slightly different ways to measure the length of a cam lock. All-Lock uses this illustration for length specifications. Notice that the A dimension varies by the type of cam used. Dimension B is the maximum material thickness the lock can accommodate.

5. Fort Lock's mini cam is just one example of the cam lock variety available to the locksmith.





6. Drawer and door lock by Schlage and ESP.

cylinder is locked in place by a spring loaded retainer.

When asked to work on a file cabinet, always check to make sure that all the locking mechanisms are available. As mentioned earlier, lock kits for the Hon as well as some Anderson Hickey cabinets are available from lock distributors. If parts such as the locking bar are missing, however, even the best kit is useless.

If only a plug is needed, aside from purchasing manufacture brands such as Chicago, Yale, Illinois and S&G, aftermarket locks are available. ESP has a selection of file cabinet locks available. (See Photograph 7.)

new line of CL series drawer locks. Offering a few configurations for the lock bar lengths, the biggest advantage in the CL series is the ability to key the lock into an existing Schlage lock system. This provides opportunity for including a desk in a master key system, offering a single key office to your customer, and even allows use of Schlage's high security Primus cylinder. (At this point it is unknown whether other aftermarket key-in-knob cylinders will fit into CL series lock, but the possibility is there!)

File Cabinets

There are several style file cabinet locks, although the one locksmiths are most familiar with is the pin tumbler plunger type. Typically found at the top right hand corner of the cabinet, these locks are connected to a cam and locking bar. When depressed, the cam rotates and lifts the locking bar that engages a strike mechanism on each drawer. The

When measuring for the right lock using an aftermarket lock, these specifications need to be considered: Length, retainer shape and position, cam attachment method.

For the sake of simplicity, there are really only two lengths to consider, short (approximately 1-3/4") and long (approximately 2"). If either of these measurements will not do, better to purchase the OEM lock.

There are two retainer styles as well: a small, round retainer and a long, rectangular retainer. Measuring from the front of the lock, the retainer is 27/32" (approximately 7/8") for the short version and 1-3/32" (approximately 1-1/16") for the long. Make sure that the retainer is the correct shape and the correct distance from the front of the lock (or back) to properly engage its locking hole.

Finally, there are also two ways that the lock engages or is attached to the cam. In one version, the cam is fastened via screw to the back of the lock. The second version uses a roll pin. In either case, make sure that the cam is attached securely and moves freely without binding when the lock is locked and unlocked.

Now with that little bit of ammunition, start collecting catalogs from the various lock manufacturers. Study them and learn to apply them to the desks, drawers and cabinets you see every day. You will also notice these manufacturers have other locks available: i.e. vending machine, mailbox, sliding panel window, T and Lever handles, etc. Soon, selecting and installing them will become second nature and serve as another source of income. **TNL**



7. Samples of available file cabinet locks provided by ESP.

Cover
Feature



by
Steve
Gebbia

Installing a cam lock in a desk drawer is a rather simple task. Keeping the lock from rotating once installed, however, can create problems. If the lock is not held securely, the entire lock can be rotated to unlock the drawer.

PUNCH UP YOUR INSTALLATIONS

Using HPC's Double-D punch for fast, attractive cam lock installation.



1. Select the spot on the drawer where the lock is to be installed.

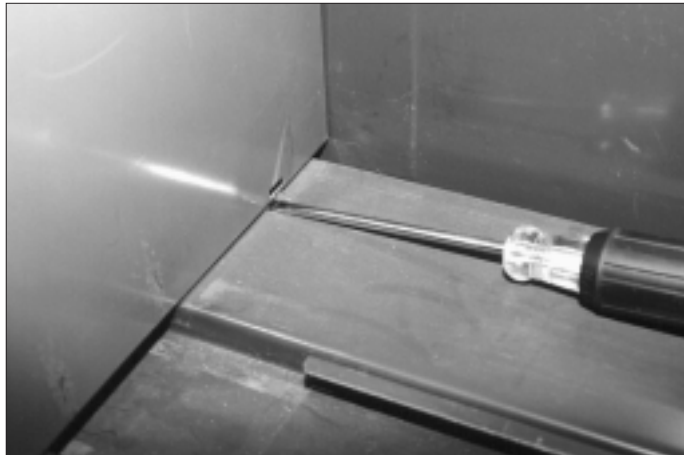


2. Drill a pilot hole and enlarge it to 1/2".



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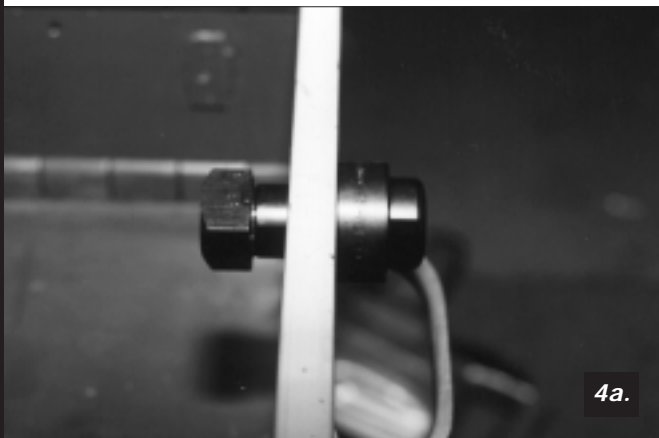
3. Remove the drawer's inside panel if one exists.

As a professional locksmith, you have at your disposal an arsenal of solutions to remedy any difficulties you may encounter. In the case of cam locks, you have a few tricks up your sleeve. In a wood drawer, it is relatively easy to prevent the lock from rotating. Simply place a spur washer under the installation nut. This style of washer is included with most cam locks and will dig into the wood and prevent the lock from rotating. Unfortunately, these won't work on steel drawers.

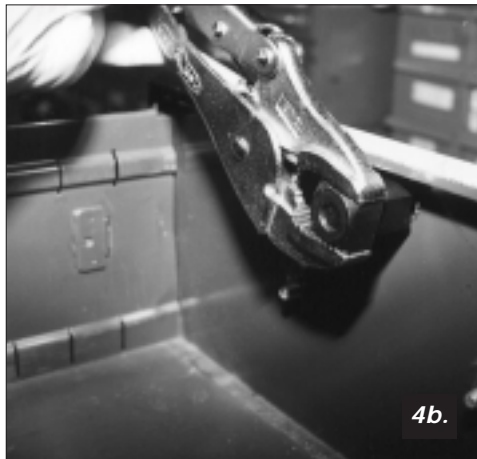
On a steel drawer, the best solution is to provide a hole with flat sides to hold the lock securely. But how do you drill a hole with flat sides? You don't. Do as the desk manufacturers do - punch it out. The easiest and cleanest way to make any shape opening in steel is with a press or a punch. Since purchasing a huge steel press is not financially acceptable, HPC Inc. has designed a small, easy to use punch set, the HDPS-4, a Double-D style punch and die.

Using the tool couldn't be easier. To start, determine where you want to place the lock. Of course, make sure you have some sort of support or strike above the drawer to accept the cam. (See photograph 1.) Not all desks have dividers between the drawers. The depth of this divider will determine the size of cam lock you will need. By using the proper size lock, you probably won't need to provide a slot for the cam to lock into.

Drill a pilot hole at this location and enlarge it to 1/2". (See photograph 2.) Most desk drawers will have an inner trim panel. Remove this panel after drilling your 1/2" hole through both panels. This will make your job easier and

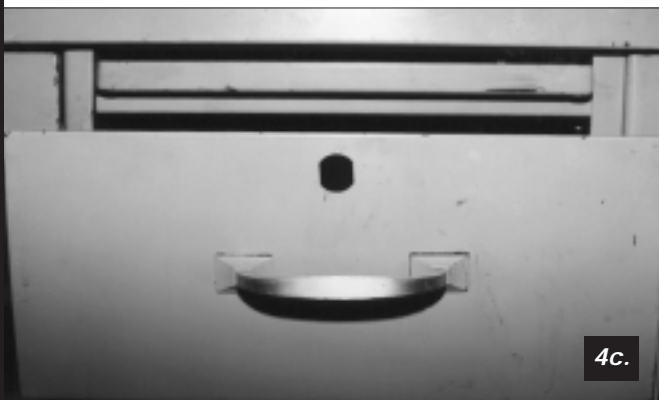


4a.



4a. Attach the punch.
4b. Tighten until the metal has been punched, and ...
4c. voila the Double-D, just right for the lock.

4b.



4c.

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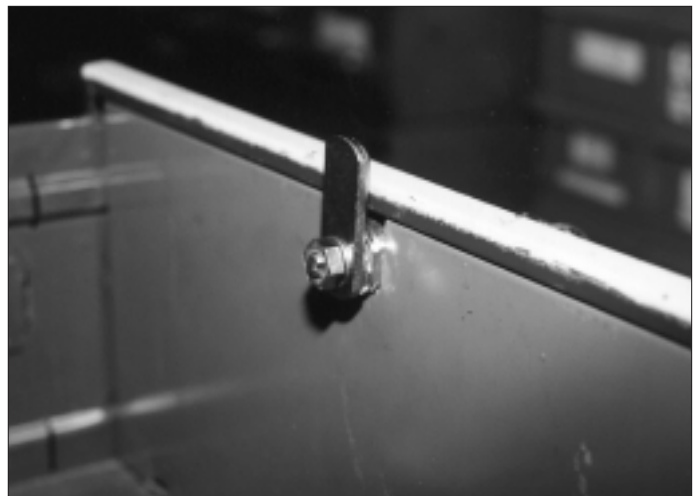


5. Install the lock and the inner panel.

your installation more secure and attractive. Most trim panels are snapped in place near the bottom. Some have screws that secure them in place. (See photograph 3.)

Next, assemble the tool through the hole in the drawer face. Making sure to keep the tool straight, tighten the nut until the punch 'pops' through the steel. Be sure to keep the threads of the tool lubricated. Repeat the procedure for the inner panel. (See photograph sequence 4.)

Assemble the lock to the outer skin of the drawer as usual, but don't install the stop washer or cam yet. On the inner panel, extend the cutout to the edge of the panel. This will allow the lock to slip under the outer panel easily. (See



6. Install the cam and nut to complete the job.

photograph 5.) Install the stop washer, cam and nut. (See photograph 6.)

The resulting installation is professionally done and attractive. More importantly, the drawer is as secure as any cam lock installation can be. The Double-D punch set from HPC is truly the best tool for the job. It is an inexpensive addition to your toolbox that will make your job much easier.

For more information on the HDPS-4 contact your authorized HPC distributor, or call HPC at (708) 671-6280.



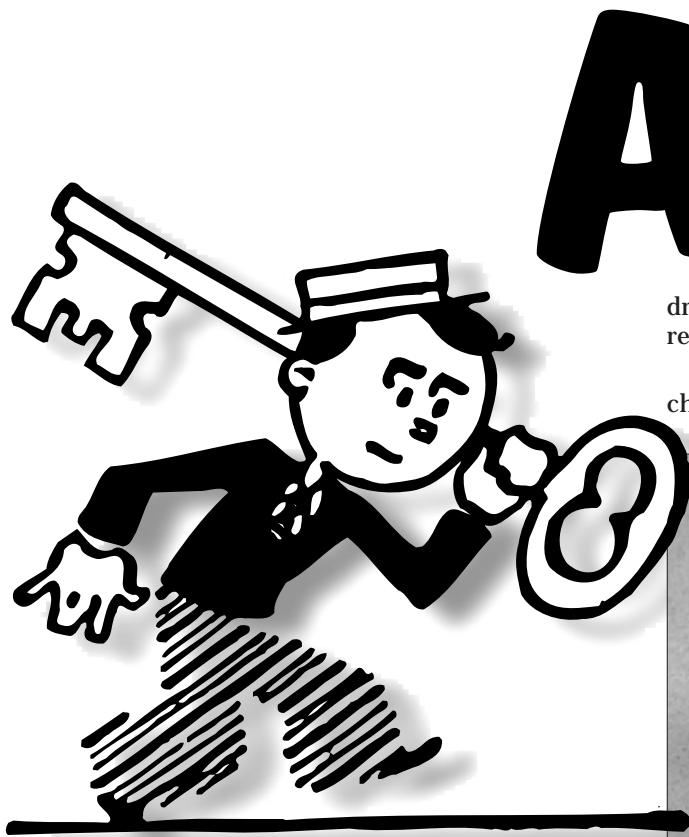
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Cover
Feature

The SCHLAGE CL Series Cabinet Lock

Offering a cabinet lock with a Schlage keyway opens (and locks) new doors for the locksmith and his customer.



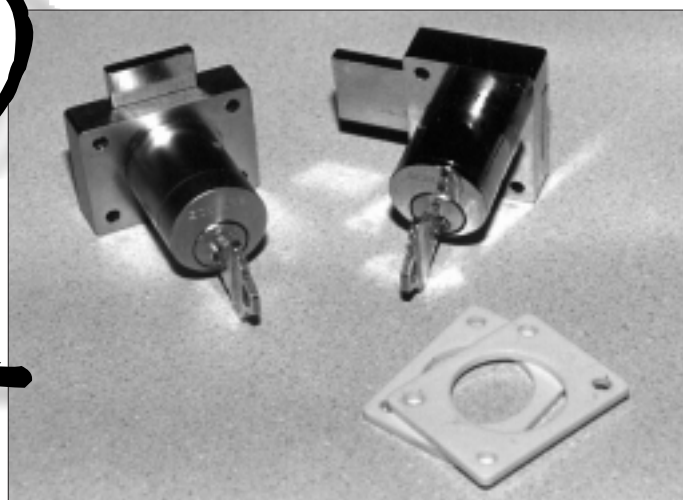
by
Tom Serogy

A

bout a year ago, Schlage introduced a new line of cabinet door/drawer locks designated the CL series. The CL1000 and CL1009 cabinet door lock have horizontal lock bolts; the CL1000 is 1" and the CL1009 is 1/2".

The CL2000 and CL2009 make up the cabinet drawer lock series with vertical 1/2" and 3/4" bolts respectively. (See photograph 1.)

While there are many desk lock manufacturers, the single characteristic that makes this lock so appealing to the



1. The Schlage CL1000 and CL2000 series cabinet locks offer both standard Schlage and Primus keying.

locksmith is that it uses Schlage keyways. This, of course allows us to key into an existing commercial system.

As a bonus, changing keyways is as simple as inserting the correct Schlage 6-pin key-in-knob cylinder, including Primus. And while this author has not yet tried, applying other aftermarket key-in-knob cylinders may allow using the CL series desk lock to key into a variety of commercial key systems.

Installation

Lock installation is quite simple: Choose the strike and strike location. (See illustrations 2.) Many times the cabinet frame can be used without installing special strikes. If not, both a slotted plate strike, requiring mortising for the bolt, and a bar strike are available.

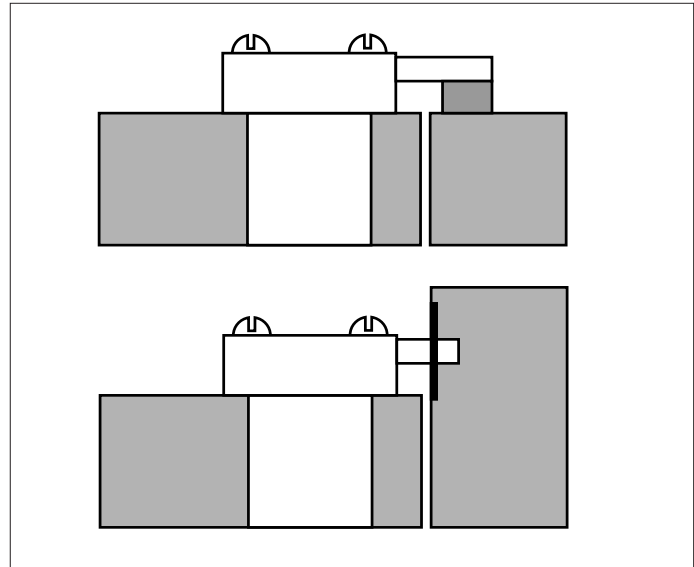
Mark the face of the door/drawer for the bolt centerline at the desired backset. When determining backset, make sure that at least 1/4" of the bolt catches the strike.

Drill a 1-1/8" diameter hole through the cabinet, for the lock cylinder. As decorative trim plates do not come with the lock, make this cut as clean as possible (use a new or sharp holesaw).

Mount the lock to the door/drawer, using four #8x1-1/4" wood screws to hold the lock in place. In doors less than 1-1/8" thick, it is necessary to shim the lock. Spacers are available for 7/8" and 1" thick doors. In any case, make absolutely sure that the mounting screws do not exit the front of the cabinet door! Check the lock for operation and proper strike engagement.

Changing Cylinders

To change the cylinders on the lock, remove the lock



2. Two types of strikes are available: a nylon bar strike and a metal slot strike. the slot strike will require minor mortising to accommodate the lock bolt.

from the door.

Remove the cylinder retaining screw, found on the side of the barrel, using a #1 Phillips screw driver. Insert a key into the lock and turn slightly to lock it in place. Use the key to pull the cylinder out from the lock. (See photograph 3.)


At this point, it's simply a matter of rekeying the standard Schlage 6-pin key-in-knob cylinder.

Reverse the procedure to assemble the lock. Make sure,



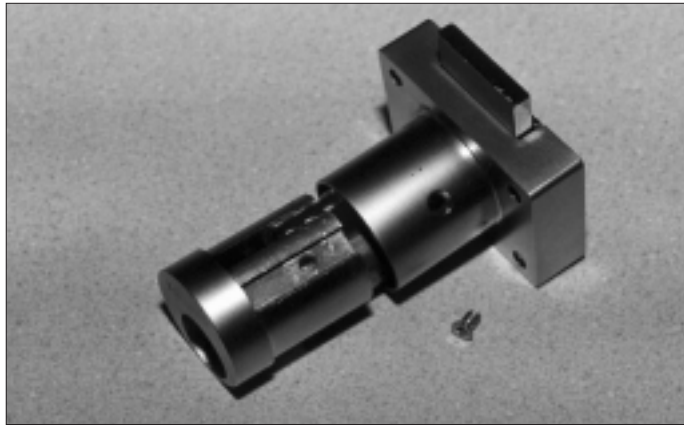
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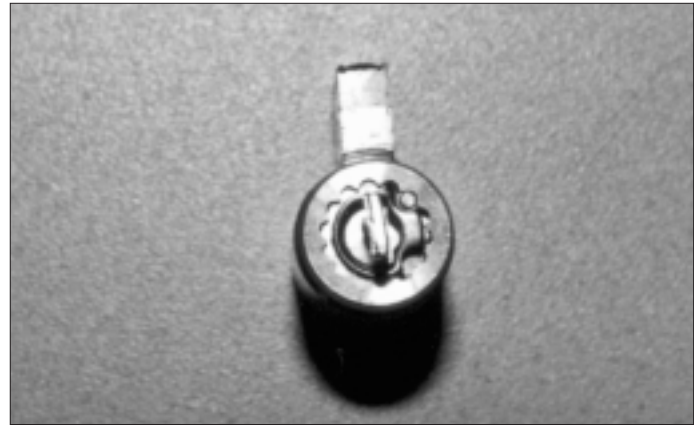


3. Removing the lock cylinder.

however, that the tailpiece is properly timed and engaged with the lock. Timing is achieved through the driver, driver bar and retaining pin; identical to those used on the B series deadbolts. (See photograph 4.)

For the CL1000 and CL1009 locks, with the back of the lock cylinder facing you, the driver and retaining pin must be such that the driver is in the horizontal position. When inserting the cylinder into the lock, with the front of the lock and the back of the cylinder facing you, turn the driver bar in the same direction as the lock's bolt. (With the lock bolt projecting to the left turn counterclockwise, with bolt to the right turn clockwise.)

For the CL2000 and CL2009 locks, with the back of the lock facing you, the driver and retaining pin must be such that the driver is in the vertical position. When inserting the



4. Correct timing of the driver and driver bar are critical to lock operation.

cylinder into the lock, with the front of the lock and the back of the cylinder facing the you, turn the driver bar in the same direction of the lock's bolt. (With the lock bolt projecting up turn clockwise, with bolt down turn counterclockwise.)

Replace the cylinder into the lock's barrel. At first, attempts this may be a little difficult. After several tries, however, mating the driver bar with the lock will become easy.

Test the lock. Turning the key 360° should throw the bolt and allow the key to be removed. If the driver bar timing is incorrect, the key will throw the bolt but only allow the key to turn 180°, making it necessary to return to remove the key. In this case, remove the cylinder and re-time the driver bar. **TNL**



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Ten years ago I started installing electronic access control systems and alarms. As a beginner/novice electronic locksmith, and with access control just emerging as a locksmith oriented field, finding a distributor that could fill my needs was difficult. Finding the correct products for an application, properly mixing and matching products from various manufacturers, on-site problem solving were (and still are) an integral part of doing electronic security.

Enter the electronic locksmith distributor - filling the vacuum for information on product and application, and providing the locksmith, especially the beginner, with the guidance needed to comfortably and correctly enter the electronic lock age. Still, what kind and how much support should a locksmith expect from a distributor? Better yet, what does a distributor expect from the locksmith?

Filling the shoes of a locksmith, I posed these very questions to a group of electronic locksmith distributors.

When asked whether a novice electronic locksmith can expect design and application help from his distributor, the answers were unanimous - yes!

"The distributor should be able to guide a locksmith through basic and intermediate design, as well as provide competent troubleshooting of stand-alone or hardwired systems," said Bill Underwood, Advertising Director for Southern Lock And Supply.

Ray Baldwin of JLM Wholesale underscored the ability of a good distributor to extend beyond knowledge on the lines carried by the distributor.

"When you need answers that combine stocked products with non stock products such as card readers, automatic door operators, keyless entry systems and CCTV systems, only the best wholesalers with trained professionals from these industries can really efficiently and correctly solve these problems." He said.

In the fledgling years, purchasing an access control system or CCTV system was turned into a game of telephone tag. Often the separate components had to be purchased from several different distributors. This made life a little harder, especially



Lining Up Electronic Distributors

Providing the locksmith with the guidance needed to comfortably and correctly enter the electronic lock age - the electronic locksmith distributor.



by Tom Seroogy

when the purchase of one component did not meet the buying minimum of that distributor. Today that has changed. According to the distributors questioned, a good electronic distributor should be able to supply the locksmith with most all components needed for a given system: electronic lock, control panels and readers, batteries, power supplies, accessories and, in some cases, the cable.

"(A distributor should) stock a full line of products that will meet the locksmith's complete job requirements." states Joe White of Wadsworth-White, Inc.

Steven Linhart, Electronics Administrator for American Access Supply agrees, "We attempt to assemble a complete package system, giving the locksmith all the necessary information, pricing and technical guidance available. We always try to maintain a good cross mix of product to meet our locksmiths' needs. It is very rare that we have to say on a quote: 'BY OTHERS.'"

Of course, nobody can adequately and satisfactorily do their job without some reciprocation from others. While the electronic distributor may be a wealth of information on product and application, it's imperative that the locksmith provide adequate and clear information to the distributor. While answered in various ways, a consensus was also formed in the type of information a locksmith can provide his distributor.

Information should include "the type of hardware on the doors; the function of the door; finish required; voltage necessary; is it a high traffic commercial installation; special factors like weather and other environmental aspects," said David Schwartz of Security Lock Distributors.

Other concerns include system configurations. "How many doors? How many users on the system? Do we need audit trail? Do they want alarm point monitoring? What about the people, time zones?" adds Linhart of American Access Supply.

Pat Quagliana of Monaco Lock Co. says that "some points may include frame conditions, existing hardware, voltage used, type of door, etc."

"Another important concern is cost." Said Underwood of Southern Lock. "Your budget will play a large



ELECTRONIC DISTRIBUTORS

a few things, you could well be on your way to becoming a 'Security Professional,' offering not just locks, but security solutions, both mechanical and electronic." States Baldwin of JLM Wholesale.

"Electronic security represents the wave of the future for locksmiths. It provides them with a highly desirable new business avenue that is a natural extension of their basic business." Says Schwartz of Security Lock Distributors.

"Electronic security products can be quite profitable, giving the locksmith new opportunities in a growth area. To make certain the locksmith capitalizes on this market, good alliances with good distributors are a must." Schwartz concludes.

A special thanks to the following electronic lock distributors who answered our questions. (In alphabetical order.)

American Access Supply
4304 S. 131st
Seattle, WA 98168
(800) 559-9634
fax: (800) 243-3049

JLM Wholesale
3095 Mullins Court
Oxford, MI 48371-1643
(800) 522-2940
fax: (800) 782-1160

Monaco Lock Company, Inc.
339-345 Newark Ave.
Jersey City, NJ 07302
(800) 526-6094
fax: (800) 845-5625

Security Lock Distributors
59 Wexford St.
P.O. Box 815
Meedham Heights, MA 02194
(800) 847-5625
fax: (800) 878-6400

Southern Lock & Supply Co.
P.O. Box 1980
Pinellas Park, FL 34290
(813) 541-5536
fax: (813) 544-8278

Wadsworth-White, Inc.
5873 New Peachtree Rd.
Atlanta, GA 30340
(800) 458-9449
fax: (404) 458-2253

Other lock distributors:

Ace Lock & Security Supply
565 Rahway Ave.
Union, NJ 07083
(908) 688-7666
fax: (908) 688-2442

A.T. Jones
1456 Broadway
Detroit, MI
(800) 735-4570
fax: (313) 965-1093

Chicago Door & Hardware
645 N. Michigan Ave.
Chicago, IL 60611
(312) 649-1441
fax: (312) 649-0787

Security Equipment Supply
4132 Shoreline Dr., #E
Earth City, MO 63045
(800) 325-0221
fax: (314) 298-8962



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A D A M S R I T E M a g l o c k K i t

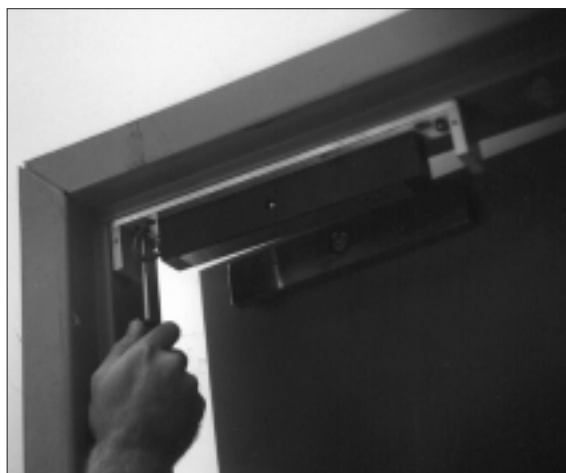
**Coming in
kit form,
this
electronic
exit device
install is
easy and
profitable.**

ELECTRONIC EXIT DEVICE

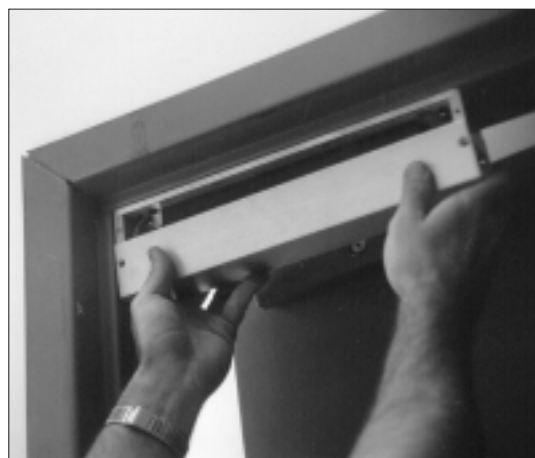
From CCTV to access control, in an effort to make electronic lock installation easier, many companies are now creating complete packages. For the locksmith, this means less time hunting down the correct components for an installation, and more time making money. Following is an electronic exit system package by Adams Rite - the Maglock Kit - and its installation.



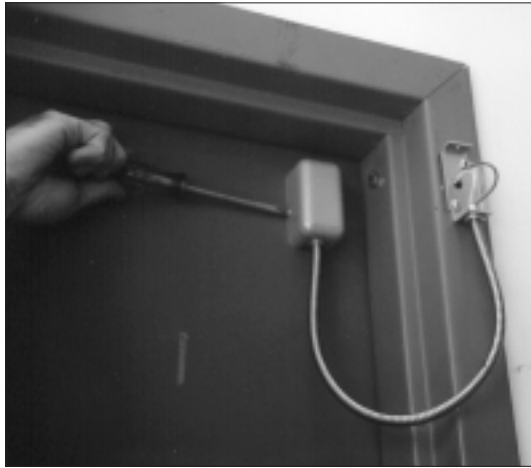
1. The Adams Rite Maglock Kit includes all parts and pieces needed for a single door installation except the wire. Included is the Pushbar, Series 1200 electromagnetic lock and armature, armored loop wire transfer and covers, key switch with activation LED, rectifier, plug-in transformer and all screws, washers, and instructions.



2. Mount the maglock and armature in the proper position to the top of the frame and door. Be sure armature floats freely on washer stack to allow perfect alignment with magnet. Mount the magnet to the inside corner of the door frame.



3. Slide on and tighten screws for the magnet cover. Feed wires through the frame, one left, one right.



4. Mount the loop transfer brackets, one on the door and one on the door frame, on the hinged side. Attach and feed wires through the armored loop and inside the door and frame. Mount covers to the brackets.



5. Drill holes for mounting backbar and for feeding wires from the loop transfer, per mounting specifications.



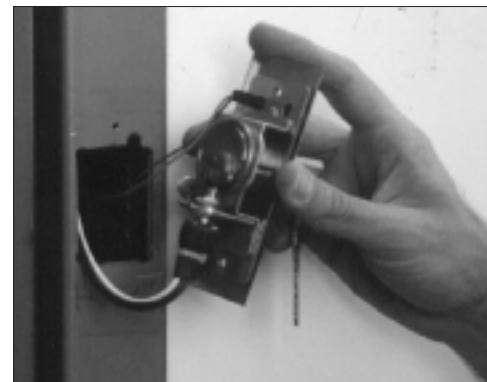
6. Attach wires and mount exit device backbar.



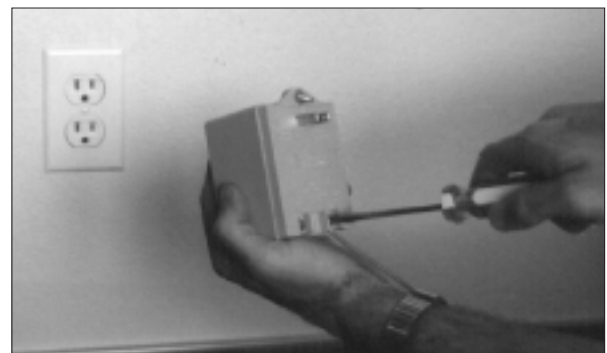
7. Attach pushbar cover by sliding on the right hand scissors first, then back on the left hand scissors until cover seats in position.



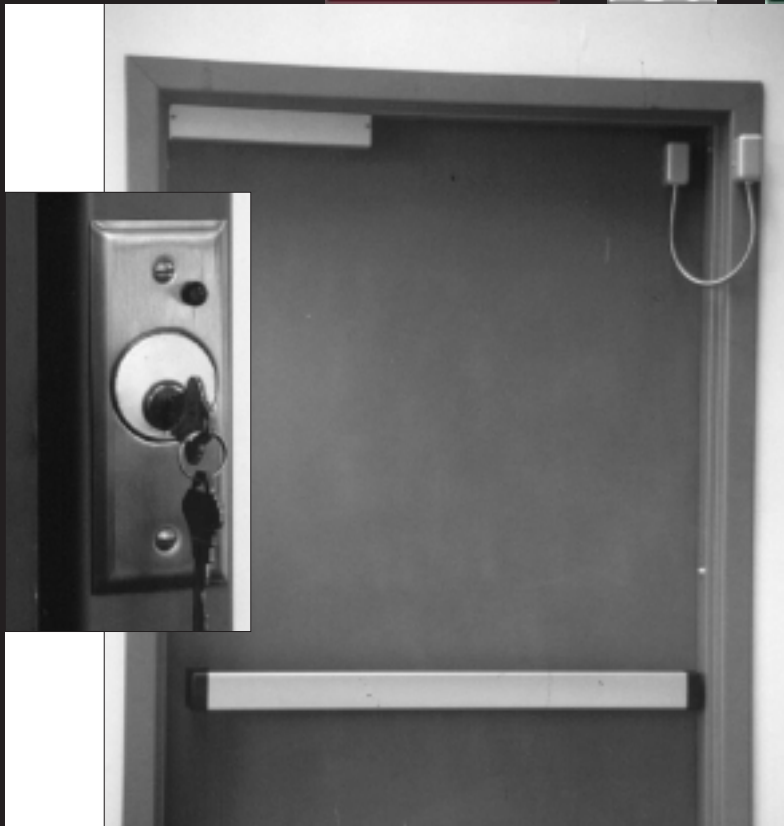
8. Mount end caps to complete pushbar assembly.



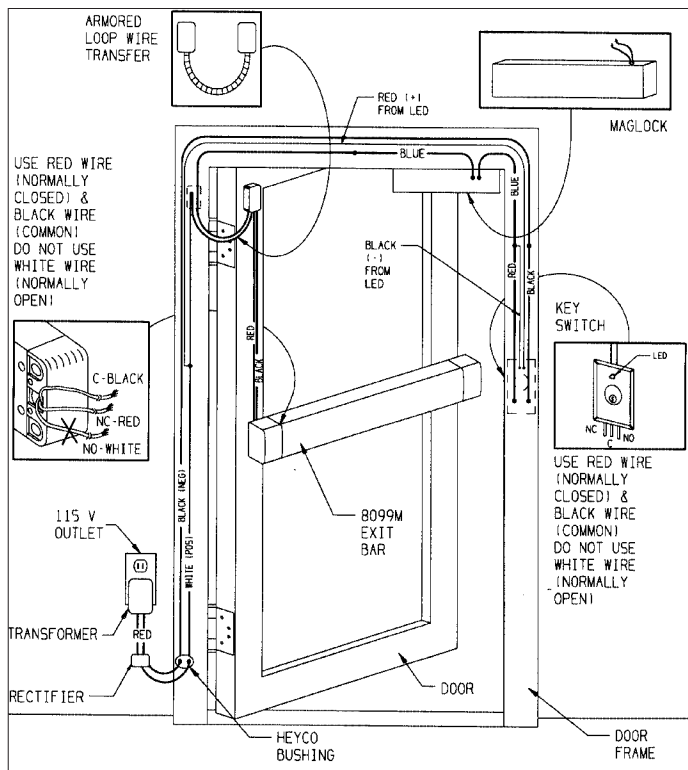
9. Attach MS cylinder and deactivator switch to key switch assembly. Cut hole, attach wires and mount key switch assembly to the outside frame.



10. Attach wires from the magnet and loop transfer to rectifier. Attach rectifier to transformer and mount to wall outlet.



11. Finished installation of a left hand hollow metal door, with key switch mounted to outside frame.



12. Diagram of proper wire runs and connections.

Photo story provided by
Adams Rite.
For more information on the
Maglock Kit contact an
Adams Rite Distributor.

TNL

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ELECTRONIC EXIT DEVICE

BUSINESS BRIEFS

News from the Locksmithing Industry

INDUSTRY INTERVIEW...

This month we have the opportunity to speak with Dale N. Padjen, Sales/General Manager for Chicago Lock Company. In fact, Dale has spent his entire 21 years in the industry with Chicago Lock Company.

Dale, how did you ever come into the lock industry?

My educational background is a combination of marketing and industrial organizational psychology. My specific interests have always been directed toward the mechanical field because my dad was the plant manager of a machine shop, where I worked during high school summer vacations. Chicago Lock was a natural fit. The first position I held here beginning in 1974 was in the marketing department.

What have you found to be the most enjoyable aspects of working in this industry?

The security field is never dull because the application of locks in a variety of industries and specialty areas seems to be limitless. Another exciting dimension for me has been the diversification of our company into global distribution through Chicago Lock's strategic alliance with CamLock Systems, Inc. Bud Shinn, president of CLC for the past 25 years and the third generation of Shinns to head this company, is absolutely the best boss one could have in terms of his progressive thinking and accessibility. In fact, everyone in this company functions like an extended family — from assembly line to office staff, which makes my job easy on a daily basis.

What about the most challenging aspects of working in this industry?

The most challenging aspects of working in this industry include keeping up with new technology in both manufacturing and communications, as well as staying abreast of our customers' current needs and new requirements. Creating awareness about the importance of security for business and personal application also presents a major challenge. We want

our customers to use our products, which means being vigilant about key control and remembering to lock up all systems all of the time. There's no such thing as too much security!

What changes have you seen take place in your industry, Dale?

Most of the changes in the lock industry have resulted from the need to learn more about security problems as they relate to consumers and the improvement of products. This is why the role of our strong research and development department is so important.

What direction do you think this industry is taking?

As long as there are new security problems to be solved, there will be continued growth and expansion in this industry. How far we go in different directions is limited only by creativity, technology and opportunity.

How have these changes affected the locksmith?

Increasingly, locksmiths have many new opportunities because they are able to offer their customers a wide variety of new product options for protecting their homes and businesses.

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

Continuing education is the key to success for the locksmith, in order to keep up with the many new changes in technology as they relate to locking systems.

What do you think the future holds for the locksmith and his role in security?

The locksmith's input is critical to the manufacturer for the development of new products. We need to know specifically what problems need to be solved in order to satisfy the security needs of our customers.

Dale, how do you think the locksmith can best serve his customer?

Product knowledge, purchase of quality locks and reliable service are the tools of a good locksmith. **NLI**



Dale N. Padjen,
Sales/General Manager
for Chicago Lock Company



HPC is proud to announce the **5th** winner in their monthly Codemax™ drawing. **HPC** has awarded a Codemax™ computerized key machine to **Daniel Schiabel** of **Canpro Lock Service** in **Etobicoke, Ontario Canada** on **July 1st**. It was purchased through **Canada Lock Products** in **Toronto, Ontario**. **HPC** will be awarding a Codemax™ to a lucky locksmith every month through February 1996. To qualify, locksmiths simply need to purchase any 1200 Series Key Machine and send in their registration card along with a copy of their distributor invoice to **HPC**. Once this is done, they will automatically be entered in the contest. Entries will remain eligible until the conclusion of the contest. A total of over \$47,000 will be awarded. There are still **seven** more chances to win.



Accepting his prize is **Ray Taketaya** from Los Angeles, California with **Silca International Sales Manager Robert DeMarch** in the Silca International Offices. Silca Home Base is located north of Venice, Italy. Mr. Taketaya's name was drawn in the recently concluded Silca Keys USA contest entitled "Venice Is Only a Box Top Away." Ray and his wife, Janet won a trip to the Factory as well as side trips to Venice, Florence and Rome.

PermaVault Safe Corporation has moved into new quarters at 3015 Philmont Ave., Huntington Valley, PA, 19006. The mailing

address remains P.O. Box 473, Huntington Valley, PA, 19006. New phone numbers are (215) 938-4300, fax (215) 938-4310.

Securitron Magnalock Corporation is pleased to announce that their Toll Free Sales/Service, **800/MAGLOCK**, is now available in the U.S. and Canada from 7:30 a.m. to 4:30 p.m. Pacific Coast Time.

Kwikset, recently named **Tom Haapala Vice President of Marketing** of the Irvine-based manufacturing company. **Haapala** succeeds **Robert Shortt** who has moved to the position of **Vice President of Marketing for Price Pfister**, Black and Decker's plumbing products division.



Locksoft, Inc. supplier of computer solutions for the lock industry, has moved its base of operations to Nebraska.

The new address is: Locksoft, Inc., P.O. Box 129, Hastings, NE 68902-0129, phone (402) 461-4149, fax (402) 461-4359, CompuServe 71165,3426.

Paul Kosakowski, AHC, Vice President Of Sales for the **DORMA Group**, will also assume responsibilities as **Vice President Of Marketing**.



Kosakowski rejoined **DORMA** as vice president of sales January 1995. He had been vice president of sales and marketing at **DORMA Door Controls** from 1988 to 1991.

Security Lock Distributors now has a number of new security products in stock for immediate shipment. These include Locknetics CM 5000 Computer Managed Locking Systems, Folger Adam 600 Series Offset Strike, Detex ECL-8010W Weatherized Outdoor Exit Alarmed Lock, Von Duprin 6210 StrikeForce Strike, Adams Rite 7000 Strike featuring 1-1/2" overall depth and the



Simplex L1007 Privacy Function Lock. Call (800) 847-5625 for more information.

Lockmasters®, Inc. was recently selected to be the major distributor for all Legault products and parts in the United States. We are pleased to offer a Mechanical Time Delay lock which can be operated by turning a standard knob or Medeco key.

We are pleased to announce the opening of our newest location. **Clark Security Products**, 830 Sivert Drive, Wood Dale, IL 60191, phone (708) 350-8500, fax (708) 350-8535



Dennis Lemon celebrates 5 years of working for **JLM Wholesale**. Dennis is Warehouse Manager and oversees all aspects of inventory control, purchasing and shipping. Dennis is a valuable asset to JLM's team of employees.

Trine Products Company has instituted **EDI** service to augment its operations. The Trine system employs a Value Added Network (VAN) component, which, acting as an electronic mailbox, automatically receives and acknowledges orders, provides information about product availability, confirms shipments and prepares invoices. **TRIL**

LIGHTER SIDE

Say What?

“No,” Don said for the third time, this time a bit louder. “A lady called us about this, not fifteen minutes ago, and the price I gave her holds.” He paused to listen a moment. “...Well, as I told her, I can send someone out to make a set of keys right away. Do you want me to do that? ...Just tell me if you want someone to come. ...I understand that, Mr. Brown. Just tell me.... Well, do you want us to come?”



by
Sara Probasco

“What was all that about?” I asked

when he had finally hung up the phone. I’ve learned that when Don grows agitated, his vocal volume control can go haywire, so I figured he was upset.

“Oh, that was Mr. Brown calling,” Don said pleasantly. “Some woman called a few minutes ago to say he had lost his pick-up keys. When I gave her the price for a new set, she said she’d check with him and call back.”

“You don’t sound upset,” I said.

“I’m not.”

“Then what was all the shouting about?”

“Oh, that. Brown’s about deaf, and his housekeeper apparently doesn’t understand much English. Trying to communicate with either one of them is a real challenge.”

The phone rang again. It was the housekeeper calling back to see if Mr. Brown had called.

“Yes, he did,” Don said to her. “The thing I don’t know is, does Mr. Brown want us to come, or not?” Don’s voice was rising again. After a moment, he cradled the phone and shook his head.

“You know,” I said, “increasing your volume may be the right tactic when trying to communicate with Mr. Brown, but it doesn’t help to shout at the lady who is language impaired.”

“You’re right,” he admitted. “I guess I’m feeling a bit ‘communications impaired’ right now. I just wish somebody would tell me clearly what they want me to do. Mr. Brown keeps up a running dialogue of useless chatter, and I have trouble deciphering anything the lady says. Just to be on the safe side, I think I’ll run on out and take a look.”

Sure enough, Mr. Brown was sitting on his front porch, waiting for him. He commenced talking Don’s ears off and wanting to know details about everything he was doing.

Besides the fact that it generally annoys Don to have someone looking over his shoulder, making comments, in this case there was the added vexation that Mr. Brown could only hear about half of every third word Don said back to him.

Nevertheless, Mr. Brown seemed very congenial and was noticeably pleased with Don’s work. He paid the asking price without hesitation and continued to shower Don with



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compliments on his workmanship amid nonrelated chatter, until Don finally waved good-bye and hastily drove away.

A week passed.

Mr. Brown called again. Once again, he went on and on, complimenting Don on the job he had done for him the week before. Interrupting him or keeping him on track was next to impossible, as he couldn't hear much of what you tried to say. Finally—amid an ongoing dialogue about his dear, departed mother, his ornery neighbors, and the way things used to be in the good-old-days—he admitted to me that he had now lost the key to his house.

Don went out again, found the door lock was (in Don's vernacular) a "piece of junk," and replaced it with a new Titan. Mr. Brown was impressed. He said so over and over, in his continuously running dialogue. After he had again told about his dear, departed mother and was starting in on his ornery neighbors, Don collected his money, bid Mr. Brown farewell, and beat a hasty retreat before Mr. Brown could get to the way things used to be in the good-old-days.

Ten days passed. Don, having heard no more from Mr. Brown, assumed that his problems were solved. So much for assumptions.

A phone call informed us that, among other things, Mr. Brown had now lost the key to the padlock on his gate. He was locked inside the fence that surrounded his house and yard.

Sighing, Don suggested boltcutters.

Mr. Brown didn't have any, and he didn't want to borrow any. He wanted somebody to come up there, let him out, and bring him a new lock, just in case someone should find his lost key and try to open his gate.

Don sent Neil up with a new lock and boltcutters.

Mr. Brown was impressed. He showered endless compliments on Neil's head for his quick, efficient handling of the matter. Then he launched into the dialogue about his dear, departed mother, obviously

delighted over having a new audience.

However, as Neil had heard Don tell of his experiences with Mr. Brown, he politely collected his money, excused himself, and headed back to the store before Mr. Brown got too carried away.

The following week, Mr. Brown didn't call. He came into the store, instead. Still praising Don and Neil for their work, this time he corralled Ted. Ultimately, he admitted he had lost the new house key and wondered if Don could come out and make him another.

A wicked smile spread across Don's face when Ted came back to his office with Mr. Brown's request. Don spun his chair around to the computer, input his code, and brought up Mr. Brown's account. "Ha, ha!" he chortled. "This time we're ready for him. You can cut him a key by code." He read off the proper key cuts to Ted and turned back to his work, humming contentedly to himself.

Mr. Brown was duly impressed when Ted cut a workable key without

having to come out to the house. He said so over and over. It seemed he had solved all his problems, at last.

However, we still hadn't seen the end of Mr. Brown. A couple of weeks later, he came into the shop again. This time, he tossed a ring full of keys onto the counter. "Here," he said to Dave, obviously quite proud of himself. He shouted as if Dave were the one hard of hearing. "I want you to know, I found every last one of those lost keys. Isn't that wonderful? The problem is, now they don't fit any of my locks. You folks were so nice to help me, I decided I'd bring them in to you. I figured maybe you could use them for something, around here. You know, as my dear, departed mother used to say...."

Hearing Mr. Brown's booming voice clear back in his office, Don knew there was no way Dave could discretely escape the coming dialogue. Shrugging, Don smiled. Then he quietly reached over and gave his office door a little push. As the door clicked shut, Mr. Brown was launching into, "Why, those ornery neighbors of mine...." **RL**



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Booth & Exhibitor Listings
Product Showcase
Better Light On Security
Access Security For Small Businesses

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WELCOME TO THE SHOW

EAST 1995 ISC EXPO

ON THE COVER...

Locking up with new electronic strike choices, Folger Adams 600 Series fits most all applications

This special supplement of *The National Locksmith* is devoted to educating you, the security professional, about the security products on display at the ISC East Show and to help you profit most from the highly lucrative security industry.

Growth is the theme for the upcoming International Security

Conference & Exposition '95. Being held at the Jacob K. Javits Convention Center in New York, the 28th presentation is expected to have 400 exhibitors displaying state-of-the-art security equipment, services and technologies running the gamut from access control, including biometrics, to preventing computer viruses. Attend the show for new and exciting

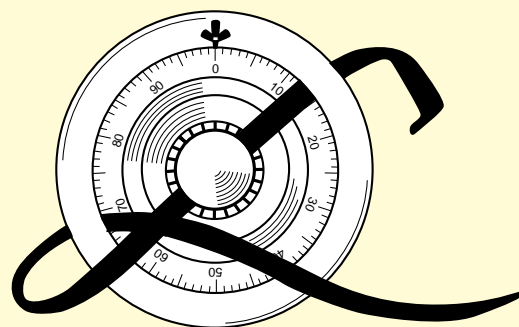
ways systems and techniques that you can offer your customer.

If you have any questions concerning this show or future ISC shows, call 203-325-5000 or write Reed Exposition Companies, 1100 Summer St., Stamford CT 06905. Tell them you heard about their show from *The National Locksmith*.



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A & S Security	464	Delta Designs	655	Kowa Optimed Inc	773	Safeguards Technology, Inc	1419
A.D.D.M. International Inc	140	Delta Vox	1434	Labor Saving Devices	1079	Safety Technology Int'l Inc	530
A.V.P. International	374	Detection Systems, Inc	1035	Lease Acceptance Corp	879	Samsung Optical	1423
ABC	1175	Detex Corporation	324	Leasecomm Corp	1236	Scantronic U.S.A., Inc	113
ABM Data Systems	319	Dice Corp	275	Lee Dan Communications Inc	1431	Seabury & Smith	1401
ADI	613	Digalog Systems, Inc	1250	Lindsay Manufacturing	1353	Seco-Larm USA Incorporated	426
AES Corporation	1304	Digi-Spec Corp	348	Linear Corp	901	Secura Key	318
AMCO Engineering Co	1058	Digital Monitoring Products	600	Litton Poly-Scientific	1331	Secure Systems, Inc	1300
AMSECO	719	Digital Security Controls Ltd	301	Lockinbar	1219	Securitech Group, Inc	1127
ASM Group, The	1133	Ditek Inc	754	Locknetics Security Engineer	537	Securiton Magnalock Corp	131
AVSI	955	Dolphin Components Corp	263	Louroe Electronics	659	Security Central	155
Access Control Magazine	1031	Doorking Inc	740	MC Development International	255	Security Communications Intl	563
Ace Lock & Security Supply Co	1140	Dorado Systems Corp	675	MCS Communications Inc	472	Security Dealer	1040
Acme Security Systems	855	Dortronics Systems Inc	1143	Macurco	104	Security Door Controls	158
Active Control Technology	162	Dynalock	1134	Marich Management Corp	150	Security Information Systems	248
Adams Rite Mfg. Inc	1240	EMI, Inc	443	Marlee Electronics	851	Security Lock Dist	558
Ademco	601	Eagle Security Products	254	Math Associates, Inc	339	Security Pacific Financial Ser	1152
Ademco	701	Eastman Wire & Cable	1003	Maxwell Alarm Screens	147	Security Sales Magazine	120
Advanced Technology Video	344	Elbex America Inc	347	May Advertising	665	Security Technology & Design	346
Advanta Leasing Corp	1118	Elcor International Inc	274	Mayflower Sales Co Inc	352	Select Engineered Systems	359
Affiliated Central Station	114	Electronic House	946	McDermott Co	761	Senses International/Safecom	358
Alarm Central, Inc	554	Electronic Monitoring	760	Mer Communication Systems	231	Sensor Engineering Company	1237
Alarm Industry Products	153	Electronics Line	419	Meridian Technologies	465	Senstar Systems	355
Alarm Lock Systems Inc	100	Elk Products, Inc	1205	Metrodial Corp	151	Sentex Systems Inc	258
Alarm Soft Inc	1163	Elmo Mfg. Corp	330	Metromail Corporation	1104	Sentrol, Inc	913
Alarm Technology Worldwide	755	Emergency 24	146	Metropolitan Scientific & Video	343	Signal Cable Co	1106
Aleph International	259	Energy Electric Cable	1343	Micro Key Software	354	Silent Knight Security Systems	1230
Allied Central Services	249	Esaw	564	Micro Timer & Controls	1458	Simplex Access Controls Corp	1325
Alpha Communication Inc	108	Europlex Technologies USA Inc	1100	Micronetics Design Corp	536	Sims	422
Alpha Systems Labs	1415	Evax Systems	978	Miller Dial Corp	1122	SkyTel Pagers	1080
Altronix Corporation	219	Eyidentify, Inc	654	Mircom Technologies Ltd	1047	Softcon	1074
Amcest Corporation	820	FM Systems, Inc	243	Mobile Video Products	245	Software House	637
American Dynamics	739	Falcon Electronics Inc	941	Monaco Lock Company, Inc	247	Sound Surveillance Products	313
American Fibertek Inc	436	Fame USA Products, Inc	960	Monital Signal Corporation	134	Specialized Products Inc	1438
American First Financial	948	Fiber Options Inc	437	Monitoring Automation Systems	519	Sprint/North Supply	813
American Monitoring	560	Financial Security Services	142	Monitronix International	1063	Stellar Security Products Inc	604
American Video Equipment	342	Fire Burglary Instruments	801	Morse Watchman Inc	159	Sungard Mailing Services	1146
Amtech Corporation	1158	Fire Lite Alarms	631	Multi-Media Communications	1062	Sure Action	824
Amtel Security Systems	574	Flair Electronics, Inc	1023	NJR Corp	1430	Synergistics	859
Anicom Inc	1120	Folger Adam Company	1252	Napco Security Systems, Inc	101	System Sensor	413
Apex Security Alarm Prod	501	GMF Insurance Agency	378	National Guardian Security	959	TVX, Inc	458
Appro Tech	366	GPS Standard USA	1225	The National Locksmith	1135	Talk-A-Phone	350
Architectural Control Systems	1244	GRI Telemark Corporation	130	Nearnet Inc	861	Tamron Industries, Inc	547
Asian World Ltd	325	GS Battery USA, Inc	225	NelTech	380	Tane Alarm Products	237
Atlas Wire & Cable	1025	GYR	331	Ness Security	351	Tectron Engineering	864
Auth-Florence Manufacturing	945	Gardall Safe Corp	364	New Line Usa	769	Telephone Extension Corp. (TEC)	1358
B&B Electronics	467	Gentex Corporation	1043	North East Gate Operators	375	Telesite USA Inc	463
Battery Outlet Inc	1059	Golden State Instruments	144	Northern Computers	1213	Telular-Adcor Security Product	643
Belden Wire & Cable	1260	Goldstar	454	NuTone Inc	1121	Terra Publishing	268
Bell Atlantic Mobile	1301	Guardian Personal Security	1160	Nuvispec	1432	Terra Publishing	270
Bell Detection Mirrors	118	Haverkamp Security Technologie	175	OSI Security Devices	1131	Texecom Inc	1421
Benzing America, Inc	767	Hirsch Electronics Corp	939	Optex (USA) Inc	623	Tomsed	1339
Best Lock Corporation	1145	Hyundai Corporation	766	Osborne-Hoffman Inc	106	Toshiba Video Systems	1148
Bradley Data Management Group	821	I Star	MIS	Pach & Company	858	Tou-Ke System Engin. Ind. Co	645
C & K Systems	713	ID Systems	578	Page-Com, Inc	753	Trine Products Company	875
C.O.P.S. Monitoring	1231	IDC	1319	PanaVise Products, Inc	434	Twico CCTV Systems, Inc	235
CADDX-CADDi Controls Inc	831	IMAC, Incorporated	448	Panasonic	201	U.S. Lock	1137
CCTMA	341	INTAPOL Industries	478	Paradox	923	UC Systems	1403
CCTV Corporation	513	ISO/Rainbow	336	Peerless Industries	768	Ultrak, Inc	1313
CRN Telemetry Devices	860	Ideal Industries Inc	1259	Pelco	731	Union Battery Corp	662
Cadix International	748	Idesco	852	Pentax Corporation	1019	Unisen EAS Corporation	1044
Canadian Flexi Drills	227	Ikegami Electronics (USA), Inc	1013	Philips Electronics	543	United Defense Industries, Inc	958
Capricorn Electronics Inc	747	Ilco/Uican/Marlok Access Ctrl	1327	Polestar Trading Inc	455	United Security Products Inc	505
Cardac Inc	1154	Innovative Business Software	751	Power-Sonic Corp	758	Versus Technology	762
Cardkey Systematics	154	Inovonics Corp	540	Premitech	1405	Vicon Industries Inc	431
Carol Products Co	418	InteLock Technologies	1141	Presearch Incorporated	110	Video Products Repair, Inc	322
Cellular Alarm Products	640	Intelligent Controls	759	Prism Video	867	Video Security Inc	866
Central Monitoring Systems	475	Intellisense	531	Professional/Tech Systems, Inc	1041	Videotronic Uwe Bischke Ltd	333
Central One Monitoring	661	Interactive Technologies	931	Prosec Vevlay GMBH	279	Viscount Communications and	649
Channelpus/Multiplex Tech	425	Interactive Technologies	1001	Protech/Protection Tech	551	Vision Research Co	466
Checkpoint Systems, Inc	1159	International Electronics Inc	122	Pulnix America Inc	363	Visonic LTD. U.S.A	525
Chinon America Inc	559	International Fiber Systems	250	QSI Systems	165	Visual Methods, Inc	441
Chugai Boyeki (America) Corp	213	Intevac	337	Quartermaster	853	Vivitar Corporation	353
Clifford of Vermont Inc	756	IsoTec	143	R B Tec	774	Voice Strategies	646
Code Blue Corporation	1124	J. Batko Inc	267	RIA Electronic, Inc	664	Watec America Corp	449
Coherent Communications, Inc	975	J.A.M. Plastics	459	RTI Company	667	Webb Company	1413
Combined Optical Industries	1061	J.C. Gury Co	280	Ram Products Company	450	Wheelock, Inc	778
Control Screening	674	JLM Wholesale Inc	128	Remeo Products Corp	1437	Wing Enterprises Inc	149
Corby Industries, Inc	1113	Jantek Electronics	1442	Reproduction Technologies	379	Winland Electronics	1055
Cotag International	1337	Javelin Systems	717	Richard Bagan Co	1051	Winsted Corporation	524
Courtaulds Performance Films	849	KP Electronic Systems Ltd	1420	Richardson Electronics	430	X-10 (USA), Inc	1005
Crest Electronics	278	Kantech Systems Inc	401	Robot Research Inc	839	Xantech	949
Crow Electronics Eng. Inc	1201	Keri Systems, Inc	1455	Rokonet Industries	518	Xetron Corporation	818
Custom Newsletter Concepts	579	Ketec Inc	1248	Rutherford Controls	1130	Yuasa-Exide, Inc	954
D/B Cameras-Microcheck	846	Key Systems Inc	1424	S. L. Sentry Inc	1048	Zero Stantron Cabinets	1155
DSX Access System	651	Keystone Wire & Cable Co	152	SPECO/EMCO/CSI/Pro-Video	823		
Dedicated Micros Ltd	1101	King Central Inc	123	STAT Resources	847		
Delta Controls	606	KingAlarm	121	Safe Defense	1153		



PRODUCT SHOWCASE

New IEI Touch Reader

International Electronics, Inc. (IEI) announces the new Secured Series Touch Reader. The newest member of the popular Door-Gard Secured Series



access control products, the Touch Reader uses reliable Dallas Semiconductor Touch Memory technology and incorporates a rugged, stylish, backlit, weatherproof housing. A built-in sounder confirms that a "token" has been read and access is visually confirmed or denied by green/red backlighting.

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OSI Expands OMNILOCK Series

OSI Security Devices has announced the release of the new 100, 300 and 500 Series of their popular OMNILOCK access control system. Available for both interior and exterior applications, the new series features support for up to 500 individual codes and an audit trail capacity of up to 750 event records per door. A programmable time schedule and holiday list provide scheduled access for four code groups. OSI's patented motor drive system allows for an estimated 100,000 operations from four AA batteries. The ADA compliant lever-set installs in minutes into a standard door preparation and is available in an assortment of finishes.

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Circle 274 on Rapid Reply

Delta Controls Mortise Cylinder Switches

New, and already accepted for use in correctional institutions, prisons, and mental health facilities, Delta Controls Key Switch Assemblies. The new key switch utilizes mortise lock technology and state-of-the-art design ideal for watch tour and cell check applications in prisons as well as general restricted control applications.



Available with optional one or two colored LED indicator lights, the unit mounts securely in a one-gang masonry box. In short, it's vandal resistant in environments that require inventive and unique locking design for high security applications.

Switches include a heavy gauge bracket assembly, a choice of switches (or multiplies), LEDs, and a mortise cylinder all integrated and mounted to a wall box. Screws are tamper resistant, attaching a .060-thick stainless steel plate to seal and capture all exposed components. Mortise cylinders, sold separately, are available in over twenty different key ways.

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Weatherproof Keypad By Essex

Essex Electronics has released the new Thinline Weatherproof Keypad to their line of access control products.

This low cost, low profile keypad is specifically designed for both indoor and outdoor applications requiring aesthetics and durability. The Thinline can be used with either the Essex KE-



260 or the KE-300 Series Keyless Entry Systems. Providing such features as 1 to 100 user codes, tamper alarm lockout, and network alarm control, Essex access control systems will operate any electric locking device.

The Thinline is also available with a choice of industry standard outputs including

Wiegand, BCD, and X-Y matrix, making this keypad compatible with most access control panels. Ideal for any environment, the Thinline surface mounts virtually anywhere and to match existing styles, the unique Graphics Panel is available in stainless steel, brass or illuminated.

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ITI's CareTaker Plus Demonstration Kit

The newest sales aid from ITI features The CareTaker Plus® security system and the Interrogator® alarm verification module in one convenient demo kit. Designed for a high-impact sales presentation, the kit gives your demonstration authority. Includes control panel, touchpad display, speakerphone, functioning door/window sensor display with base, panic sensor, handheld touchpad, light bulb and socket for X-



10 Powerhouse Lamp Module, and enclosures for showing prospects door/window, shock, and freeze sensors, and PIRs.

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Automatic Gate Wholesalers' New Digi-Lock™

Automatic Gate Wholesalers introduced the rugged, all weather Digi-lock™ digital keyless entry system. The new digital keypad is available as a flush mount unit or in a 6" x 4" housing.

The AGW Digi-Lock™ is easy to install, simple to use, and extremely flexible. Standard features include variable entry code length, programmable "strikes-and-out" settings, and dual relay control. Value added features include choice of zinc chromate or black powder coated finishes on the 6" x 4" steel housing, stainless steel face plates, keypad light and light control dimmer module.

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Secura Key's SA-LINK

Secura Key is offering its SA-

LINK™ Access Control Communications Software. The user-friendly terminal software is specifically designed to allow PC-based programming and transaction reporting with Secura Key's ENTRACOMP® 27SA and 28SA stand alone card access control units.

The SA-LINK is easy to use since it's already set up to communicate with ENTRACOMP® SA units, and provides easy backup and restore of program data with one simple menu. Unlike generic terminal emulation programs, SA-LINK™ monitors the communications with the SA unit and automatically performs the appropriate functions as needed. Thus, when uploading (backup) or downloading (restore) SA settings, SA-LINK® will automatically set the protocol to XMODEM and prompt for the file name to be transferred. The transfer is then completed automatically.

For **FREE** Information
Circle 279 on Rapid Reply

Securitech's Maglatch™ Series

Securitech's Group, Inc., introduces the Maglatch™ 9000 Series lockset which combines



electromagnetic and mechanical locking. The door is locked in place by two locks, yet only one motion is required to exit or enter.

Dual-Locking is ideally suited for entrances to high-rise apartment buildings. Maglatch™ also provides the ability to use electromagnets and meet fire codes for fail-safe re-entry from stairwells. Panic exit and mantrap models are also available.

Maglatch™ is a step up from electric strikes. Depressing the handle simultaneously depowers the



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electromagnet and releases the heavy duty latch. Maglatch™ works with any intercom, card access or keying system and can be used with existing cylinders and electromagnets.

The Maglatch™ design incorporates the LeverEx™ handle. The LeverEx™ design is ADA compliant. The slip-clutch lever, makes for a highly vandal-resistant product, allowing the handle to be forced down when in the locked position without damage. The LeverEx™ can then be reset to its normal position by easily lifting it up.

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National Guardian's CMS/Spider Personal Alert Locating System

CMS/Spider Personal Alert locating system, by National Guardian and Visonic is an electronic locating system that determines both the identity and the location of the person sending the emergency signal.

The CMS/Spider interface can be activated anywhere receivers are installed within the monitored area: a parking garage or lot, retirement community, college campus or anywhere there is an increased risk of personal attack.

Depressing the button on the key chain transmitter triggers local devices like horns, strobes and voice alerts to help deter an attacker.

The CMS/Spider can also transfer critical information to a remote location like a security office. The monitor displays a complete description of the person in need of assistance and specific location where the threat occurred.

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Accessor By Access Technology

The Accessor from Access Technology is a new approach to Digital access control and audit trail tracking. Useful in both existing installations or new applications; the Accessor is a simple to operate, stand alone unit.

The various models are programmed using the IBM compatible software supplied. Functions can also be programmed from the keypad for quick code changes or individual/group lockouts.



Each unit can accommodate 714 users, each with their own unique code. Up to 2000 entries are stored in the unit and available for downloading and printout. Power is supplied by four standard AA batteries. Each unit is fully self-contained and require no hard wiring.

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Photoelectric Smoke Detector For DMP Panels

Digital Monitoring Products, Inc. (DMP) announces the SLK-12 Photoelectric Smoke Detector for DMP Command Processor Panels and Loop Expanders. The SLK-12 is a low profile 1.3" smoke detector head which easily installs in a two wire or four wire twist lock base (sold separately). Up to 137 detectors may be used on the CMP 1912 XR panel. Each detector can be individually identified from the system keypad or central station.

For **FREE** Information
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Infinity M By Sentex Systems

Sentex Systems introduces the Infinity "M" series. The Infinity family of access control systems features a large and very high contrast two line by 20 character display. This display is so large (130% larger than the Infinity "S" series) and bright that it can be read those who have poor eyesight, including the elderly. The increased size and number of characters also make it even more useful as a prompting device during on-site programming.

Like the other members of the

Infinity family of access control systems, the Infinity "M" integrates telephone, card, and keypad entry with an LCD electronic directory to display the occupant names and codes. These systems can control up to 32 doors via card or code access and can also perform elevator, HVAC and lighting control. A 2400 baud internal modem is standard and is used for programming and event record retrieval. The card technologies supported by the Infinity systems



include Proximity, Wiegand, Barum Ferrite and ClikCard (Sentex's uniquely encode radio transmitters).

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Circle 284 on Rapid Reply

TU-DOR Doorman By Solutions Worldwide

The TU-DOR DOORMAN is the first of a new family of inexpensive front door intercoms allowing residents to answer their door from any phone in their home.

If someone calls when you are on the intercom you will be alerted by an electronic tone. Hitting your phone's hook switch will automatically connect you to the outside call.

Provision has been made for additional door stations and door



strike activation. A single door station can communicate with multiple controllers for duplex and fourplex applications. The unit can also be connected to commercial phone systems without requiring a dedicated trunk port for the business environment.

Front door stations are available in flush or surface mount; plastic or stainless steel.

For **FREE** Information
Circle 285 on Rapid Reply

DoorKing's Wall Mount Entry System

DoorKing has added a new wall mount style to its popular 1814 and 1815 line of telephone entry systems. The wall mount unit is designed to be surface mounted on a wall, and does not require the installer to cut a large hole in the wall, as a flush style unit would.

The wall mount entry system is enclosed in a beveled corner stainless steel face plate. The aestically pleasing unit is not only easy to install, but will blend in with most entry and lobby decor. The wall mount style mounts directly to a wall and does not require



any cutting of large holes, making installation extremely simple. Installers love this unit. The new wall mount unit has a lockable face plate that swings open from right to left that further simplifies installation and maintenance.

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Samsung High Resolution 1/3" Color CCD Camera

Samsung's BW-410EA is a high performance 1/3" color CCD camera featuring 580 lines of resolution for exceptional picture quality. With sensitivity of just 0.1 lux at F1.2, the

BW-41EA is ideal for low light applications.

Electronic Sensitivity Control (ESC) automatically controls shutter speed and allows use of inexpensive CS or C mount fixed iris lenses. The automatic electronic shutter speed is 1/60 to 1/50,000 second. Aperture correction is built-in. Auto iris selections include



Video, DC and ESC mode.

External sync/line lock/internal sync are included. Signal-to-noise ratio is 5dB.

A built-in 24VAC isolation transformer makes the BW-410EA ideal for multi-camera systems applications.

A positive/negative imaging switch is built-in for special applications.

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Better Light On Security

by Virginia K. Kubler



With the hindsight of a Monday morning quarterback, it is clear that a dramatic change in the use of construction materials for residential and commercial buildings has taken place. The use of glass as a construction material has grown by leaps and bounds as Americans have opted for natural illumination, expansive views and sunshine for their homes and offices. According to the American Institute of Architects, the use of glass in the average home expressed as a percentage of the total home living space has grown from

about 7 percent in the 1930's to over 15 percent today. The volume of glass used in home construction has also grown as homes have become larger. The average modest home has grown in size from about 1,100 square feet to 1,400 square feet of living space over the same period.

The growth in the use of glass for commercial buildings is even more dramatic as cities have become dominated by office towers of glass and steel.

While this direction is all fine and in line with current American trends toward light and natural surroundings, there is a downside. Open, airy, see through expanses do not come without risk. Glass houses don't like bricks! Glass doors and windows are, in the true sense, windows of opportunity for the burglar and the vandal!

The ability to secure a building or a home has become a major concern of businesses (big and small) and home owners. Common is the old *Smash And Grab* technique. Items such as computers, TVs, VCRs, purses, etc. left near a window, are often fast, easy targets for burglars. In less time than it


takes to open a door, a burglar will smash the window and grab the valuables.

Customers with large display windows and storefronts are often key targets for these criminals. In the time it takes police to respond to an alarm, the glass has been broken, the valuables lifted, and the escape made.

Also effected are homes with sidelights. As fire restrictions become tighter, and liability becomes more of a concern, the use of double deadbolts in doors near glass is decreasing. This, of course makes these entry ways vulnerable to smashing the glass and turning the inside lock to open the door.

Finally, let's not forget auto security. While radio, cellular phone and other types of auto theft are easily committed by breaking a window, a more serious type of crime is becoming more common. Using the *Smash and Grab* technique, criminals are robbing bank customers as they drive up to make a transaction at drive-through tellers. After smashing the window, the money, wallet, or purse are snatched before the stunned vehicle occupant can respond. Not only is the money gone, but there is also the danger of being cut by flying glass.

One of the latest hi tech tools to join the fight against this type of crime is safety and security films—a highly sophisticated laminated film of polyester and metallized coatings bonded by a unique adhesive system. Courtaulds Performance Films has introduced the Llummar Magnum



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As a professional in security, safety films offer you a new avenue for income as well as safety and security for your customers.


smashing his way through a display window, the police will have had ample time to respond.

In residential applications, doors near glass can be protected without adding a double deadbolt or security bars. The customer is protected from easy burglary, retains an easy fire exit, and doesn't lose the aesthetics of the sidelight.

And, in the case of the autos, not only is the smash and grab stopped, but the occupant of the vehicle is also protected from broken glass.

By adding safety films to your list of options, you can provide your customers with the security they need and the light they like.

• •

The author is Director of Sales and Marketing for Courtaulds Performance Films. For information on a Llumar installer nearest you, contact Courtaulds at (800) 255-8627. 

Safety and Security line to meet these security needs.

The new window film provides optical clarity without distortion or a yellow cloud or frosted shadow. Every Magnum film has a scratch resistant surface to assure trouble free maintenance with the most conventional methods of window cleaning.

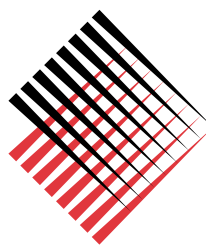
Available in three thicknesses, the film conforms to impact resistance guidelines issued by the American National Standards Institute (ANSI Z97). All Magnum films carry a five year warranty.

While these self-adhesive films are easy applied to the interior side of the glass, installation should be done through an authorized installer. The installations are quick, without mess and can be completed without interrupting normal daily activities.

While alarms are becoming a predominant part of security, their effectiveness is still dependent on the response time of the monitoring service and local police. Besides, they are typically only activated one the intruder has gained access. It is still physical barriers such as locks, lock reinforcement, and security doors that make up the deterring part of security.

Adding safety films to existing methods of security can drastically increase both safety and security for the customer, while increasing your profit.

In commercial applications, by the time a burglar has tried



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Access Security For Small Businesses

Guide your hotel and small accounts into adequate and affordable access control.

When small to mid-size hotel owners find themselves forced by the pressures of the hospitality business to upgrade their guest room security systems, the uninitiated can become overwhelmed by the available choices in hotel locks. For the novice lock buyer, the old adage "simpler is better" can guide them when shopping begins.

Typical hotel locking systems consist of mechanical locks that are opened and locked using traditional keys. If hotel owners can stay with a mechanical locking system, they will feel more comfortable and familiar with the locks' reliability, serviceability, security, and basic function.

Although electronic, computer based card reader locking systems are



widely available and represent the lock of choice for most everyone, the high cost of installing such a system and the associated maintenance and upkeep costs place electronic and programmable systems out of reach for the 10 to 150 room properties.

An acceptable alternative for upgrading is a mechanical card reader locking system - the TellCard 200 locking system from TellCard Systems being one of them.

This mechanical hotel card reader lock is a 1" deadbolt mortise lock with a possession based reader as its sensor and barium ferrite based cards as the medium.

The barium ferrite material inside the cardkeys is the same material that refrigerator magnets are made of.

Barium ferrite's reliability level is equal to that of more expensive and complex possession-based reader technologies, such as Weigand, proximity and touch/memory, yet its cost places it in the range of less expensive barcode or magnetic stripe cards.

The cardkey is made by placing a thin layer of plastic resin containing barium ferrite between two layers of PVC (plastic). After the card is made, it must be programmed so that the reader in the lock recognizes it. The cardkey manufacturer encrypts its own cards in a proprietary way.

The encryption process consists of magnetically activating the barium ferrite at various points on the card. A cardkey-based access control system must be able to accommodate multiple keying levels (up to 14 levels of masterkeying). More than several hundred million recoding possibilities must be available to avoid duplications.

Inside the reader, a series of magnets are set in rows and columns. With a card in the reader, these magnets block a shearline formed by a top and bottom plate. When the correct card is used, ferrite spots on the card repel the magnets and lift them above the shearline allowing the door to be opened.

The possession based / mechanical readers allow only one card to be used per reader. (While any number of users may have a card, all cards are the same.) When a card is lost or stolen there is no reprogramming involved. The reader is physically moved from one door to another; cardkeys stay with the reader. An Allen wrench is the only tool required to remove two screws from the reader, and a simple computer program tracks the location of the readers.

Another attractive feature for small hotel/motel owners is peace of mind in knowing what direction to take to upgrade their new system in a few years without having to start again from ground zero.

The logical next step is a sequential card reader system. The system is upgraded by installing new readers in the existing locks; new lock bodies are not required. The reader contains a specific room code and accepts a

Continued on page 14-ISC



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Continued from page 12-ISC

recycle sequence of guest cards coded only to that room. As each new guest card is inserted, the lock resets its code to match the new card, locking out the use of the previous card. After a series of four cards, the lock resets back to the first code. This sequential change eliminates the need to move readers from room to room as the reader resets itself.

An electronic card reader system using bar code cards is wrapped in a magnetic stripe envelope to provide additional security and can be used to monitor other hotel services, such as food and beverage services and amenities. Each guest room is rekeyed automatically as new cards are inserted; the new card voids the previous cards. The card reader has an audit trail that shows the last 40 entries into the room.

Because of the confusing and expensive electronic and computer-based hotel lock systems available, the simple approach is often the most attractive to small hotel/motel property owners trying to find their way through the hotel lock maze when it's time to upgrade. **INL**

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THOSE AMAZING MULLIONS!

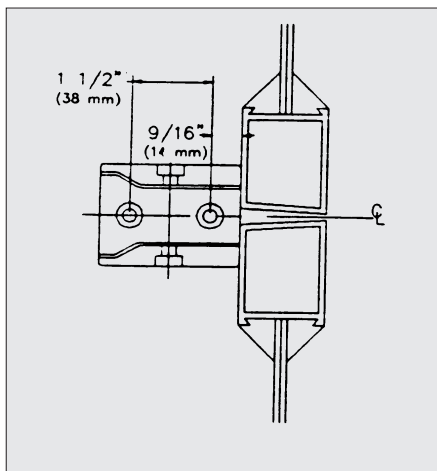


I told you a mullion times, there's money to be had in minor door and frame repair.

Removable mullions are often used in auditoriums and other public spaces with double doors or banks of doors. In the auditorium example, an entrance opening might

be equipped with a pair of doors divided by a mullion. Under normal circumstances, the mullion divides the opening, permitting good crowd control through it. In situations such as an emergency, the mullion channels traffic, permitting more orderly egress. When necessary, the mullion can easily be removed to provide unrestricted access through the opening.

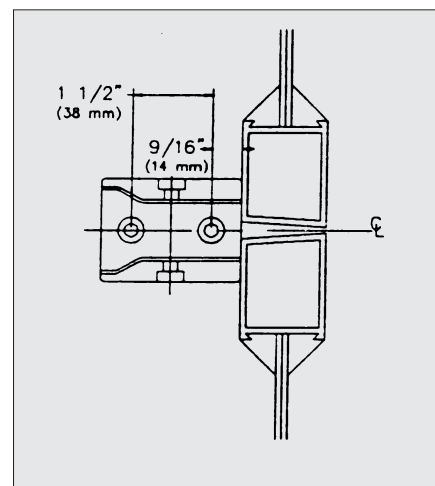
When the doors don't close and latch, covert entry is easy, or they are not sealing well, that's when the locksmith is typically called. Unfortunately, in many cases, adjusting the hardware



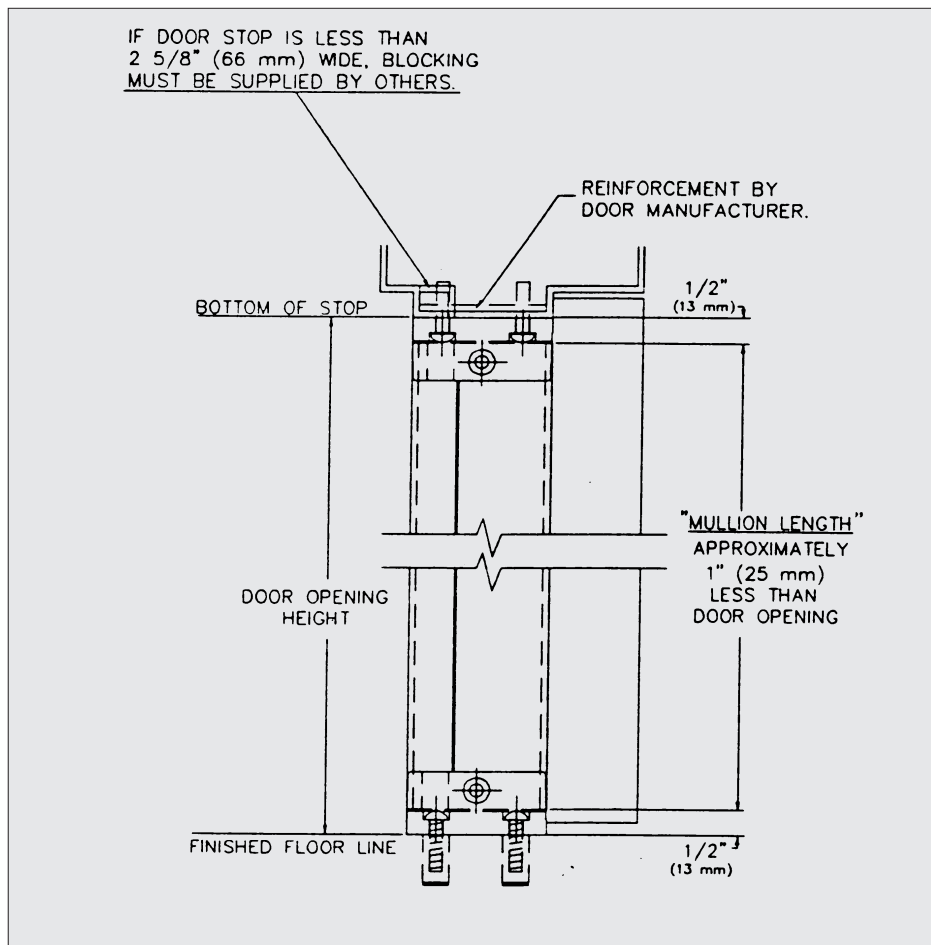
1. Use bottom fitting as template against the doors.

For the locksmith, often a hardware problem doesn't originate with the hardware. In many instances it's either an improper hardware application (using Grade 2 hardware for high traffic areas, for example), or there are problems with the door/frame to which the hardware is attached.

Where a set of double doors is involved, both security and traffic contingencies are of great concern.



2. Repeat the same for the top.



3. Cut mullion to length.

(typically vertical rod devices), adding sweeps and weatherstrip don't help, and a mullion needs to be installed or replaced. Locksmiths familiar enough with these conditions realize how simple and profitable a mullion installation can be. For those unfamiliar with an install - continue reading and reap the profits.

There are a variety of mullion types and styles available on the market today. Among the three offered by American Device, its newest is the 1310 aluminum mullion, designed especially for narrow stile doors but can be used wherever circumstances dictate.

Installation is a straight forward, five-step procedure which can easily be accomplished by a locksmith.

Step 1

Use the bottom fitting as a template, placing it on the floor against the doors. Line up the center lines as shown in illustration one. Mark and drill two 17/32" diameter holes 5/16" deep. Insert two 1/2" diameter lead anchors and mount the bottom fitting with two 12-24 x 1" pan head bolts.



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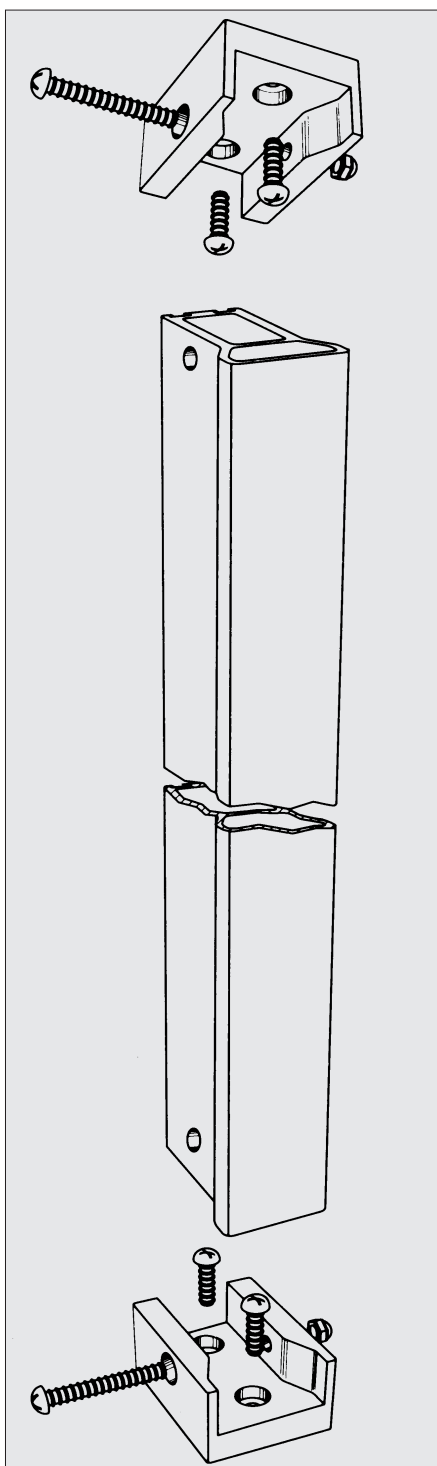
[Click here for more information](#)



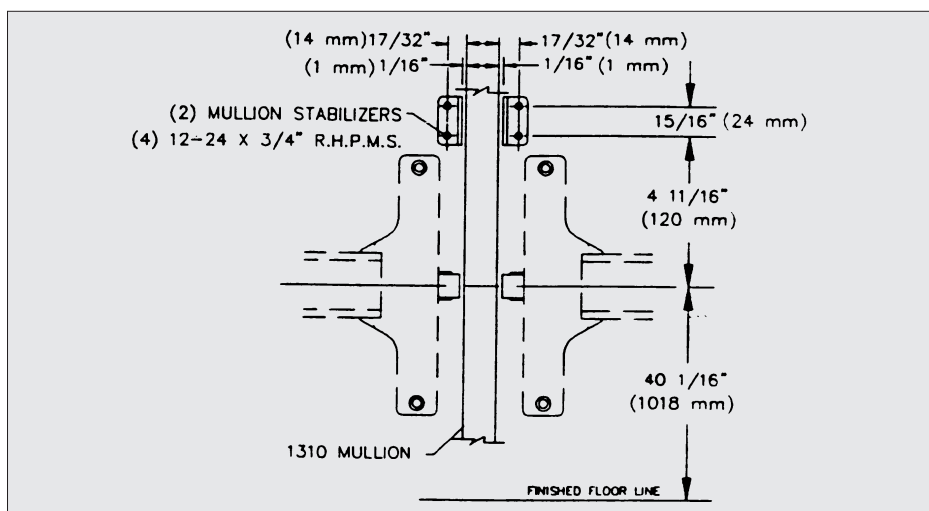
Step 2

Repeat this step for the top, using the top fitting as a template. Place it at the top of the door opening (bottom of the stop) lining up the center lines as shown in illustration two. Mark and drill two #16 (.177") diameter holes; tap for a 12-24 thread. Install the top fitting using two 12-24 x 1" pan head bolts.

Step 3



4. Install the mullion.



5. Install the stabilizers to complete the job.

Measure the distance between the top and bottom fitting as shown in illustration three and cut the mullion to length. *Do not* cut the bottom of the mullion.

Step 4

Slide the mullion into place and install the bottom mounting bolt (1/4-20 x 17/8" pan head bolt) by sliding it through one side of the bottom fitting, through the mullion and out the other side of the bottom fitting. Fasten with a lock washer and acorn nut. Using the top fitting as a template and guide, cross drill a 17/64" (.265") diameter hole through the mullion. Install a

lock washer and acorn nut as above. (See illustration 4.)

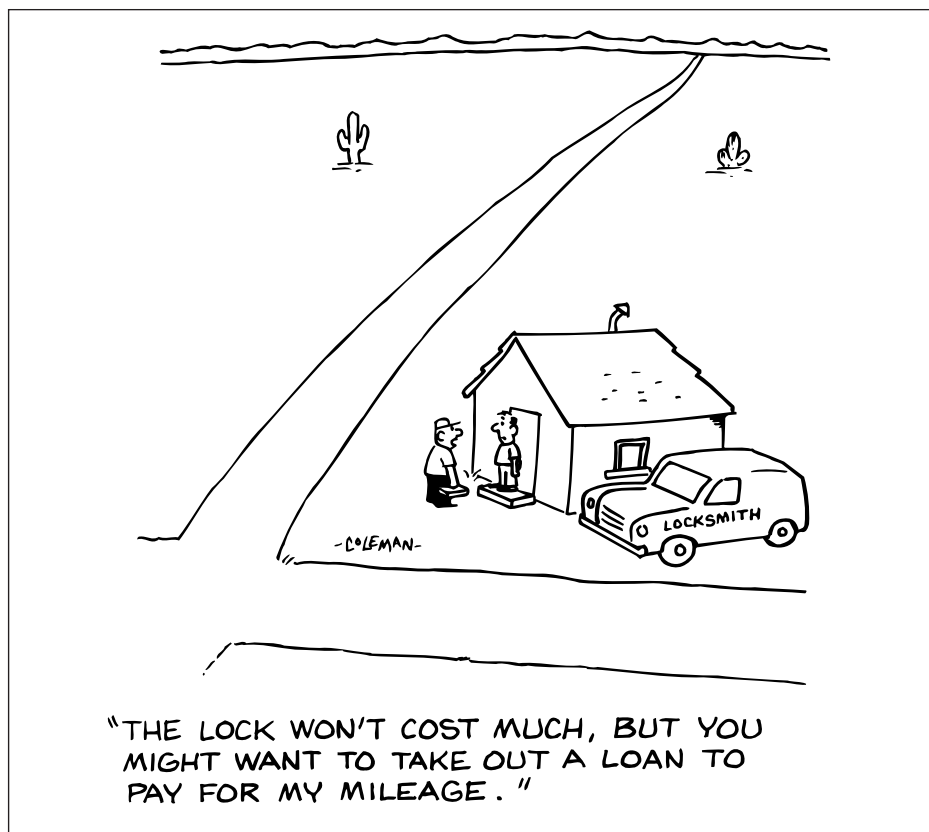
Step 5

Install mullion stabilizers just above the exit device heads as seen in illustration five. Drill four holes using a #16 drill then tap for 12-24 x 3/4" bolts.

Now, aside from the exit device installation, you're done. Check the doors for operation, collect your money, and enjoy.

For more information contact an American Device distributor, or call American Device at (618) 965-3491.

TNL





THE SILENT PARTNER

by Steve Gebbia

**He won't talk back
and you don't need
to keep him supplied
with donuts and coffee.**

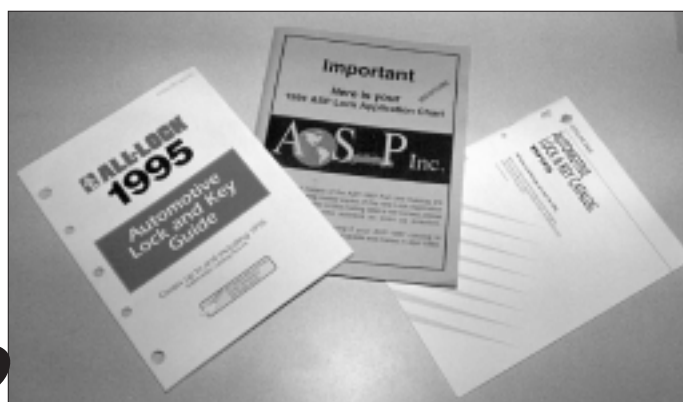
**Reference manuals are truly the
perfect silent partner.**

What is the perfect silent partner? Someone who helps out when needed, keeps his mitts out of your business, doesn't mouth off, and doesn't ask for anything in return. Does he exist? Yes. But he isn't a person. Or a machine. The perfect silent partner for the locksmith is a book. Actually, a whole bunch of books. Reference manuals are there when you need them, tell you exactly what you need to know, and then sit on the shelf waiting until the next time you need them. What could be better?!

Like partners, they come in all shapes and sizes and have different specialties. Some of the most useful cover Auto Servicing, Auto Opening, Safe Opening, and don't forget code books. With each of these specialties, there is so much information to know that it is very difficult - if not impossible - to remember everything you need to know about each



1. AutoSmart is an excellent reference manual for fast, on-the-road information on foreign and domestic automobiles.



2. Manufacturer catalogs like those from All-Lock, Auto-Security Products and Strattec offer excellent and much needed information.



3. New to the automotive locksmith is the NLAA. Devoted entirely to automotive locksmithing, this organization develops and offers reference material not only through bulletins and newsletters, but also through E Mail!



4. Offered by The National Locksmith is the All-Lock Car Entry Manual. Other excellent manuals and tools are offered by HPC, Slide Lock, Tech Train, and High Tech.

particular lock. This is where reference manuals really shine. As you prepare for a job, simply reach for the appropriate manual and find out exactly what you will need to know how to service that lock or safe properly, efficiently, and profitably.

Automotive Service Manuals

Everybody's aware of the changes in the field of automobiles. Systems are becoming more complex, part numbers double on a daily basis, and keeping abreast of servicing them has become a real challenge. The auto industry is constantly changing the type of locks used on new cars. Every year there are several new locks on the market. Because of this, constant updates and new editions of the manuals are required.

Some of the best service auto lock reference manuals on the market are "AutoSmart" and the Lynn Hawkins Foreign Auto Manuals by The National Locksmith magazine

AutoSmart is a quick, one stop auto reference manual, combining all the various reference information into one handy volume. It is conveniently divided by make and model. Because it is a loose-leaf style book in a three-

ring binder, updates can be placed where they belong - with vehicles of the same make and model. (See photograph 1.)

Another similar manual is "The Foreign Car Information Book" by Baxter. While not as comprehensive as AutoSmart, the Baxter manual is accurate and includes just about every car imaginable.

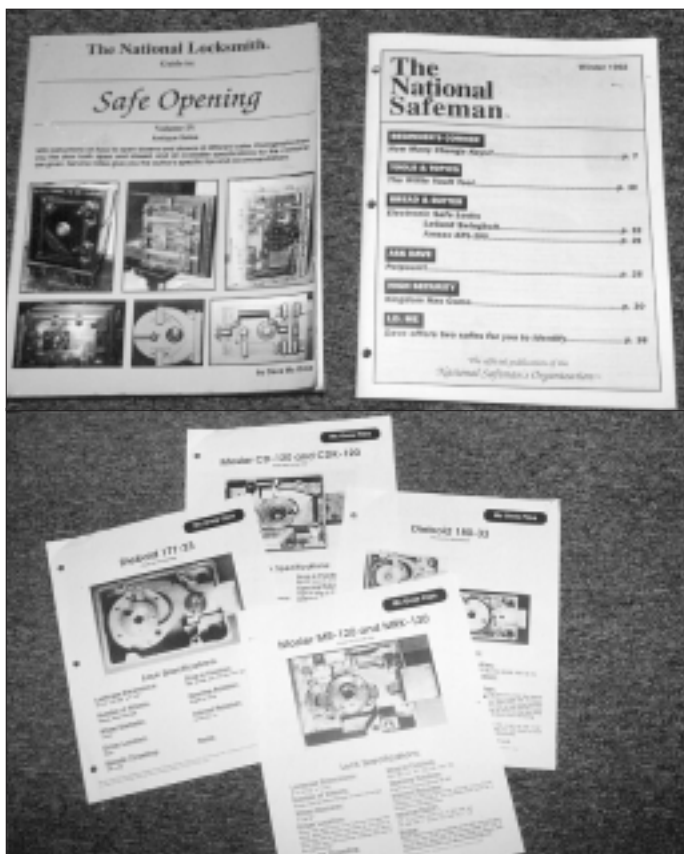
Another excellent source for locating information on the various autos is through manufacturer catalogs. All-Lock and Strattec provide a comprehensive array of lock and key applications, as well as cross reference parts lists. Auto Security Products provides a an extensive line on foreign lock applications. Each year these companies print an updated application guide to help you determine which lock is used on your customer's car. (See photograph 2.)

Finally, let's not forget a newcomer to the automotive reference family - the National Locksmith Automobile Association. The first and only one of its kind, the NLAA provides current information on opening, key generating, service procedures and problems for all makes of vehicles.

While most information is contained in regularly mailed newsletters and bulletins, personal technical help is available via both phone and E Mail. As an association, not only is the reference material available, but help from a network of manufacturers, distributors and other automotive locksmiths. (See photograph 3.)

Automobile Opening Manuals

The insurance industry is tired of paying out on claims for stolen autos. They have 'persuaded' the auto makers to improve the security of their vehicles. And improve they



5. The National Locksmith and the National Safeman's Organization both offer thorough and accurate information on safe service and opening.

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SRi and Steve Young are working together to bring you the best in locksmith tools and supplies.

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did! Cars are getting harder to open, special tools and training are required to open even the least expensive vehicles. This is great news for locksmiths - if they are prepared.

Several manufacturers produce tool sets with instruction manuals to guide you through the opening of any vehicle on the market today. As every locksmith has his own preference, you will need to decide which set is best for you.

Steve Young of Tech-Train has an excellent manual that not only tells you how to open the door, but also shows you with photos and diagrams the inside of the door panel. Updates are easily inserted into the loose-leaf style book. In addition, he has a series of videotapes on opening cars that are updated regularly to include new vehicles as they are introduced.

Video tapes are especially effective because you can speed it up or stop and review the tape at any time. In fact, with the tapes on auto opening, this is highly recommended. View the full tape and then go back and look at sections of it again. And again. By constantly reviewing the tape, the information stays fresh in your mind.

Other car opening and service manual manufacturers include HPC, Slide Lock, High Tech and *The National Locksmith*, all have their own offerings in automotive opening manuals, reference material and technical assistance. (See photograph 4.)

Reference material like this makes it easy to learn how to service the newest of auto locks. Unlike one-day seminars, tapes and manuals are always there for you to review. You probably won't be servicing these newer locks and steering columns on a daily basis, so it is nice to be able to quickly review the procedure before heading out to service one. And unlike a classroom, you learn at your own pace.

Safe Opening Manuals

Opening a safe in an efficient and professional manner requires a great deal of information. As Dale Libby says: "Attack the lock, not the safe." In order to do so, you must first identify what type of lock is used and



6. Don't forget manufacturer catalogs and service manuals. They are usually free and offer a wealth of information.

how it is mounted.

Just opening the lock isn't always enough though. You may arrive to find a lock that is malfunctioning. Whether caused by neglect, abuse, vandalism, or attempted burglary, it is your job to open the container. Knowing in advance about hardplate and the location of relockers will make your job much easier.

You need to know the type of lock used, how it is mounted and how it is protected. With the variety of safes and safe locks produced in the last hundred-or-so years, this is asking quite a bit.

The National Locksmith produces several excellent references for safe technicians. "The National Locksmith Guide To Safe Opening" is a series of bound books that list safes alphabetically by manufacturer. Each listing shows a photo of the container, a photo of the lock as it is mounted, and detailed servicing information. This includes drill points, mounting location, lock type, and information on hardplate and relockers. There is a wealth of information in these pages to help you quickly identify the lock used on a particular container.

"The National Locksmith Guide to: Manipulation," "The Best Of Dale Libby," and other reference manuals are equally as important and offer the locksmith fast, accurate information on safes.

Are you looking for more information on a particular lock? Like the NLAA the National Safeman's Organization offers newsletters and bulletins, as well as technical assistance. The McOmie Files is a

series of loose-leaf pages that can be placed into a three ring binder. Each page has a photo of a particular safe lock and any information about that lock that you are likely to need. Used together, these two references provide the information you need to identify the type of lock and how it is mounted and protected. (See photograph 5.)

Another organization offering help is the Safe and Vault Technician's Association (SAVTA). Or, Lockmasters, who offers both resident and correspondence courses as well as training manual and aids for safe work. Armed with this information, you are ready

to tackle the toughest challenge.

Manufacturer's and Distributor's Catalogs

Another good source for information on locks has always been the catalogs from your distributors and from manufacturers. While the Distributor catalogs may not have application guides, most distributors have a support staff available to assist you in selecting the proper lock. It is their business to know the products they stock and sell.

The manufacturer's catalogs usually contain exploded view diagrams of their locks. These, combined with parts listings, will help you get replacement parts for their products. Many manufacturers also publish factory service manuals for particular locks. These show exactly how to disassemble and service each product in that particular line. Exploded view diagrams and parts listings are shown for each function of that lock. (See photograph 6.)

As you can see, there are many silent partners out there just waiting for a chance to help make you a better locksmith. Unlike most, these don't want a share of your profits. In fact, they often pay for themselves within a few service calls. Plus, you don't even have to bring them coffee and donuts.

Do you still say you don't want a partner? Go ahead and get one today. Better yet, get as many as you can. The initial investment is quickly recovered. You will be able to do old jobs quicker and take on new jobs that you currently shy away from.

The best investment you can make in your business is knowledge.

TECHNITIPS

Helpful hints from fellow locksmiths

Send in your
tips and win.



by
Jake Jakubowski

HOW TO ENTER

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

BEST TIP OF THE MONTH

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

EVERY TIP PUBLISHED WINS

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

America Online: NATL LOCK

Use the above address if you are on AOL.

Internet: natllock@aol.com

Use the Internet address if you are not on AOL.

These Prizes Awarded Each Month!

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

Submit your tip and win!

Hey, y'all! I jes' want to thank everyone that's been sending me their tips and to remind the rest of y'all out there that we're fast coming to the close of another Technitip year. Which means that we're getting close to having a year-end drawing for some really great prizes. Like a Silca Matrix key machine and bunches of other good stuff!

The reason I'm a' telling y'all this, is to let you know that there's still time for y'all to send me your tips, tricks and ideas. Like I've said before, I may not use every one

that's sent to me - but every one that I do use gets a prize for the month that I use the tip and is eligible to participate in our year-end drawing too!

So, friends and neighbors, git your pencils and paper out and write them ideas down and git 'em on in here. Like, immediately or sooner!

'Sides, when you send me your tips you help to make your Technitip column the best there is. And, I surely 'preciate that. Y'all heah?

All-Lock Foreign Auto Service Winner Aspire Progression Chart

As many locksmiths may have already found out, the Ford Aspire is a different animal. The key blank for this car is the H70 (ILCO) or Silca's FO34. The code is not stamped on any of the locks and can only be found on a small metal tag that is attached to the original keys at the time of sale.

The ignition uses spaces one through eight and the door uses spaces three through ten. That means if you are trying to generate an operating key by removing the door lock, you are left with spaces one and two to progress before you can obtain

a working key for the ignition.

I have found that the easiest, at least for me, method of generating a first key for this vehicle is to remove the door or trunk lock, sight read the wafers through the drain hole and progression cuts one and two to obtain a master key for this car.

Since, like the older GM and Ford 10-cut locks, the Aspire has a MACS of only two, it is fairly easy to progression the ignition key once you have an operating door or trunk key. To further simplify the progression, I have developed the

Continued on page 83

Continued from page 81

following Ford Aspire progression chart.

If your third cut is a #1, progression your key as follows:

First Key

- 1-1
- 2-1
- 3-1
- 4-2

Second Key

- 1-2
- 2-2
- 3-2
- 4-3

Third Key

- 1-3
- 2-3
- 3-3

If your third cut is a #2 progression your key as follows:

First Key

- 1 1
- 2-1
- 3-1
- 3-3
- 4-3

Second Key

- 1-2
- 2-2
- 3-2
- 4-2

Third Key

- 1-3
- 2-3
- 2-4
- 3-4
- 4-4

If your third cut is a #3, progression your key as follows:

First Key

- 1-1
- 2-1
- 3-1
- 3-2
- 3-3
- 3-4

Second Key

- 1-2
- 1-3
- 2-3
- 2-4

Third Key

- 4-2
- 4-3
- 4-4

If your third cut is a #4, progression your key as follows:

First Key

- 1-2
- 2-2

- 3-2
- 4-2
- 4-3
- 4-4

Second Key

- 1-3
- 2-3
- 2-4
- 3-4

Third Key

- 3-3

Hope you find this chart as useful as I have.

Jay Christie
Via E-Mail

Editor's Note: For more information on servicing the Ford Aspire, refer to Michael Hyde's column in the September 1994 The National Locksmith, page 21. In that article, Michael covers opening the car and generating keys for it. Although he did not include a chart like the one above for progression the master key for this vehicle.

**STRATTEC Pinning Kit & Jacket Winner
Homemade Power Supply**

I have found that when installing or repairing electric and electro-mechanical locksets, magnetic locks or panic/exit devices, it is handy to

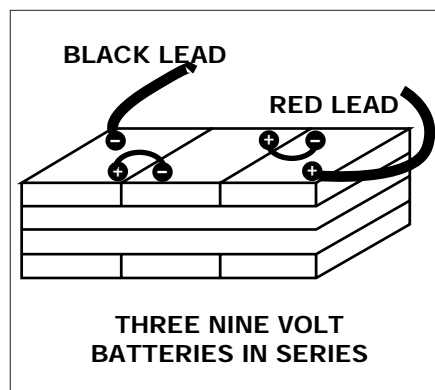


Illustration 1.

have a portable power source to check the lock mechanism after a repair or before powering up a newly installed system. Here's a way to make your own economical portable power supply by using three 9-volt batteries wired in a series. (See illustration 1.)

First tape three, fresh, 9-volt batteries together to form a pack. Next, make a positive lead by soldering an alligator clip to a length of red wire (6" to 12" long) and a

negative lead with a length of black wire and an alligator clip.

Next, wire your three batteries in a series (which will give you a power supply of 27-VDC) by connecting the negative terminal of one battery to the positive terminal of the next battery. If you have wired them properly, you will then solder your red lead to the positive terminal of the first battery and the black lead to the negative terminal of the third battery

To test your 24-VDC lockset, simply attach the alligator clips to the appropriate leads and check the function of the lock, panic/exit device, magnet or strike. I have even found this to be an effective way of testing Von Duprin's EL bars, if the batteries are really fresh or by using two portable power packs.

John Matteson
Via E-Mail

Editor's Note: By salvaging the "clip pads" (that connect an electronic device to a 9-volt battery power source) from old exit alarms or other hardware, you could make a reusable harness for a portable power supply rather than having to solder new connectors each time you wanted to make a fresh tester. Also, by using the proper voltage batteries, you can make relatively cheap testers for any VDC lockset you were working with. Good tip John!

**American Lock & Supply Winner
GM 6-Cut Ignition Keys**

Here's a tip that my fellow locksmiths might find helpful for generating an ignition key for '95 model GM cars that still use the 6-Cut wafer system. I have used it with good success.

Use a good otoscope to look down the keyway. You will find the depths of the wafers are stamped on the face of each wafer facing the viewer! Simply read the number and cut a key accordingly.

Not every GM vehicle you come across will have this feature. But, on those that do, you no longer have to tear down the steering column to generate the key. I have also found this helpful numbering system on some 1994 models.

All it takes to find out is a peek down the keyway. Just one look and you could save yourself a lot of time and aggravation.

Tim Cobb
Via E-Mail

HPC Pistol Pick Winner
Illinois Plug Removal

Here is a service technique that I have found to be successful when servicing Illinois Duo and standard double sided disc locks.

When faced with a lock out on these locks, you will sometimes find the code stamped on the face of the lock. If the code is visible, simply cut the proper key and be done with it. However, the code is often found on the rear of the plug and not visible without removing the plug from the cylinder.

These cylinders are generally held in by an internal retaining ring that is not accessible unless you have a key. This is where my trick comes in handy.

Per illustration two, drill and tap a hole where indicated to accept a #6-32

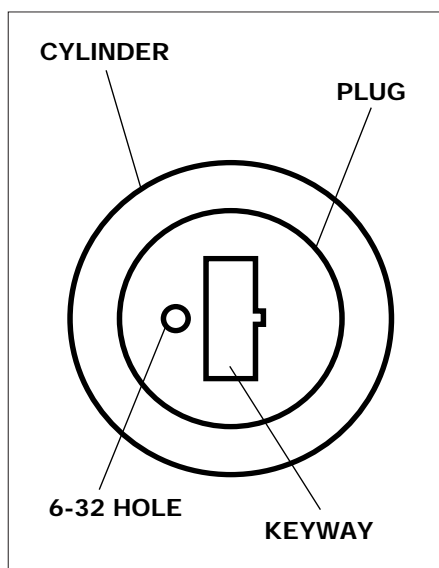


Illustration 2.

screw. Do not drill your hole more than 3/16" deep. Insert the screw and using an automotive lock extractor, pull the plug out of the cylinder housing. Once the plug is removed, the bolt can be probed back to the open position.

At this point, you have the option of replacing the lock or generating a key for it after obtaining the code from the rear of the plug. If you generate a key, the next step is repairing the lock.

The repair is usually only a matter of snapping the retaining ring back to the plug and "popping" the plug back in the cylinder. Before replacing the plug make sure to "deburr" it and the cylinder, if necessary. Finish the repair by cutting off the screw and gringing or sanding it flush.

John Carty, CJS
Via E-Mail

Editor's Note: If you're going to use force, better plan on replacing the plug. Even if it looks repairable, why take chances?

Silca Rubber Headed Key Blanks
Winner

Laminated Padlock Repair

We frequently have customers bring in either #3 or #7 Master padlocks that they want keyed alike, but don't want to wait for us to order them or spend the money for a mate to one of the locks that they already have.

To key one of these locks to their sample key requires cutting or grinding off the rivets on the bottom of the lock case, pulling the segments apart, removing the cylinder and rekeying it. Then, of course, you reverse the process when reassembling the padlock.

Unfortunately, the rivets tend to be a little too short to peen over on the bottom of the lock case sufficiently to hold the segments together.

To solve the problem, we have found that since the cylinder is somewhat loose in the case, there is enough room to leave out one segment and still have the lock

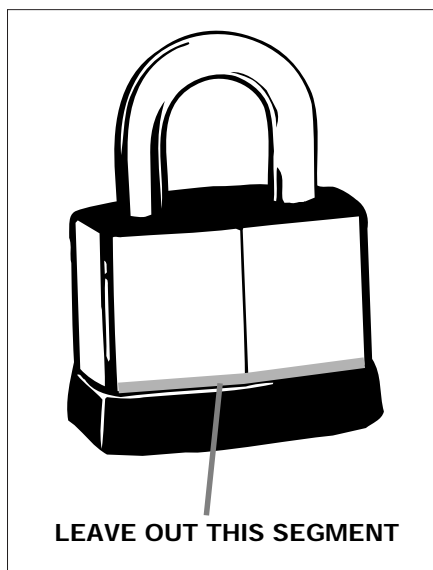


Illustration 3.

function properly after it has been reassembled. We leave out the segment immediately above the rubber bumper with the name stamped on it. (See illustration 3.)

George Lazich
Via E-Mail

Pro-Lok PK15 Professional Lock Pick Set Winner

Schlage IC Core Rekeying

Here are a few useful hints for locksmiths that are called to repin Schalte removable cores.

When removing the cylinder cap on Schlage removable core cylinders, a Weiser Cylinder Cap Tool with the round notches works well. However, you need to cover the hole in the tool with your finger to prevent the retaining pin from flying away should the tool get a little off center.

When rekeying these cylinders, it is good to develop the habit of holding your finger over the control pin as you dump pins from the plug. Otherwise you may spend unwanted time searching for this specialized pin among your scrap brass or the floor of your van.

And, in a pinch, you can make a control key for these cylinders from a standard 6-pin blank by filing the shoulder back to correspond to a 7-pin blank. Then duplicate the customer's key, and in the seventh space cut the key to a #6 depth. Run the cut off the tip of the blank so the tip is perfectly flat.

Lyn Behm
Utah

Sieeking Products EZ-Pull GM Wheel Puller Winner

Strike Mortising

Here's a quick tip that makes for a more professional looking job when installing deadbolt or door knob strike plates. I screw the plate onto the jamb first and then use a razor or knife blade around the edges of the strike plate rather than marking it with a pen or pencil.

Then I unscrew the strike plate and chisel out the wood between the cuts that I made. This really helps me to get "sharper" edges for the strike installation - especially in older homes with many coats of paint on the jamb that will crack off in large chunks if you just try to chisel them out.

I know there are strike mortising tools on the market, but even these can cause chipping and splintering when the door or jamb has been heavily repainted time and time again.

George Henderson
South Carolina

A-1 Security Mfg. Quickpull
Quick Tryout Keys

If you have a set of H51 Ford tryout

keys for earlier Ford ignitions, you can duplicate them to make a set of tryout keys for older Ford doors, glove compartments and trunks (Using the H50 blank to duplicate on). These will also make excellent tryout keys for newer model Ford product trunks and glove boxes.

In order to duplicate the H51 tryout set onto H50 blanks, place your H51 in the left vise of your duplicator. Then place an H50 blank in the right vise with a shim behind it (I use the shim from my code machine) to properly align the H50 blanks

Remember that the H51 has two tryout keys on each blank (one on each side) to you need to flip each key over and duplicate each side to have a proper tryout key.

I have found these H50 tryout keys to be about 85% effective when making trunk keys or just opening locked vehicles.

Phil Lanier
N. Carolina

Major Mfg. Product Winner
Medeco Key Adjustment

When I cut Medeco keys on my HPC 1200 CM, I find that I can get a

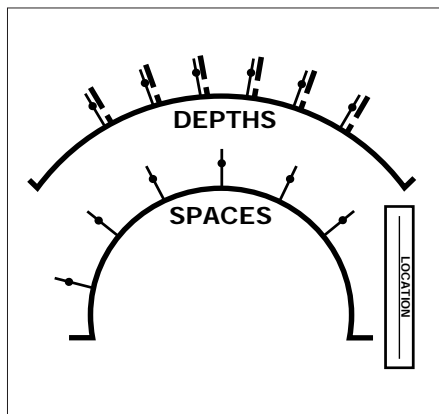


Illustration 4.

smoother working key if I cut the keys just a slight bit deeper than the code card calls for. (See illustration 4.)

As per the illustration, I cut the keys about 1/8" past the depth shown on the card which seems to allow the key to work smoother.

Phillip M. Loftus
New York

Editor's Note: I have experienced the same situation using my 1200 to cut Medeco keys. When cutting Schlage, Sargent or Russwin I don't seem to need to deepen the cut. Anyone out there have any ideas about this? If so, I'd sure like to hear from you.

Technitip Hand Book Winner
Space Indexing

If you don't have a code machine or space and depth keys handy, here's how you can determine the spacing for a key that you have to impression or generate an original key.

Use "White Out" to coat the top edge of the key blank. Then insert the blank in the plug and using a paper clip, scratch awl or dental tool insert the tool in the chamber and rotate it. This will scrape away the white out and leave a very clear mark at the proper space.

These marks are easy to see even at night and help you to generate the key you need.

Charles Osborne
Virginia

Golf Tee Hole Filler

Golf tees make excellent hole fillers when trying to realign strikes of fill in wallowed out holes in door jambs.

Just gently hammer one into the hole, cut off flush, drill a small pilot

hole in the proper location and insert the new screw. It's held tightly and firmly in place.

Juanita Ramsey
Texas

Trilogy Install Tip

When instating the Alarm Lock Trilogy, drill all of your holes as you would for a Simplex 1000. This will give you a very convenient hole to store the extra length of wire Alarm lock provides you with. Also, you won't need to buy any new installation jigs.

And, if for some reason, you would later need to install a Simplex on the door, the mounting holes are already there.

Steve Kaschimer
Arizona

Silicone Keys

Try using silicon cloth (which you can obtain in sporting goods stores) to wipe off your keys after cutting. This will put a small amount of silicon lubricant of the key blade.

That will make it easier to insert the key into the keyway and saves a little wear and tear from abrasion.

Ed. Steedle
New York

GM Pick Vibrator

I use a pick gun with an offset needle as a vibrator when using my R&D GM lock pick set. It works especially well on the GM trunk locks with decorative trim.

Dominick Atansio
Via E-Mail



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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.

BITS & PIECES

Informative Tidbits for the Security Industry

HPC, Inc. announces the acquisition of Scotsman Security Products. As of June 12, 1995, HPC took over the production of the Scotsman line, which includes tubular key machines and tubular blanks, door guards and cylinder guards. This new acquisition will greatly enhance HPC's vast line of key machines and door hardware.



by
Tom Seroogy

With HPC's years of experience in key machine development and production, the Scotsman tubular key machines are sure to continue increasing in popularity.

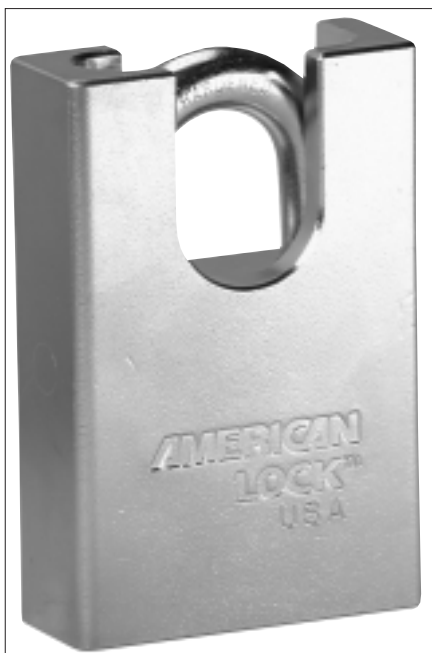
The Scotsman DorGards are also a welcome addition to HPC's long line of door products. The DorGard is already specified into the blueprints for banks in Canada, and are increasing in popularity in the United States as well.

All production will take place in HPC's Schiller Park, Illinois, facility. All products are available immediately. Call HPC with any questions at (708) 671-6280.

I'd like to include a correction, here. Our June 1995 issue premiered the Reader's Choice Awards. Award winner American Lock was chosen for their Model 748 Padlock. The accompanying picture, however, was that of American's Series 2000 lock. (See photograph 1.)

Also mistitled was our Beginner's Corner article. Here, American's Series 2000 padlock was inadvertently called the Series 6000. (See photograph 2.)

We apologize to President Bill Noone and the rest of the folks at American Lock for the errors. Your progress in expanding the American padlock line are to be commended.



1. The real American Lock Model 748 padlock has a shrouded U-shaped shackle radius to resist prying. The replaceable shackle is made of a hardened boron alloy steel, three times the tensile strength of its predecessor.




2. The American Series 2000 shackleless padlock has always been a favorite for utility and service vehicle owners.

Every month we get several calls requesting parts information for Steelcase and Hon file cabinets. In general, Steelcase is typically fit with Chicago locks; Hon locks are manufactured by ESP. When needing service or part information on cabinets from Steelcase and/or Hon, Steve Stegle of American Locksmith out of Elgin, Illinois, recommends calling these numbers: Steelcase (800) 227-2960. Hon (319) 264-7361. Thanks Steve!

We've also been getting quite a few questions regarding the different length GM 10-Cut ignition key blanks. The standard blank has always been the B82. However, with the 1995 Cavalier becoming a single key car, it was discovered that the B82 is too short to properly operate the trunk or deck lid lock. The proper key for this vehicle is the B86 or P1106. Although longer than the B82 predecessor, the B86 will work in all GM 10-Cut vehicles and will replace the B82 when necessary.

NLAA tip of the month: Late model GMs with radio control hornpads will have a radio lockout system to deter theft. The radio system operates normally whether armed or disarmed. When armed and power is removed (simulating a theft) the radio will lockout and prevent further operation. Problems usually occur when a locksmith removes the battery to remove the airbag module from the steering wheel. When the job is complete and power restored, those radios left in the secure mode will lock up and cannot be used. To clear the radio, a code number must be entered. If the code is not known, it must be taken to a dealer for resetting.

Two systems currently exist, the Delco Loc II, using a six digit code, and the Theftlock system, using a four digit code. Delco Loc II is typically used on models with cassette decks, while the Theftlock system is used on units with CD players. Radio packages with the Delco Loc II system will usually be labeled as such. Units with the Theftlock version have Theftlock and a LED display on the face of the radio. For more information on this system and its operation, see the NLAA Spring 1995 Newsletter.

Also, NLAA members, don't forget to join myself, Tom Mazzone and Michael Hyde on line! 



AVOIDING EXIT ALARM

Some simple tips on avoiding the most common installation/service errors

by Steve Gebbia

Oops!

That's one word a customer doesn't want to hear. Unfortunately, mistakes happen. Happily, most can be prevented by a little thought and preparation. By being thoroughly familiar with the product you are installing, you can avoid common pitfalls.

Detex has made several improvements to their 230 series exit control lock to ease installation and service. (See photograph 1.) Many of these changes have solved common installation problems. However, several mistakes are still being made in the field. Knowing what they are

can help you avoid the same problems.

Installation Location

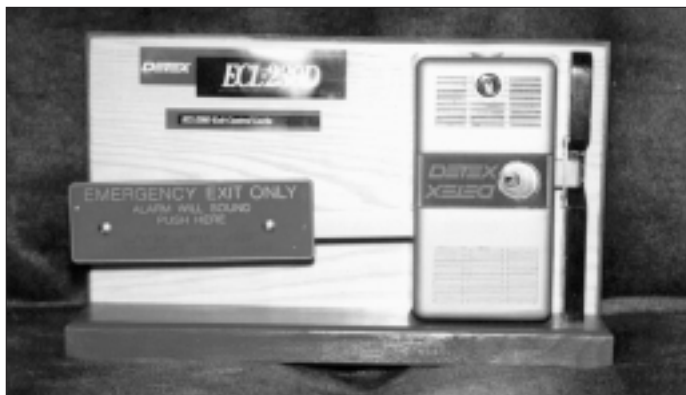
One common problem novice installers have is locating the device and exterior cylinder hole at the correct location. The 230D uses the back mounting plate as a template for locating the mounting holes. But the back plate must be located at the proper backset. To facilitate this, the back plate has two small studs to locate a paper template. Two paper templates are used - one for a surface mounted strike plate and one for a mortised strike plate. By using the proper paper template, it is now quite

easy to correctly locate the device on the door.

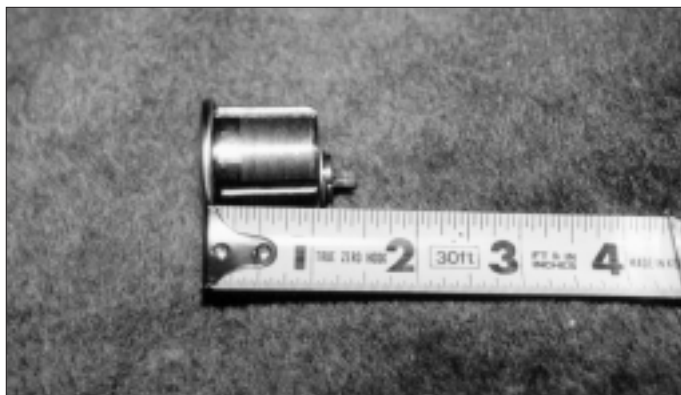
Locating the outside cylinder hole is just as simple. On the back plate are two indicators for locating the cylinder hole. One is for a right hand reverse bevel door (RHRB) and the other for a left hand reverse bevel door (LHRB). Simply choose the appropriate hole for your particular door.

Interior Cylinder

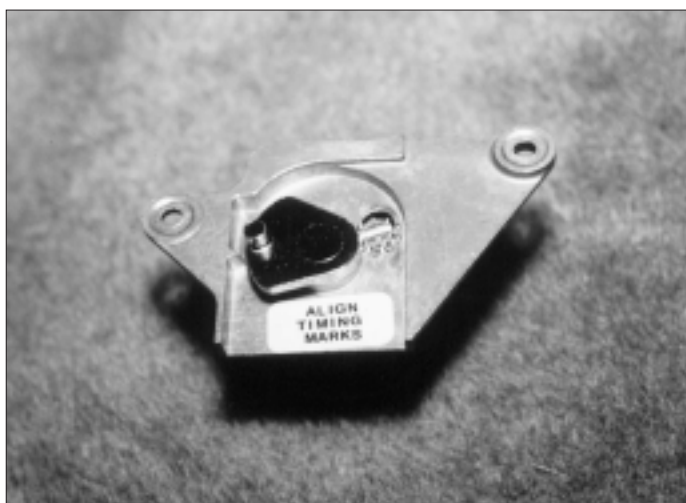
The length of the interior cylinder and tailpiece is critical to proper operation of the device. Left too long, the tailpiece binds, not allowing smooth operation. Left too short, the cam will not operate. It is quite easy to determine the proper length. The



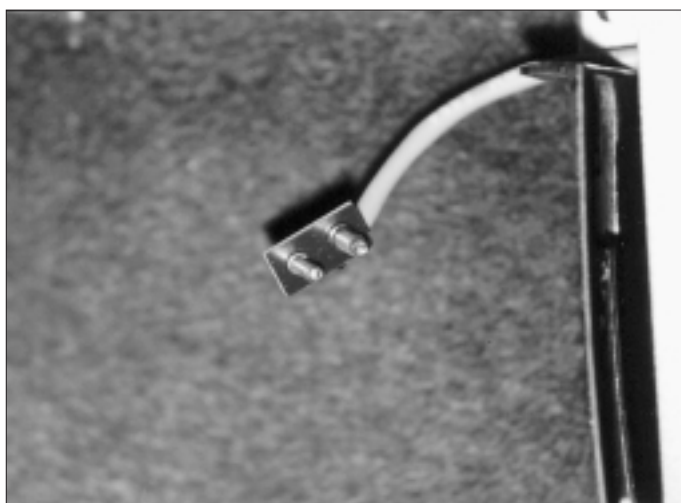
1. A well known exit alarm, the Detex 230 has made changes to make installation easier.



2. For proper operation, the overall length of cylinder and tailpiece must be 1-1/2".



3. The cam must be properly aligned with timing marks once the cylinder is in place.

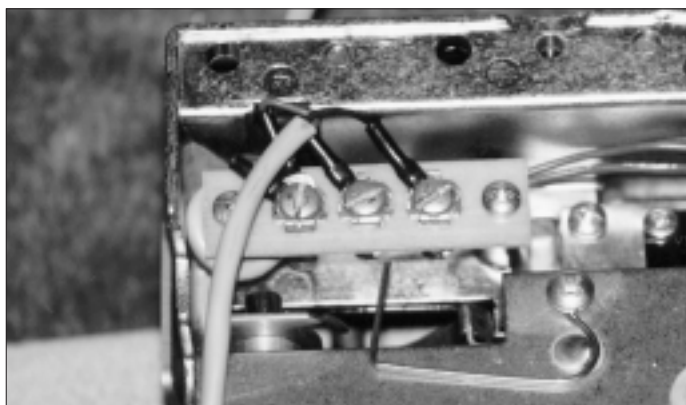


4. This is a common battery connector for the Detex 230 exit alarm.



ERRORS

on the Detex 230 exit alarm.



5. If the battery connector is damaged, replace it.

overall length of the cylinder, from the back of the face to the end of the tailpiece, must be 1-1/2". (See photograph 2.)

Some 6 pin cylinders exceed this length requiring the use of a small spacing ring. However, this may cause the face of the cylinder to extend too far from the device body. Remember that the cover must be able to slide past the installed cylinder.

Another problem concerns the proper timing of the interior cylinder. On the back of the cam bridge assembly (cylinder mounting unit) is a set of timing marks that should be lined up during installation. (See photograph 3.) Unfortunately, installers don't always pay close enough attention to these marks and they are often left not aligned. Unfortunately, there are a lot of newly installed devices that are not timed properly.

Batteries

The 230D comes from the factory with the battery inside a plastic bag. This bag is to protect the lock mechanism from any battery acid that may leak out. Replacement batteries should also be placed in a leak proof bag. This simple measure can save your customer the cost of replacing the entire device when he forgets to check the battery on a monthly basis.


The Detex 230 series, from 230H to 230D, all use the same battery

connector. (See photograph 4.) The battery has two holes in the top that this connector pushes into. When replacing the battery, use the same style of battery. These are available through locksmith distributors, Radio Shack and other electronic supply stores. If you don't

have one with you, buy one and install the correct battery.

Using the incorrect battery may cause a possible short circuit. Most of these devices are in very high traffic areas and receive more than their fair share of abuse. This can cause the battery to slide around within the device. With other styles of batteries, the contacts are exposed and may make contact with a metal surface.

If the wiring harness is damaged by acid or corrosion, replace the harness. Photograph five shows the wiring terminals located on the rear of the device. Simply unscrew the terminal block screws for the old connector and tighten the screws on the new harness leads. This is a simple, inexpensive repair that restores the device to factory-original condition.

As we go into the field, we find many of these errors made as a result of a carpenter, alarm installer or end user performing improper installation or service. As locksmiths, however, each of these mistakes must be avoided. Before installing any product for the first time, it is a good idea to sit down and read the instructions all the way through. Compare the instructions to the device so that you are very familiar with its operation and how it applies to that particular installation. This should be a normal part of your routine. After all, you are a professional. 



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with the
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To Transfer Or Not To Transfer?

That Is The Question!

To Transfer, or Not to Transfer is an important question when deciding where to drill to open a safe or money chest. There is no absolute answer for this. Your decision will be made according to several factors about the safe or lock you are drilling. Many considerations are listed here to help you decide what is best. I will, of course, list my general findings at the close of the article.

1. The emergency dial set with dial templates in custom routed storage case. Very nice.

If you have decided to drill open a container, your first decision is where to place your first effort.

Whether to transfer or not depends on your drill point, the drill point depends on the problem. Let Dale walk you through the process.



by
Dale Libby

Regardless of the drill point, if you are going to drill into the lock, it will be compromised and need to be replaced. If the lock needs to be changed or retrofitted, anyway, then the point of penetration does not matter, and it is best to drill to give you the most advantageous view of the lock's interior.

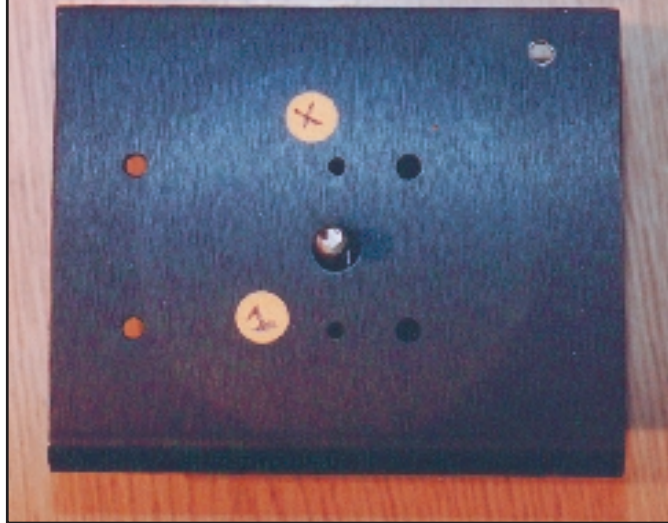
The first consideration is discerning the exact problem with the safe. If it is a lost combination or a reset relocker, the positions of the holes will be different. If the safe combination lock is malfunctioning, then another hole location will be needed.

A way to make this distinction clearer is to state the question as "Do we drill at the exact drop-in position so we can watch the wheels, gates, and the

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2. Theoretical Transferring Sequence. Let us move our readings from hole "1" to position "X".

Photograph one shows the Edenburn Complete Emergency Dial Set. This includes dial spindle fixture with hex Keys, engraved plastic dials, a magnetic

wheels are correctly aligning under the pointer.

Photograph three shows the door with the dial spindle fixture attached and the adjustable magnetic pointer attached.

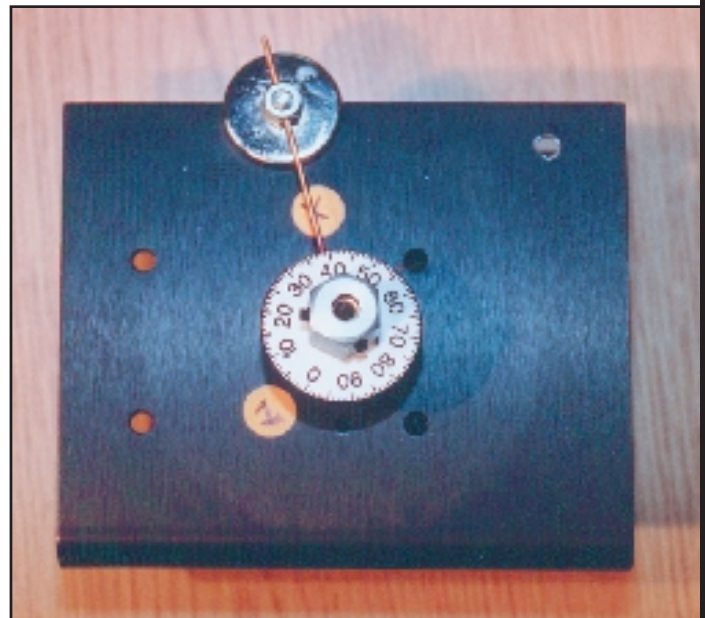
The gate of the last wheel of the lock has been aligned, reading "40". In photograph four, I have moved the

locking lever and fence while we turn the combination spindle; or do we drill at an open (innocuous) location in the lock cavity, observe the relative position of the gates, note these positions numerically, and then move these gate positions to the correct drop-in area of the combination lock?"

The correct answer varies from time to time. Before discussing my favorite method of transferring gates to the drop-in position, I will introduce a new tool from LeRoy "The Wasp" Edenburn that I use *not* according to directions.

adjustable dial indicator, drills and metal stock, and a custom routed case.

This kit is used when the dial of a safe has either fallen off or been knocked off by abuse or burglary. Another use I have found for this kit is to use it as a transferring tool. If you ever have to dial a safe where the dial spindle has been broken off flush to the safe door body, then this kit is excellent for transferring numbers.



3. Attach dial template-holder to combination dial spindle and attach magnetic dial pointer at position #1. Dial and note combination at this location.

Photograph two shows a lock mounting plate with two stickers.

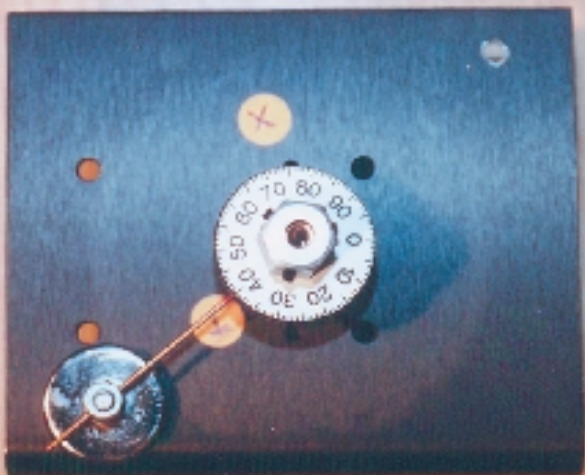
We will move the combination reading through a hole at Position "1" (about 7 o'clock on the plate) to the drop-in position at 97 which is marked by an "X". ("X" marks the spot).

4. Move magnetic pointer to drop in position and dial same combination at new location.

After drilling the hypothetical hole into the safe door to view the wheels at an uncluttered location, we obtain the hypothetical combination 20-80-40. I like to line up one or the other edge of the gate in the hole to assure that the

magnetic pointer to the drop-in position at "X". I have dialed the combination of 20-80-40 to the new pointer position and turned slowly back to the drop-in position to align the cam and nose of the locking lever. Now I oscillate the dial spindle fixture, and the lock opens.

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If the lock does not open the first time (It rarely does), try a couple of numbers up and down.

1. 21-81-41
2. 22-82-42
3. 19-79-39
4. 18-78-38

If after trying the above combinations and the safe lock does not open, move the magnetic pointer two numbers in a new direction (Either Clockwise or Counter Clockwise), and try the same above combinations again. The safe will open eventually.

The main reason that I might want to drill away from the drop-in area is in the case of combination locks that have roller bolts and geared drivers to levers. If you drill and damage any of the interior components, the lock may never open. That is why drilling away from this critical area is important on some of these older locks.

Drilling at the Drop-In position accomplishes many things. It lets you see the action of the wheels, gates, and levers. No transferring is needed. If something is wrong with the wheels or flies, then this can be compensated for at the drop-in position. The wheels can be probed around, the lever forced into the gates, or any other problems can be solved by direct application of force.


Also, by drilling at the drop-in position, no special lights or borescopes are needed. An otoscope or focused flashlight will usually suffice. The major benefit is speed. If your drilled hole is perfect and you have not compromised the lock or moving parts, the lock will be open in few minutes after penetrating the safe lock.

In the past, I have touted the use of numerical transferring. That is using the dialing index, and either adding or subtracting numbers from the observed combination through the remote drilled hole. This works, but we all have added wrong and spent too much time correcting our own mistakes.

Now, I use the non-numerical method of transferring. I move the pointer to the position that I want the gates to line up at. After dialing, I oscillate the dial spindle. This is an important part of the opening. The pointer is positioned where the locking lever fence is positioned. The exact location will vary with how the lock is mounted and handed in the safe. The brand of the lock will determine the exact drop-in position.

Whenever I have to drill a safe or money chest, I choose the drop-in position as a matter of course. If I do not drill at the precise drop-in position, I will try to drill at a spot that I can observe this locality, so I can watch the gates of the wheels line up under the fence. Barring that, I will drill and transfer. This emergency dial set tool makes this problem of remote transferring easy. TRANSFER and PROSPER!!!!

For further information contact LeRoy Edenburn Enterprises, 57 N. Huron Street, Ypsilanti, MI 48197, (313) 483-2444.



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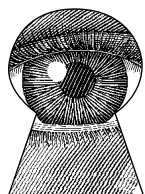


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THRU THE KEYHOLE



A Peek at Movers & Shakers in the Industry

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Folger Adam 600 Series Strikes

by Dan Nicholson

Manufacturers of Electric Strikes have long been challenged with the age old question, "How can we provide an electric strike that maintains security while, at the same time, satisfy convenience and safety concerns?"

The main issue for safety is side load. Side load being referred to as the amount of pressure that can be exerted on a door, pull or push, and still allow release of the electric strike when activated or energized.

The problem has been that, in order to achieve side load requirements, security is usually compromised due to necessary ramping of locking cams and levers. The ramping design of surfaces allows for ease of opening under pressure but, at the same time, lends to surreptitious or undetected entries.

A case and point for safety would refer to a situation where people, in a rush to egress and area, push against a door before the electric strike is activated. The door cannot release because too much pressure is being forced upon the latchbolt and electric strike. To a lesser concern, another situation would have a door jammed due to weather stripping, air pressure or building shifts. In any case, failure of an electric strike to release when requested can result in a potential safety hazard.

Most electric strikes are designed using single point locking surfaces. This means that when the solenoid is activated, there is a single/direct relationship to unlocking. Any

pressure or force applied to the keeper, directly corresponds to that single locking point, thereby jamming the release mechanism.

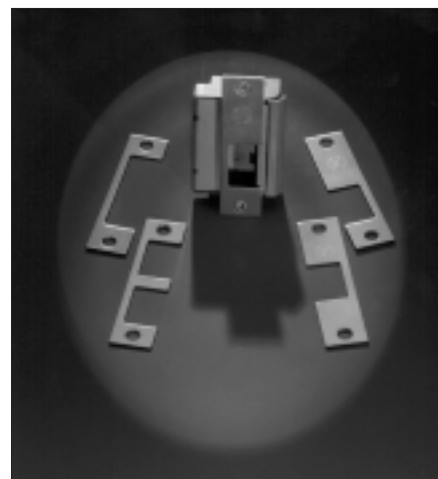
Security and convenience have long been a challenge to electric strike designers. How can door locking integrity be maintained, while at the same time, provide a convenient system for entry and egress.

One answer was the introduction of deadbolt retaining and/or recapture, integrated with an electric strike. The Folger Adam 310-3-1 was a forerunner of this design, allowing a deadbolt along with the standard latch/deadlatch of a mortise lock to be used as additional security for electric strikes. This design was limited since electronic access was sacrificed if the deadbolt was thrown.

Advancements in technology brought a design that allowed release of a deadbolt, latch and deadlatch and subsequent recapture of the deadbolt upon door closure. This design satisfied security needs/requirements and also addressed the convenience/safety concerns requested from users.

The new Folger Adam 600 Series Electric Strike has not only addressed the security problems associated with common latch only strikes, but also safety and convenience demands never before addressed and, as an added installers advantage, all models can be field interchanged to any other model. In other words, when you get to the job site and the cylindrical lock that you were told about suddenly appears as a mortise lock with deadbolt, don't panic! Simply modify the strike to accept the different lock design.

As for side load, the 600 Series design has been side-pressure tested and released with up to and exceeding 20 pounds. This is possible due to the advanced technology used in designing the strike. Instead of



Folger Adam 600 Series Strike. Offering varying faceplates, the Folger Adam 600 Series strike allows the locksmith one strike for a variety of applications.

utilizing a common single-point locking system, 600 series strikes use a secondary roller surface that greatly diminishes load, even under heavy pressure. Also, the roller design deflects pressure where a solid surface does not.

Field interchange and retrofit is accomplished with common tools and few parts. Change out by the installer or distributor allows a great deal of product flexibility. Field service and bench kits provide a wide assortment of interchangeable parts.

The 600 series has all of the typical Folger Adam traits:

Investment cast stainless steel case, keeper and internal parts; field receptacle for wiring ease; wide range of solenoid voltages (6, 12, 16, 24, 48, 115 VAC and VDC); UL; ANSI Grade 1 tested; optional switches for latch, deadbolt and locking cam; and, best of all, priced competitively.

Last, but certainly not least, 600 series Electric Strikes fit into standard ANSI 1-3/4" x 4-7/8" cutouts with simple exterior frame modification and may be used in aluminum, metal or wood frames. Metal templates are

available to scribe frames before cutting. These templates will fit into an existing ANSI prep and wrap around the frame for marking purposes.

For additional information on electric strikes or to ask for your local distributor, please contact Folger Adam Company at (708) 739-3900 or fax us at 708-739-6138.

Dan Nicholson is Product Manager for the Architectural Security Products Division of Folger Adam Company.

Fort Lock's New Wafer Tumbler Technology

Fort Lock's now offers new Universal Keyways, featuring Fort's Snap-In Trapezoidal Tumblers and Dove Tail Spline Housings..

There are two Universal Keyways. One is compatible with all 54G type key sections (reverse S keyways), and the other is based on all 00V type key sections (S keyways). These two keyways feature a continuous ward through all tumbler ways and a key tip locator V section at the end of the keyway. These two features improve

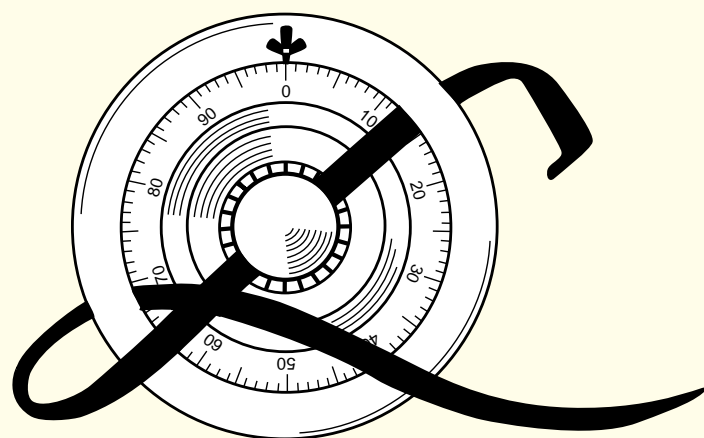
key support to help eliminate key interchange. The keyways also allow easy master keying without plug modification and the ability to key into all other manufacturers' key code systems.

The spring retained tumbler feature uses the diameter of the spring to retain the tumbler. When inserting a tumbler into the plug, the tumbler spring coils take a parallelogram shape allowing the tumbler to move laterally, out of the way of the retaining shelf in the plug. Once the retaining point on the tumbler moves past this shelf, the spring coils snap back to their full diameter, forcing the tumbler retaining point to snap under the shelf in the plug, resulting in the tumbler now being retained. This prevents any deformity or damage to the tumbler or the plug during assembly. The outcome is that the tumbler now has a smoother action up and down, guaranteeing full throw of the tumbler, resulting in decreased key interchange on soft side locking.

Other features of the Universal Keyway system are the interlock between the tumbler and spline in the lock housing. The locking surfaces of the tumbler are angled out with a trapezoidal shape and the splines are angled in, like a dove tail. The angles of the two are parallel, thus causing the tumbler to want to pull up into the spine, trying to lock rather than unlock. This action not only prevents key interchange but also increases resistance to picking.

All four of these features are incorporated in the construction of all Fort Lock's single bitted wafer tumbler flat key locks, including all Multi-Function 23000 and 24000 series products. The resulting locks have available 3000 non-interchangeable key codes, 3000 change keys under any master key, and the ability to key into all other manufacturers' key codes.

Fort Lock's Universal Keying Matrix is the result of the combination of the Universal Keyways with seven possible different composite key blanks, 54A, 54B, 54C, 54D, 54E, 54G, and 00V. When complete compatibility is required with another manufacturer's key code system, Fort Lock can guarantee that all existing keys in the field will work the new Fort locks and all new Fort Lock keys will work all the existing locks in the field.



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By using the Universal Keying Matrix Chart you can pick the appropriate Universal lock using the appropriate key blank for a given code series. You can then order the lock either as a Multi-Function product or standard product through Fort's Key-To program.

To order or to get more information, contact a Fort Lock distributor, or call Fort Lock at (708) 456-1100.

Chicago Lock

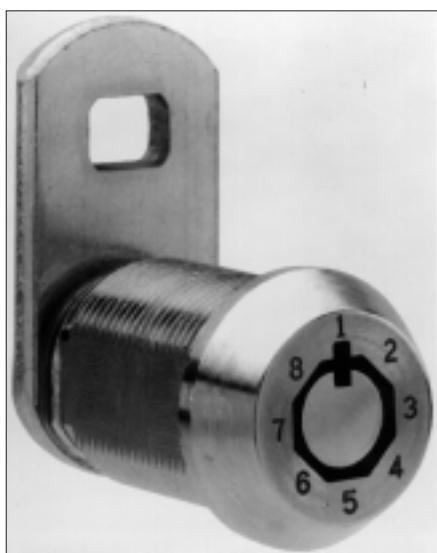
Chicago Lock Company (CLC) is celebrating 75 years of achievement providing quality products and dependable service for its customers. The company was firmly established by its invention of the ACE® 7-pin

tumbler tubular lock. Patented in 1934, it virtually revolutionized the industry, giving CLC indelible name recognition.

"We've always rejuvenated ourselves by addressing the challenges of new technology and the specific needs of our customers," says Lyle B. (Bud) Shinn, Jr., currently marking his 25th year as president of CLC. "Long before a lock becomes obsolete, we always have something in the works to take its place," he adds. It was William C. Shinn, Bud Shinn's grandfather, and associates who founded Chicago Lock Company in

1920 with the purchase of a one-year-old cabinet lock business.

CLC has had great impact in many areas of security. Specialty items such as locks for gun cabinets, change machines, bicycles, office furniture, can/bulk, vending machines, government stamp machines and tool boxes, as well as continued involvement with the amusement and gaming industry have spread the Chicago Lock name into diverse areas. In fact, there aren't many places a locksmith can turn without running into a CLC lock.



Chicago Lock. System 64 allows the locksmith fast, complete rekeying for their customers using two keys. A red group key for selecting one of eight programming groups and a black reset key for picking one of eight combinations. A gray key serves as any of the 64 operating keys.

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Furthermore, CLC has responded to the demand for different levels of security with new products. In 1987, TuBAR® Security Products, Inc. became a subsidiary of CLC for designing and manufacturing an independent line of maximum security locks, including the lock cylinder for MaxiGuard auto alarms. In 1993, CLC formed a strategic alliance with CamLock Systems, Inc., a British firm that manufactures medium security locks in Asia.

Chicago Lock Company's 75th anniversary marks a double milestone in terms of production and product. After 31 years at its present Belmont Avenue location in Chicago, groundbreaking ceremonies were held in February 1995 for a new plant and company office at a site in Pleasant Prairie, Wisconsin, a suburb of Kenosha. Completion is targeted for the fall of 1995.

"The move is critical for the future growth of Chicago Lock for a number of reasons," says Dale N. Padjen, sales/general manager. "Firstly, our new state-of-the-art facility will provide a faster, more efficient manufacturing process. In addition, our new plant

layout and recent purchase of the IBM AS/400 computer and latest CAD-CAM software systems will enable us to meet our customers' requirements through EDI and other electronic data communication now and far into the future.


"Another advantage to the move is the plant's excellent location just off the interstate highway, which means more efficient service for meeting customer needs more quickly."

Chicago Lock also has introduced System 64™, a cylinder lock line designed for fast, efficient reprogramming. Originally designed to aid vending service route managers with key control, this system is equally advantageous to locksmiths. In 30 seconds, a locksmith can reprogram a lock to fit any one of 64 operating keying alternatives by using only two keys. It also helps the locksmith service his customers by being able to offer an easy and practical solution when fast and complete system changes are required.

The System 64™, 30-second program for managing the entire lock change is made easy to operate with

the aid of color-coded key handles. The red Group Key is used to select one of eight programming groups. The black Reset Key is used to select one of the eight combinations available within each group. The locksmith then can choose any of the 64 gray Operating Keys to open the lock for his customer.

Chicago Lock embarks upon the next 75 years with a continued commitment to excellence in meeting the diverse security needs of its customers with creativity, concern, and, always, quality products.

For more information contact a Chicago Lock distributor or call CLC at (312) 282-7177. 

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KEY CODES

Yamaha 7001-8000

Spacing:
1-.157, 2-.256, 3-.354,
4-.453, 5-.551, 6-.650

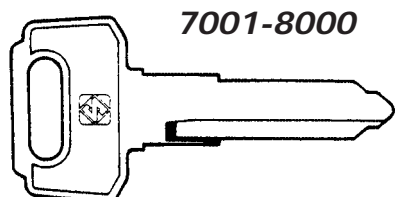
Depths:
1-.296, 2-.276, 3-.256,
4-.236

Key Blanks:
Silca YH31R

HPC 1200 CM
Code Card: CMC80
(6th cut, add .099 to
cut 5)

Cutter: CW1011
Stop: Shoulder

Framon
Cut Start: .157
Cutter: FC8445
Cut To Cut: .0985
Spacing Block: #5
Stop: Shoulder



7001	232112	7030	434114	7059	144123	7088	341124	7117	313132	7146	133134
7002	234112	7031	232121	7060	232123	7089	343124	7118	322132	7147	142134
7003	234112	7032	234121	7061	234123	7090	413124	7119	324132	7148	144134
7004	322112	7033	243121	7062	241123	7091	422124	7120	331132	7149	212134
7005	324112	7034	322121	7063	243123	7092	424124	7121	342132	7150	214134
7006	342112	7035	324121	7064	313123	7093	442124	7122	344132	7151	221134
7007	344112	7036	342121	7065	322123	7094	233131	7123	412132	7152	223134
7008	423112	7037	344121	7066	324123	7095	233131	7124	432132	7153	232134
7009	432112	7038	423121	7067	331123	7096	242131	7125	434132	7154	234134
7010	434112	7039	443121	7068	342123	7097	244131	7126	144112	7155	241134
7011	233113	7040	132122	7069	344123	7098	323131	7127	443132	7156	243134
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7014	323113	7043	231122	7072	423123	7101	343131	7130	134133	7159	331134
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7018	422113	7047	314122	7076	134124	7105	124132	7134	231133	7163	412134
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7024	322114	7053	343122	7082	312124	7111	221132	7140	341133	7169	143142
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7028	423114	7057	133123	7086	332124	7115	241132	7144	122134	7173	312142
7029	432114	7058	142123	7087	334124	7116	243132	7145	124134	7174	321142



Yamaha

7001-8000

7175	323142	7231	321212	7287	413221	7343	134232	7399	413234	7455	342244
7176	332142	7232	323212	7288	424221	7344	141232	7400	424234	7456	412244
7177	341142	7233	331212	7289	433221	7345	143232	7401	431234	7457	421244
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7194	342143	7250	313213	7306	131224	7362	131233	7418	432242	7474	144312
7195	421143	7251	324213	7307	133224	7363	142233	7419	434242	7475	212312
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7203	233144	7259	443213	7315	344224	7371	311233	7427	143243	7483	324312
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7216	234211	7272	334214	7328	241231	7384	134234	7440	413243	7496	134313
7217	243211	7273	413214	7329	243231	7385	141234	7441	424243	7497	143313
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7219	332211	7275	431214	7331	331231	7387	224234	7443	433243	7499	224313
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7222	434211	7278	134221	7334	421231	7390	242234	7446	133244	7502	312313
7223	443211	7279	213221	7335	423231	7391	244234	7447	142244	7503	314313
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7226	231212	7282	244221	7338	441231	7394	332234	7450	214244	7506	413313
7227	233212	7283	314221	7339	443231	7395	334234	7451	231244	7507	422313
7228	244212	7284	321221	7340	121232	7396	341234	7452	234244	7508	424313
7229	312212	7285	323221	7341	123232	7397	343234	7453	243244	7509	431313
7230	314212	7286	343221	7342	132232	7398	411234	7454	324244	7510	442313



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7001-8000

7511	122314	7567	314322	7623	424324	7679	143342	7735	223411	7791	231421
7512	124314	7568	321322	7624	431324	7680	224342	7736	232411	7792	233421
7513	142314	7569	323322	7625	442324	7681	231342	7737	234411	7793	242421
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7515	212314	7571	334322	7627	134331	7683	244342	7739	322411	7795	314421
7516	214314	7572	341322	7628	231331	7684	312342	7740	324411	7796	321421
7517	221314	7573	343322	7629	242331	7685	314342	7741	342411	7797	323421
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7519	241314	7575	413322	7631	321331	7687	334342	7743	423411	7799	334421
7520	243314	7576	424322	7632	341331	7688	341342	7744	432411	7800	413421
7521	313314	7577	431322	7633	422331	7689	343342	7745	434411	7801	422421
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7523	324314	7579	122323	7635	431331	7691	413342	7747	123412	7803	431421
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7566	312322	7622	422324	7678	141342	7734	431344	7790	224421	7846	212424



Yamaha 7001-8000

7847	214424	7873	313431	7899	334432	7925	443433	7951	212442	7977	411443
7848	221424	7874	322431	7900	343432	7926	121434	7952	221442	7978	413443
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7854	313424	7880	432431	7906	122433	7932	213434	7958	322442	7984	421132
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7864	133431	7890	224432	7916	243433	7942	334434	7968	213443	7994	134421
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7867	214431	7893	242432	7919	324433	7945	431434	7971	242443	7997	342424
7868	221431	7894	312432	7920	342433	7946	433434	7972	312443	7998	411432
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7870	232431	7896	321432	7922	423433	7948	131442	7974	323443	8000	423442
7871	234431	7897	323432	7923	432433	7949	133442	7975	332443		
7872	243431	7898	332432	7924	434433	7950	142442	7976	343443		

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KEY CODES

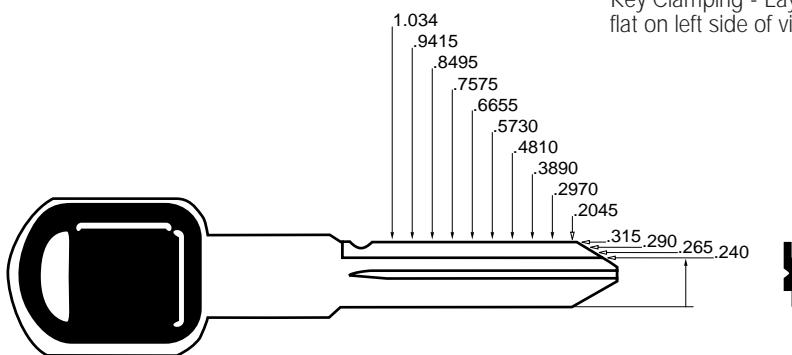
GM Codes 000-D999

HPC 1200 CM
Code Card - CF215
Cutter - CW1011
Stop - 1054R Tip Stop (Ford 10-Cut)

Framon
Cut start - .216"
Cut to cut - .092", Spacing Block #3
Cutter - FC8445
Key Clamping - Lay Spacing clip F2MS552
flat on left side of vice and align from tip.

Spacing and Depths
using Universal
Micrometer Card #58.

	Spacing	Depth
1	.1850	.315
2	.2775	.290
3	.3700	.265
4	.4625	.240
5	.5550	
6	.6475	
7	.7400	
8	.8325	
9	.9250	
10	1.0175	



Curtis
Cam - GM6
Carriage - GM6A

KEY BLANKS
B&S 5995936
Silca GM37(EP)
Curtis B82
Ico P1102
Jet B82(PH)
EZ B82
ESP B82

000	1232432243	D006	1233231223	D012	1232244322	D018	1232344223	D064	1233213424	D110	1233132424
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D002	1232243133	D008	1232331244	D014	1232321324	D020	1233244212	D066	1232134324	D112	1232232344
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						D028	1232123133	D074	1233224213	D120	1232231323
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						D035	1232132444	D081	1233432124	D127	1233443312
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						D039	1233431224	D085	1233232432	D131	1232442432
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GM Codes 000-D999

D156	1233423443	D230	1234232342	D304	1232134322	D318	1234224243	D332	1233423112	D345	1232133434
D157	1234211323	D231	1233232132	D305	1232132334	D319	1233432133	D333	1232234324	D346	1232134244
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D160	1233134322	D234	1233133422	D308	1232343434	D322	1232134233	D336	1234221242	D349	1233423432
D161	1233121332	D235	1232123242	D309	1233231323	D323	1233431323	D337	1233113224	D350	1233443424
D162	1233242424	D236	1232343123	D310	1233423422	D324	1232431342	D338	1232421243	D351	1232231122
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D227	1233421124	D301	1234232134								
D228	1233112423	D302	1232233424								
D229	1234221342	D303	1232442344								

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GM Codes 000-D999

D358	1232231124	D432	1233442234	D506	1232312443	D580	1232313433	D654	1232244324	D728	1233113442
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D366	1233134233	D440	1234232324	D514	1232312312	D588	1233224244	D662	1232442213	D736	1233121324
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D372	1232332242	D446	1233213233	D520	1232324232	D594	1232313234	D668	1232124323	D742	1233442343
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D374	1232343232	D448	1233112444	D522	1233421232	D596	1232433242	D670	1232243124	D744	1233212234
D375	1234223234	D449	1232233122	D523	1233243432	D597	1232342112	D671	1233433124	D745	1233442423
D376	1233212123	D450	1232334232	D524	1233433424	D598	1232124244	D672	1233122442	D746	1233131223
D377	1234233432	D451	1233124244	D525	1234232334	D599	1234211332	D673	1232442342	D747	1232421313
D378	1233121312	D452	1233223443	D526	1232123344	D600	1232134422	D674	1232122433	D748	1233232123
D379	1233431313	D453	1232321313	D527	1234231222	D601	1232213433	D675	1232123124	D749	1232342113
D380	1233213434	D454	1232344334	D528	1234211322	D602	1232212333	D676	1233223423	D750	1234224313
D381	1233112234	D455	1232324333	D529	1232121344	D603	1234234244	D677	1232323443	D751	1232124223
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D383	1232231332	D457	1233123124	D531	1233421244	D605	1232132242	D679	1232324243	D753	1232124434
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D385	1233442433	D459	1233442232	D533	1232423342	D607	1234233132	D681	1234211213	D755	1232321133
D386	1233432442	D460	1233122432	D534	1234224332	D608	1233122324	D682	1232443244	D756	1233132324
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D388	1232331232	D462	1233212323	D536	1234221232	D610	1232131324	D684	1233132132	D758	1232424322
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D396	1233113324	D470	1232234432	D544	1233244233	D618	1233213322	D692	1232243234	D766	1232243113
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D403	1233242112	D477	1232431124	D551	1232331133	D625	1232321342	D699	1232431332	D773	1232334313
D404	1233243342	D478	1232211244	D552	1233231322	D626	1234223213	D700	1233112443	D774	1234211343
D405	1233124334	D479	1233421213	D553	1232131313	D627	1233131123	D701	1232134243	D775	1232313423
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D408	1232423243	D482	1233424313	D556	1233432324	D630	1233432433	D704	1232423344	D778	1233132422
D409	1234224312	D483	1232332422	D557	1234212242	D631	1232424234	D705	1232431132	D779	1234213233
D410	1232213133	D484	1232432344	D558	1233231222	D632	1232423212	D706	1233213313	D780	1233112432
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D422	1233442124	D496	1233442432	D570	1232243342	D644	1232424434	D718	1233123444	D792	1233213134
D423	1232131242	D497	1233224342	D571	1232434322	D645	1233132423	D719	1232421323	D793	1233434424
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D426	1234234334	D500	1232424242	D574	1234212213	D648	1232331223	D722	1233131212	D796	1232343342
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D430	1233122334	D504	1233234342	D578	1232312132	D652	1233243122	D726	1232431123	D800	1233243232
D431	1232424334	D505	1233112124	D579	1233131312	D653	1233244322	D727	1232342424	D801	1234213234



GM Codes 000-D999

D802	1233213312	D835	1232211232	D868	1234231243	D901	1232232433	D934	1232124342	D967	1232342233
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D805	1234221243	D838	1233443242	D871	1233211312	D904	1233432213	D937	1232234342	D970	1232432343
D806	1233213324	D839	1232342433	D872	1234233442	D905	1233133424	D938	1232343442	D971	1234234434
D807	1234232234	D840	1233133224	D873	1232313312	D906	1234232423	D939	1233211343	D972	1233422343
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D809	1232242134	D842	1233122133	D875	1232121343	D908	1232424312	D941	1233112323	D974	1233212422
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D812	1234233242	D845	1233223434	D878	1233213244	D911	1233224242	D944	1232342122	D977	1232324212
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D814	1232433424	D847	1233212442	D880	1232433213	D913	1232132243	D946	1233423244	D979	1233421134
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D817	1232322442	D850	1233113422	D883	1233213343	D916	1232123422	D949	1232324242	D982	1232331222
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D830	1233212132	D863	1232313113	D896	1233134223	D929	1234231212	D962	1234213443	D995	1233112243
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D832	1232231133	D865	1233424322	D898	1233224432	D931	1234223344	D964	1232434212	D997	1232311324
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D834	1232422313	D867	1234231233	D900	1232421334	D933	1234223424	D966	1232322134	D999	1233422123

TNL

INDUSTRY MEETINGS

August 3-6, 1995

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

August 11, 12, 13, 1995

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

August 24-27, 1995

Clark Security Products' 1995 Trade Show & Educational Conference at Turf Valley Hotel & Country Club, Ellicott City, MD
Contact: Pam Engdahl at (619) 974-5273.

September 8-10, 1995

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

September 11-14, 1995

ASIS Announces 41st Annual Seminar & Exhibits Security's Hot New Rhythms, New Orleans Convention Center, New Orleans, LA
For more info: (703) 522-5800, Fax (703) 243-4954.

Saturday, September 16th, 1995

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

September 14-17, 1995

The Greater Chicago Locksmiths Association's Annual Auction. No charge for admittance. \$5 refreshment fee. Seller's fee is 10%.
For more info contact: Kathy Zaniolo at (708) 386-3334.

September 17, 1995

Accredited Lock Supply Co. 21st Anniversary Trade Show, Secaucus, NJ.
Contact: Norman Koller (800) 652-2835.

September 23, 1995

Doyle Lock Supply, Inc. Annual Dealer Trade Show, Raddison Conference Center, Minneapolis, MN.
Call: (800) 333-6953.

September 27-October 1, 1995

The Greater Philadelphia Locksmiths Association (GPLA) convention, Exhibitors call Don Amole (215) 288-5588, Registration call Ron Blevins (610) 444-5550.

October 1, 1995

The San Francisco Bay Area Chapter of the California Locksmith Association 6th Annual Locksmith Flea Market, Centennial Hall, room 4, Hayward, CA.
Call Blaine at (510) 278-2853.

October 6-8, 1995

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

GENERAL SECURITY

Continued from page 23

deadbolt cylinder through the outside of the door. Secure them in place with the mounting screws. On the ANSI K Series, the mounting screws must be shortened to the appropriate length, depending upon the thickness of the door. On the J Series, mount the deadbolt cylinder with mounting screws and support plate exactly the same as any of Arrow's E (standard duty), D (Heavy duty) or IC (interchangeable core) deadbolt cylinders. (See photograph 10.)

On ANSI K Series, insert the appropriate (according to size) cam driver into the center cam of the interior escutcheon. (See photograph 11.) The J Series with 4" centers does not use a cam driver. Make sure that the indicators of the cam and upper gear is up and the deadbolt is retracted. Place the interior escutcheon over the tailpieces and/or make sure the cam driver enters the deadbolt. Secure the interior escutcheon with two #8x32x1/2" screws.

Install the interior knob.

Prepare the jamb for the appropriate strike or strikes.

Other Notables

While it is unnecessary to remove the back cover of the interior escutcheon, photograph 12 shows the inside cover removed. This exposes the thumbturn receptacle, upper gear, cam, lift, and hub. When the inside knob or lever is turned, it rotates the hub, raising the lift, retracting the deadbolt and turning the thumbturn.

These locksets have been designed for a wide range of keying versatility. They are available in the standard Arrow keyway, as well as Schlage C and E keyways and interchangeable core (Best type) locks. On the K Series, while the rim cylinder is Arrow and available in the above keyway configurations, most other rim cylinders can be adapted into the lock unit. The only drawback is in retrofitting the knobset. If, however, the knobset is passage function, there is no cylinder to be concerned about. If the knob is of lever design, it is passage function.

ELECTRONIC SECURITY

Continued from page 29

- Is power outlet local to needs? This may require a licensed electrician to install additional outlet(s).
- Warning labels and stickers are needed to conform to legal requirements.

Remember to do a good job on the site sketch. It allows you to record detailed physical features and necessary measurements. More than one site sketch may be necessary for a job estimate.

I hope this series of articles has helped give you the basic understanding and confidence to enter into the CCTV market and provide a broader base of service to your customers.

I want to thank Sean Horenstein for his invaluable assistance in the preparation of this article.

Questions may be directed to Lockmasters at (800) 654-0637.



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TEST DRIVE



Taking Industry Products for a Spin Around the Block

THE PROTECTOR

PRODUCT: The Protector™ lever conversion kit by Advanced Hardware Technologies. Available through Advanced Hardware distributors. Suggested list price to end user is \$110. Cost to the locksmith may range from \$52 to \$55. For information, contact Advanced Hardware at (800) 277-9377.

PRODUCT DESCRIPTION: The Protector we tested comes as either a complete ANSI Grade 1 lever or as a conversion kit for Schlage D and Arrow H series knobsets (Arrow ball type knobs excluded). A fire guard insert is also available where U.L. fire listed equipment is required.

Other units allow retrofitting of various function, Grade 1 and Grade 2 knobsets from most other manufacturers.

The Protector comes in US3, US4, US10, US10B, US26, and US26D finishes.

FRIENDLINESS: How's this for friendliness? If you can install a door knob, you can install The Protector.

After carefully reading and following all instructions, our unit was fitted to a Schlage D series knobset within a few minutes. Although a Truarc ring spreader (for keyed units only) and drill are necessary for installation, no other specialty tools are required.

Simply remove the outside trim from the knob and install the conversion hardware of The Protector. Hand the lever return springs (if necessary), drill two 3/8" holes for the mounting through bolts, assemble the lock to the door, and it's done.

FEATURES: With hardware, except for the style and finish, all of the important features are a hidden and integral part of the lock. The Protector includes 5" heavy cast zinc handles, and 3-1/2" heavy cast zinc roses that provide for an attractive exterior. The

large roses cover most other hardware door preparations.

The inside of the unit reveals large coiled lever return springs, guaranteeing consistent lever return, and reduction in lever sag. Covering the return springs are the lever stops that prevent excess torque from being applied to the lock's body and internal components.

In fact, the design of The Protector eliminates any excessive pressure and/or torque on the lock chassis, protecting it from abuse and premature failure.

COMMENTS AND SUGGESTIONS: It's already been stated that The Protector is attractive and strong. While the unit we tested worked smoothly and consistently even after repeated applications of excessive torque to the lever, the only drawback we could find was its lack of years in the field. At this point only long term exposure to various

environments and conditions will be its final judge.

CONCLUSION: The Protector lever conversion kit is a well designed, economically advantageous alternative to purchasing new levers. **TL**

DESCRIPTION:
The Protector by Advanced Hardware Technology

COMMENTS:
Easy and economical lever hardware alternative.

TEST DRIVE RESULTS:
Good looking, strong and priced right. Its only weak point is a few years of field application.

