



# SECURITY FACTS!!



A Quarterly Physical Security and Security Technology Newsletter

Vol. 3, No.2



## Addressing Unique Locking Requirements

The DoD Lock Program was established in 1984 to manage the research, development, test and evaluation (RDT&E) of locking devices, security containers, and related delay systems. Help is available through this program to define locking system requirements and to solve security-related problems.


*There are many reasons to periodically re-evaluate locking system requirements:*

- \* Neutralization techniques continue to be developed and refined.
- \* Material science advancements have contributed to the development of locking systems that are more reliable, functional, and cost-effective.
- \* Weapons platforms often have unique requirements for security hardware systems.
- \* Security hardware systems with improved resistance to forced entry are available.
- \* Storage of critical assets requires locking systems that provide specific levels of protection, in addition to meeting operational requirements.

*The DoD Lock Program provides technical guidance on these issues. Call (800) 290-7607, (805) 982-1212, or DSN 551-1212 for more information.* 




## New DOE Lock Systems Effort

DOE stakeholders will soon benefit from support offered by **NFESC**. *Improved performance and dependable lock security systems* are assured from the many services offered by this **DOE Lock Hardware Systems** effort. Technical assistance and procurement support are added benefits. Lock systems special features include training, testing and evaluation of security hardware systems, and periodic DOE requirements review. *Quick response to questions and reliable solutions* to difficult lock problems are just a few of the services available via the **Hotline**, newsletters, TechData Sheets, and various technical reports. 

**New  
Toll Free  
Number!**  
**DoD Lock Program**  
**(800) 290-7607**



**24-Hour  
Customer Service!**

Mosler's Product Support Division is now located in their headquarters office in Hamilton, Ohio. Take advantage of their 24-hour, 7-days-a-week support by calling **1-800-MOSLER-1** or visiting their web site at: [www.mosler.com](http://www.mosler.com). 



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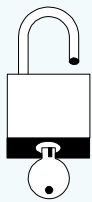
*Modular Vaults are Cost-Effective*

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## lock talk...

### *Wondering What These Terms Mean?*

 **Key-in-Knob Lockset:** Any lockset with a key-operated cylinder in one or more knobs.

 **NFPA 101:** The Life Safety Code from the National Fire Protection Association.

 **Shrouded Shackle:** A shackle which is protected from cutting or tampering by design or by the use of secondary shields.

*Courtesy of The Professional Glossary of Terms relating to Cylinders, Keys and Master Keying, compiled by the ALOA-sponsored National Task Group for Certified Training Programs, Master Keying Study Group*



Give us your  
feedback!  
We want to know  
what you think!

Call the Hotline:  
(800) 290-7607,  
(805) 982-1212,  
or DSN: 551-1212



## *Frequently- Asked Questions*

*The answers you need are here!*

***I need a GSA-approved security container to replace a container that is not approved. Where can I go to get a replacement without having to purchase a new one?***

Call us at the Technical Support Hotline at (800) 290-7607 and we'll try to locate one for you.

***What causes the "lightning bolt" display on the X-07 combination lock?***

The liquid crystal display (LCD) will show a lightning bolt from any of these five causes:

1. The incorrect combination was entered.
2. The combination was dialed in less than fifteen seconds.
3. The dial was rotated more than 1-1/3 revolutions without pausing at least 1/4 second.
4. The direction of dialing was reversed without pausing at least 1/4 second.
5. The combination was dialed with short, jerky movements.

The same lightning bolt will be displayed, regardless of the cause. The last four causes relate to the *software protection features* of the X-07. These features are built into the lock to resist robotic dialing. When any of these features are violated, a lightning bolt appears. Lightning bolts delay opening of the lock. Ten consecutive failed attempts (lightning bolts) cause the lock to "power down." Until the lock is left alone - no dialing - for 90 seconds, it cannot be "powered up." This is an added delay feature.


***What is a "bit-drop failure" in an X-07 lock?***

This is a RARE occurrence, in which the lock's combination changes. The symptoms are that when the correct combination is properly entered, this results in a lightning bolt display. To make this diagnosis, eliminate the five other causes of lightning bolts:

1. Verify that the combination entered is the correct one (refer to the Standard Form 700).
2. Take more than 15 seconds to dial the combination.
3. Be sure to pause at least 1/4 second for every 1-1/3 revolutions of dialing.
4. Pause at least 1/4 second when reversing dialing direction.
5. Dial with smooth, natural wrist movements.

If the lightning bolt display continues, call:

**Hotline:** (800) 290-7607, (805) 982-1212, or DSN 551-1212  
or

Mas-Hamilton Group Technical Support: (800) 950-4744 



Tools &

EQUIPMENT



## Introducing the New X-08 Lock

There are now two combination locks that meet the requirements of Federal Specification FF-L-2740A. Both locks are produced by the Mas-Hamilton Group in Lexington, Kentucky. The recently approved lock, designated as model “X-08,” is the first new lock to be approved for protection of classified information since the model X-07 was approved in 1991.

The X-08 is similar to the X-07 in that it features an electromechanical design and uses a generator to “power-up” the microprocessor. The most significant difference in the two locks is in the opening procedure.

The X-08 is “powered-up” by turning to the left and then each number is entered by turning the dial to the right and stopping on the correct number. The liquid crystal display (LCD) prompts the user when to enter each number of the combination.




Figure 1. Mas-Hamilton X-08 Lock.

Once the correct combination has been entered, “OP” is displayed on the LCD with an arrow that directs the user to turn the dial to the right to retract the lock bolt.

The General Services Administration (GSA) approved the X-08 lock and has added it to the qualified products list for Federal Specification FF-L-2740A. Activities may use either lock to protect classified information.

**There is no requirement or reason to replace an existing X-07 lock with an X-08.**

The Mas-Hamilton Group is producing the X-08 lock. First shipments are expected by mid-November. DoD and other federal activities will start seeing it soon. 

## Modular Vaults are Cost-Effective UL Listed, GSA-Approved, and Meet Federal Specs



UL listed modular vault panels and doors are commonly used by financial institutions, commercial, industrial, and mercantile properties to protect assets from forced entry threats. Within DoD, they can be used for executive protection and storage of unclassified information and material such as sensitive or personal data, drugs, precious metals, money, or negotiable documents. UL listed modular vaults are rated by the time it takes to gain entry using any combination of common hand and power tools, and oxygen-fueled cutting torches. UL 608, “Standard for Safety for Burglary Resistant Vault Doors and Modular Panels” is the test standard. Ratings are based on the net working time as follows:

- |                     |                      |
|---------------------|----------------------|
| a. Class M – ¼ hour | b. Class 1 – ½ hour  |
| c. Class 2 – 1 hour | d. Class 3 – 2 hours |

All UL listed modular vaults will have a UL label that includes the manufacturer’s name or symbol, date of manufacture, model number, and factory identification mark. Also attached is a label that specifies each panel or door is “UL Listed Burglary Resistant,” the class of the panel or door, and certification that the panel or door has been tested according to the requirements of UL 608.

### Advantages of Modular Vaults

- Construction of new vaults within hours, opposed to days.
- No concrete forms required for construction.
- Lighter weight (up to 70% less) dependent upon the class.
- Lower cost (up to 50% less) dependent upon the modifications.
- Flexible installation and removal of vaults in any location.
- Less space required because the walls are up to 70% thinner.
- Easy expansion or reconfiguration of vaults.
- Ability to relocate or reuse vaults at other locations.
- Possible repurchase by manufacturers if replacements needed.

A GSA-approved modular vault panel may be used in place of a reinforced concrete structure if it meets the requirements of Federal Specification AA-V-2737 and is installed with a GSA-approved vault door.

See page 4 for a list of companies that sell UL listed modular vault panels and doors. Please note that this list may not be all-inclusive.

(Continued on page 4)



## *Improve Security Skills!*

### *Select From a Variety of Courses*

Would you like to improve your security-related abilities? A variety of training programs are available from both government agencies and industry. See the following for courses of interest.

*DoD-sponsored training is available from:*

#### **Mobile Training Team**

The Naval Criminal Investigative Service maintains two Mobile Training Teams (MTT) to assist in the implementation of the Navy's Physical Security and Law Enforcement Programs. The teams are located in Norfolk, Virginia, and San Diego, California. 1,500 Naval personnel attend these courses annually. Courses include: Physical Security/Law Enforcement Supervisors' Course, Security Manager's Course, and Shipboard Security Engagement Tactics Training, and others. In addition, MTT provides special briefings to approximately 80,000 Navy personnel, civilian employees, and dependents. These briefings include:

- Terrorism Awareness
- Crime Prevention and Awareness
- Rape Prevention and Victim Sensitivity
- Violence in the Workplace
- Case Management Exercises

#### **West Coast**

San Diego, CA

1-619-545-8934 or DSN 735-8934

#### **East Coast**

Naval Amphibious Base, Norfolk, VA

1-757-462-8925 or DSN 253-8925

#### **Lockmasters**

5085 Danville Road

Nicholasville, KY 40356-9531

Phone: 800-654-0637

Courses include: Push Button Manipulation, Professional Locksmithing, Lock Picking, Impressioning, Government Security Containers, GSA Red Label Containers, Electronic Safe Locks, Safe Lock Servicing, Lock Manipulation, Safe Penetration, Basic Crime Prevention, High Threat Security Surveys, Theft Control, Controlling Workplace Violence, Time Locks, Theft Methods and Prevention, and Electronic Access Control.

#### **American Society for Industrial Security (ASIS)**

1625 Prince St.

Alexandria, VA 22314-2818

Phone: 703-519-6200


A variety of professional development programs are offered: Access Control, Computer Security, Physical Security, Asset Protection, Facility Security Design, and Executive Protection. In addition, hundreds of presentations and exhibits will be showcased at the ASIS 45th Annual Seminar and Exhibit in Las Vegas, NV, September 27- 30, 1999.

#### **MBA**

101 Edgewood Plaza Dr.

Nicholasville, KY 40356-1814

Phone: 888-622-5495 or 606-887-0496


Courses include: Combination Lock Technology, Manipulation, Time Locks, Professional Safe Drilling, and DoD/DOE Combination Lock Training. 

## *Funding May Cease Lock Retrofit Program Impact*



In 1993, Congress directed DoD to replace locks securing classified material with combination locks meeting Federal Specification FF-L-2740. Funding support for this effort is scheduled to end on 30 September 1999.

***The requirement to retrofit locks securing any level of classified material remains.***

Retrofit support will continue via the **Hotline** and this newsletter. Lock retrofit training will be available only to activities that can provide funding for the training. 

## ***Security Facts!!***

Published By

**NFESC**



Using Appropriated Funds

(Continued from page 3)

### *Vendor Listing of UL Listed Modular Vault Panels and Doors*

#### **Diebold Inc.**

Hamilton, OH 45012

#### **Modular Vault Systems**

Linthicum, MD 21090

#### **International Vault Inc.**

Ridgefield, CT 06877

#### **Mosler, Inc.**

Waco, TX 76712

#### **Hamilton Safe Co.**

Fairfield, OH 45014

#### **Vault Structures Inc.**

Fort Myers, FL 33916

#### **American Vault**

Canton, OH 44711

#### **Collier Safe Co**

Odessa, FL 33556

#### **LeFebure Corp**

Cedar Rapids, IA 52406

#### **Harrison Concrete Prod.**

Harrison, OH 45030

#### **Lindsay Concrete**

Canal Fulton, OH 44614

#### **Skilcraft Security Equip.**

Burlington, KY 41005 

The views and opinions expressed in this publication are not necessarily those of the Department of Defense.





# Free E-Mail Service!

## *Attention Security Professionals!*

A no-cost subscription E-Mail Service is currently under development by the DoD Lock Program! Up-to-date, accurate information on physical security directives, products, services, and training will be offered. Members will be able to post information, ask questions, or reply just by logging into: [locks@lists.nfesc.navy.mil](mailto:locks@lists.nfesc.navy.mil).

### *To subscribe:*


**<http://lists.nfesc.navy.mil/guest/RemoteListSummary/locks>**

*If you prefer, send an E-Mail to [locks-request@lists.nfesc.navy.mil](mailto:locks-request@lists.nfesc.navy.mil) and include your name, E-Mail address, and the word, "subscribe."*



## Preventing X-07 Lockouts

The X-07 combination lock has a magnetic relock trigger in the form of a pin located in the lock bolt. Whenever the lock is mounted "Right Hand," that is the lock's bolt points to the right as seen from inside the container or door, the pin may vibrate loose and cause a lockout. For that reason, the pin should be removed. Follow these steps:

- ◆ Open the drawer or door in which the lock is installed.
- ◆ Release the boltwork so that it is in the locked position (bolts extended).
- ◆ Extend the bolt of the X-07 by turning the dial counterclockwise.
- ◆ Remove any hardplate or other pieces covering the back of the lock.
- ◆ Remove the two screws which secure the X-07 lock cover.
- ◆ Carefully remove the lock cover, pulling it straight off the lock case.
- ◆ With a large slot screwdriver, remove the lever screw (which attaches the lever to the bolt).
- ◆ Put your thumb or finger over the hole in the bolt and push the bolt out of the lock case. Do not lose the ball bearing which will pop out into the hole in the bolt.
- ◆ Strike the corner of the bolt on a hard surface to shake the pin out of the bolt.
- ◆ Replace the bolt in its channel, hole end first, so that the hole is over the spring of the ball detent.
- ◆ Place the ball bearing in the hole of the bolt. Press on it with an unsharpened pencil or similar object to compress the detent spring. With the spring compressed, slide the bolt into the lock so the ball bearing seats in the recess on the underside of the bolt.
- ◆ Replace the lever screw.
- ◆ Replace the lock cover, putting it straight onto the lock case.
- ◆ Replace the cover screws.
- ◆ Replace the hardplate or other pieces covering the back of the lock.
- ◆ Unlock the X-07 lock.
- ◆ Retract the boltwork of the drawer or door. 

*For questions regarding this procedure, call the Hotline!  
(800) 290-7607, (805) 982-1212, or DSN 551-1212*

## Lock Systems Features



### DOE Lock Hardware System Highlights



*Department of Energy (DOE) physical security systems will now benefit from the support being received from the Naval Facilities Engineering Service Center!* The DOE Lock Hardware effort offers many services that will result in improved performance and reliability of lock security systems, as well as providing technical and procurement support to DOE stakeholders.

#### Advantages of this Support

- Technical training for lock hardware systems coordinated through the NNSI/CTA
- Security hardware systems tested and evaluated
- Quick response to questions and reliable solutions to difficult lock problems
- Exposure to security newsletters, TechData Sheets, and technical reports for locking and related systems


#### Impact on Locking Systems

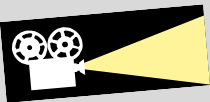
- Improved performance and reliability of lock systems
- Lower costs
- Procurement support for locking and related security systems
- Recommendations for security improvements and lock hardware system effectiveness
- Development of cost-effective physical security lock products
- Enhanced overall security posture for DOE lock systems
- Access to a technical support **Hotline** and web site provided by DoD (U.S. Navy) Lock Program
- Selection support
- Product availability information

#### Hardware Supported

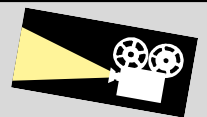
- Locking devices and security containers
- Safes, vaults, seals, and related security systems
- Doors, windows, and utility openings
- Vehicle barriers
- Weapon storage/maintenance facilities

#### Services Offered

- **Training** - (In coordination with the NNSI/CTA) Security systems application, installation, and maintenance training includes information on vulnerability assessments, how to develop requirements for security systems, determining adequate levels of protection of assets, and testing locking systems.
- **Test and Evaluation** - Prior to procurement, security hardware systems considered for use at critical sites will be evaluated for cost, operation, and performance.
- **Technical Assistance** - Security hardware selection, applications, installation, and problem solving assistance available through various sources such as the **Hotline**, E-mail, technical publications, and web site.
- **Procurement Support** - Procurement support for all DOE lock and related hardware systems.
- **Review of Requirements** - Periodic review of DOE orders, directives, manuals and guides relating to physical security hardware systems. 



**Call the Hotline for More Lock Hardware Systems Info!**  
**(800) 290-7607 or (805) 982-1212**



## TechData Sheets Available from the Hotline!

A *TechData Sheet (TDS)* describes a single product, process, or system. ESC's Security Engineering Division disseminates important information to the field user via these TDSs. Simply call the **Hotline** for a copy!

78-40R	Reinforcement for Chain Link Gates
80-02	Steel/Ply Attack-Resistant Wall System
81-07	Prevention of Forced Entry
82-04	Increase Security in Sensitive Areas
82-10	Security Screens
82-12	Pre-Engineered Explosive Magazines
83-27	Steel Grating Cage Provides Secure Enclosure for Low-Security Structures
87-01	Secure Enclosure for Low-Security Structures
87-04	Security Hasps, Anti-Intrusion Bar, and Universal Security System for Naval Environments
90-07	Sargent & Greenleaf Model 833C High Security Padlock
92-05	Center of Expertise for Physical Security
93-02	Planning, Design, and Physical Security Measures for Emergency Command Centers
2000-SHR	Neutralizing "Locked-Out" Security Containers
2010-SHR	Neutralizing Red Label Class-6 Containers
2042-SHR	Drawer Head Replacement Program
2054-SHR	Protecting Electronic Media from Fire
2062-SHR	Estimating Damage to Structures from Terrorist Bombs
2063-SHR	Blast Shielding Walls 