





# **Putting KNOX-BOX® to the test**

Most departments have had at least one property owner question the security of placing their key in a box mounted to the exterior of their building. Knowing the security of the Knox-Box® would be a concern. Knox has taken many steps to make the Knox-Box as impregnable as possible with the majority of the security features designed into the box. We even submit our products to an independent testing lab (UL) to make sure they meet the security standards we advertise.

One department decided to put the Knox-Box to the test to see just how secure the box actually was. What started as simple firehouse banter turned into a challenge. The Fire Marshal (Lieutenant Dale Fahrney) would talk about how safe and secure the box was while the firefighters said it's only a box. "I was telling him to get over himself. It's basically just a metal box. And anything can be broken into," explained Lieutenant Steve Shupert. Since members of the department have been trained on forcible entry and had a variety of tools readily available, they decided to test the security of a 3200 Knox-Box. "We do a lot of forcible entry training. We've spent a lot of time studying the methods and tools used in forcing entry. We thought we could pop the box," shared Lieutenant Shupert."

Lieutenant Shupert and firefighters Jeremy Smith and Mike Wilcox began the challenge by installing a surface mounted 3200 hinged Knox-Box inside their station. "We used a plywood skin backed up with some MIAMI TOWNSHIP, OH

dimensional lumber. It was in there pretty good," shared Lieutenant Shupert.

They started by trying to pick the lock. "While I have picked some locks previously (non-Knox products), I couldn't pick the lock on the Knox-Box," Lieutenant Shupert



 $Final\ attempt\ to\ compromise\ the\ KNOX-BOX.$ 

said. Shupert had used the internet to learn more about picking locks before starting the challenge. "I believe half of them (on-line videos) are fake if not all of them. I couldn't get any of their ideas or suggestions to work," explained Lieutenant Shupert.

Next, they disassembled the hinge. "In most cases when you disassemble the hinge of a door you render the system in failure. That's not true for the Knox-Box. The hinge on the Knox-Box merely held the door in

# EDITORIAL

Our focus in this edition of Rapid Access is security. In recent months, we have received calls from several departments asking for help answering questions from council members and property owners on the security of Knox products. So we have decided to devote this entire issue of Rapid Access to security. We hope you find these articles useful in addressing security concerns and questions within your jurisdiction.

At Knox, we are very proud to say our products are made in the USA. As many companies move part or all of their operations overseas, Knox is committed to producing its products in the USA.

Thank you for your support of the Knox System. We look forward to serving your department for years to come.









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## **Putting KNOX-BOX®** to the test

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place to keep it from falling to the ground," explained Firefighter Mike Wilcox.

Finally they began to attack the box. "We decided to go through the lock," stated firefighter Jeremy Smith. First, they chiseled the dust cover off. "Then we tried to whack the lock cylinder out but the screws kept stripping out. We couldn't get a bite on it," explained Smith.



Finally, they moved on to more conventional forcible entry techniques. Initially they used a short pry bar but they continued to be unsuccessful. Finally they pulled out their largest pry bar – a 36 inch Halligan bar. Still they had no success in "popping" the box. While the Knox-Box was showing some damage it still hadn't been compromised.

By now, they had spent about two hours trying to break into the box. While they had been unsuccessful, they were still very determined to get the box open without the key. So they brought out the heavy tools – tools that the average criminal wouldn't carry around with them.



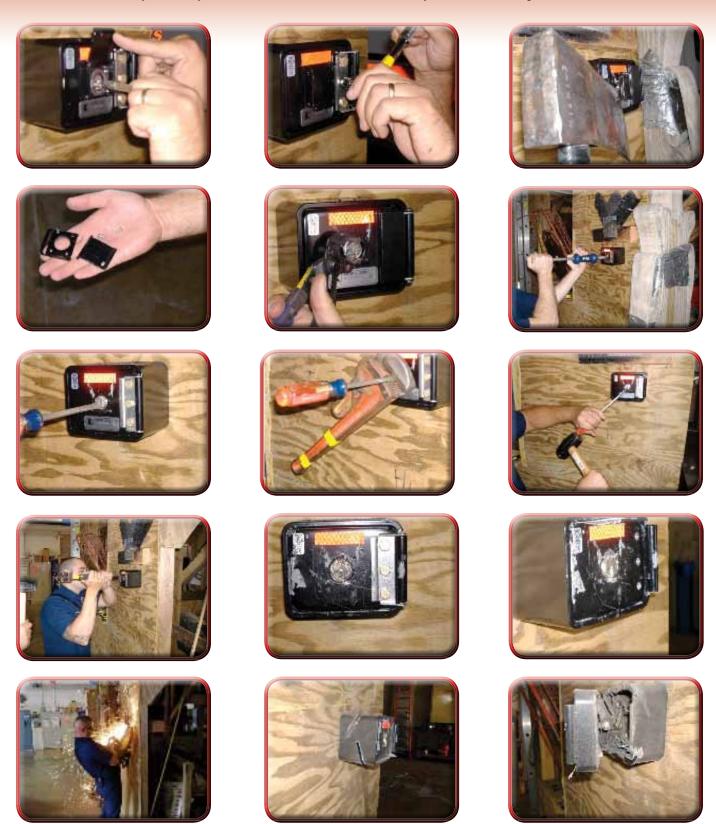
They pulled out a saw with a steel rated blade. With the saw, they were able to cut open the box while also managing to set a floor mat on fire. This took them about ten minutes. The sparks from the saw started the fire. Good thing these firefighters were wearing fire resistant uniforms and inside a firehouse. No one was hurt and the fire was extinguished quickly. "If there had been any access cards inside the box, they would have been damaged," commented Lieutenant Shupert.

"If a bad guy could knock the box off the wall, and the box was not alarmed, and they retreat to a van (with the box) and worked in private they might get the box open. It is our opinion that the customer's door is much easier to break into than the Knox Box," shared Lieutenant Shupert.

While Knox has designed most security features into a Knox-Box, the final layer of security is the actual installation. Knox strongly recommends all departments require their property owners to install Knox products per the installation instructions. And if possible, install a tamper switch connected to the building's burglar alarm.

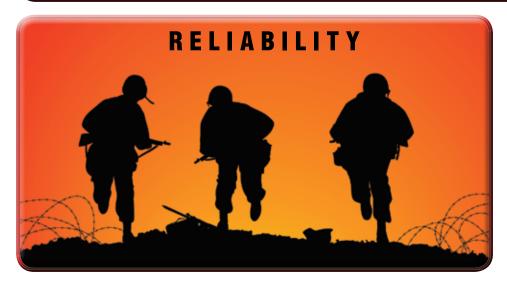
The Miami Township Division of Fire/EMS (Montgomery County, Ohio) serves a 22.08 square mile area with a nighttime population of 26,000 and a daytime population of close to 65,000. The Division of Fire/EMS, which consists of 35 career and 40 part-time employees, work out of four stations.

## Miami Township Fire Department worked for hours to attempt to "force entry" on a KNOX-BOX®



In addition to extensive testing by both Knox engineers and Underwriters Laboratories (UL), firefighters sometimes test the KNOX-BOX® for security by staging a break-in. This attempt took several hours to complete. The department concluded it would be much easier to break-in through the front door than through the KNOX-BOX. Images courtesy of Miami Township Fire Department, Ohio.

# **System Reliability**





**Americans want reliability.** They want it in their cars, their kitchen appliances, and their government. Prestigious awards are given each year to companies and public organizations that demonstrate their dependability and customer service. As it relates to government services people expect excellence.

They also want consistency, and quick results. They expect the mail to arrive at the same time each day, the trash truck to swing by at the same time each week, and when they need help in an emergency they expect to see fire, police and EMS at the front door within just a few minutes of calling 9-1-1. Despite the stereotypical views that are usually associated with government waste and the bureaucracy, firefighters are held in high regard. In a Washington Post (2/11/10) poll, over two thirds or 67% of the people surveyed had a moderate to high level of mistrust in their government. This is juxtaposed to firefighters, who may work for the same local governmental jurisdiction that people are wary of, enjoy up to a 95% public approval rating. In most cases, the government and the services it provides work flawlessly. Turn on the faucet and water comes out, flip the switch and the lights come on, call 9-1-1 and the fire department will be there in less than five minutes.

Reliability is a key ingredient in any organization's effort to be respected and

"In most cases, the government and the services it provides work flawlessly."

valued in the community. Consistency and reliability do not happen without a long-term commitment to success and a strategic plan to make it happen. We all make New Years Resolutions with the best intentions, but many times fail to develop a plan or make the necessary commitment. Fire recruits practice putting on bunkers, donning air packs, and memorizing street maps and hydrant locations until it becomes second nature. Engine and ladder companies practice drill field evolutions on a regular basis. Fire Prevention officers take great care to do functional tests to insure that sprinkler and alarm components are safe and reliable. Very few weeks go by without a news story of a group of agencies that are practicing for a large-scale mass casualty or WMD event. With

practice comes confidence, consistency and reliability. For a fire department to be both responsive and reliable it means a commitment to providing the highest level of service while implementing the best tools available to accomplish the task. The same holds true for your Knox program. Knox offers products and program support to help you, but as with every other tool, it also takes a commitment from you.

#### **Installation and Maintenance**

The effectiveness and reliability of your Knox program is dependant on the requirements you place on it. There are performance standards for fire sprinkler and alarm devices; why not have them for the Knox program? The installation and maintenance of the boxes and padlocks can be critical to the products being serviceable in an emergency. Every morning at virtually every station in every corner of the world, the crew checks out the engine or truck. They inspect equipment

The effectiveness and reliability of your Knox program is dependent on the requirements you place on it.

including gloves, face masks, SCBAs, down to the level of water and fuel in the tanks. These are all tactical tools. So is your Knox program. It is difficult to over state how important the mounting of a Knox-Box is to the overall security, performance, and reliability of the product. Require a box with a tamper switch whenever possible. Periodic maintenance is also important. No fire department would dream of buying a new ladder truck, filling it with fuel



and then parking it in the bay for years on end, expecting it to fire up and work properly when the 'big one' hits. While you obviously don't have to check the Knox-Box or padlock every day or week for that matter, it does require some attention. For a Knox-Box to be reliable at 2:00 am, it is important that it is mounted according to Knox Company recommendations and that you periodically have a plan for testing and servicing the boxes/locks. Please take the time to go to the Knox web site and look at our recommended mounting standards and look at our video that demonstrates the UL hammer attack test.

## Reliability in your Knox Program

Take a look at your community. Look for vulnerabilities and security risks. Look for opportunities and available products from Knox to bring consistency and uniformity to your community. An example would be new code that impacts emergency elevator access. The 2012 International Fire Code (Ch. 506.1.2) now authorizes you to implement an emergency elevator box program. Additionally, the 2012 IFC now requires that any and all boxes used for emergency access be listed against physical attack according to UL 1037. No exceptions.

#### 2012 IFC 506.1

"When access to or within a structure or an area is restricted because of secured openings or where immediate access is necessary for life-saving or fire-fighting purposes, the fire code official is authorized to require a key box to be installed in an approved location. The key box shall be of an approved type listed in accordance with UL 1037 and shall contain keys to gain necessary access as required by the fire code official."





Look for opportunities and available products from Knox to bring consistency and uniformity to your community.

In this photo, the FDC connection has been rendered unusable by vandals with plastic water bottles.



Develop and execute a plan to periodically test and service all Knox products, including keeping the contents of the Knox-Box current.

**Reliability.** It is a simple word that is at the heart of what most organizations strive to accomplish. Consistency and reliability in any organization will add to the cohesiveness of the group and will result in a stronger unit. It will certainly enhance safety and response effectiveness. Use it to your advantage. A commitment to excellence coupled with a goal of consistency and reliability in the delivery of service will yield lasting results.





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#### **SUPPORT CONTACTS**

## FIRE DEPARTMENT **SUPPORT**

This department provides customer service to fire departments.

800-KNOX-BOX (800-566-9269)

#### **ELECTRONIC SUPPORT**

(866-566-9269)

This department deals exclusively with technical questions regarding KeySecure®, Sentralok® and MedVault® units. 866-KN0X-B0X

PROPERTY OWNER **SUPPORT** 

Property Owners & General Inquiries to Knox should be directed to our main number. 800-552-KNOX (800-552-5669)

# **KNOX NEWS**

Trade Show Schedule	
Show & Location	Dates
SC Fire Marshal Conference Myrtle Beach, SC	JUN 6-10
NFPA Boston, MA	JUN 12-15
Southeastern Association of Fire Chiefs Montgomery, AL	JUN 16-17
NY Fire 2010 Verona, NY	JUN 16-18
New England Fire Rescue Springfield, MA	JUN 24-26
TN Fire Chiefs Nashville, TN	JUL 10-12
MO Valley Fire Chiefs Wichita, KS	JUL 12-15
Ohio Fire Chiefs Columbus, OH	JUL 15-17
Firehouse Expo Baltimore, MD	JUL 21-23
Florida Fire Chiefs Marco Island, FL	JUL 22-26
South Atlantic Fire Rescue Expo Raleigh, NC	AUG 10-13
Fire Rescue International - DoD Atlanta, GA	AUG 22-25
Fire Rescue International Atlanta, GA	AUG 25-27
EMS World Expo Las Vegas, NV	AUG 31- SEP 2
Alaska Fire Chiefs Fairbanks, AK	SEP 21-24
Canadian Fire Chief Calgary, AB	SEP 25-28
MN Fire Chiefs St Cloud, MN	OCT 11
FireShowReno Reno, NV	OCT 24-26

# **Knox-Box® Security**

The Knox Company takes pride in manufacturing vandal resistant products. While the majority of the security components are engineered into the product design, the safe guarding of the box is contingent upon the correct installation of the product.

Knox strongly recommends all boxes be installed 6 feet up from the ground. A box at this height is easily accessible by most first responders without the use of a ladder. Additionally, anyone tampering with the box would stand out.

Per the Knox installation instructions, all boxes should be attached to a solid wall, beam or post using at least five Grade 5 or 8 fasteners of 3/8" diameter. If the box is mounted on a secure wall per the Knox installation instructions, it will be extremely difficult to knock the box off the wall. Any hollow wall must be built up from the reverse side to ensure against

pull out if the box is attacked from the outside.

The final component to a proper installation is to lock the box. Unfortunately, as many departments experience growth coupled with budget constraints, we have found this isn't always being done in a timely manner. An unlocked box is a security risk to your entire Knox System. We strongly encourage all departments to have a procedure in place where the door is locked within a short period of time following the installation of the box.

As an added layer of security, we offer an optional alarm tamper switch on all our boxes. When the tamper switch is connected to the building's burglar alarm system, an alarm is sounded if the box is opened with a key or loosened from the wall. Some departments require all boxes





in their jurisdiction to have a tamper switch to address security concerns of property owners. Knox can even set-up your department's system so that no box is shipped without the tamper switch. (If interested in requiring this in your jurisdiction, please contact your local account manager.)

The proper installation of the box is paramount to the security and safety of the box. To promote correct installations, complete installation instructions are shipped with each box and are also available on-line at www.knoxbox.com. Please help us help you keep your system secure by having the boxes installed correctly and locking the boxes in a timely manner.

#### IMPROPER INSTALLATIONS

## Congratulations to our FDIC Weathervane & TV Winners!

Weathervane Winner:
Chief
Scott Alderman

Lewisville Fire Dept
Lewisville NC

32-inch Flat Screen TV Winner:

District Chief

Matt Porter

Des Moines Fire Dept Des Moines IA



#### **Unlocked Box**

An unlocked box is a security risk even if the box is empty. There is also a safety issue with children playing with the lid and smashing their fingers.

# Improper installation height

A low installation height makes tampering with the box less noticeable.
Additionally too low of a box can be a magnet for children playing with the dust cover and placing gum in the lock.



## Hinged Box Installed On Side

With the hinge on top, the keys in the box will not hang properly which could result in keys obstructing the locking cam making the box more difficult to open. Additionally, one hand is needed to open the box, while the second hand must hold the box open. If the lid is not held open, a hand will be crushed when the lid slams down.



## Recess Mount Box Surface Mounted

The flange protrudes out and is visually unappealing. A protruding flange could cause injury if something were to get caught on it. Additionally, the property owner could have purchased a surface mounted box for a slightly lower price.

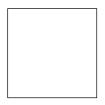


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# **An Added Layer of Security – Tamper Switches**

Tamper switches add another layer of security to already attack resistant Knox® products by having the building alarm system monitor any attack activity that occurs with a Knox-Box® key box. These switches will alleviate property owner concern about unauthorized entry and use of building keys. Nearly all models of Knox products are available with a UL listed tamper switch.

The "tampers" are pre-installed at the factory and are easy to connect to a building's alarm system. Do not connect a tamper switch to the fire alarm. The "tampers" detect movement of a Knox-Box door and the attempted removal of the box from its mounting. In the past few years security has become a major concern for businesses. As a result, we have seen a steady increase in the request for tamper switches.

The Knox Company highly recommends that boxes be ordered with tamper switches even if the end user currently does not have a security alarm system. This gives the property owner the option to connect the box to the building's

Closeup of a tamper switch for a recess mount Knox-Box®. Recess mounted Knox devices require only a door tamper switch. Wall mounted devices

accommodate both door and rear tamper switches.

alarm system if installed rather then having to retrofit their existing box with a tamper switch at a later date.

## **Tamper Switch Installation**

Installation instructions are included with each product and assistance is always just a phone call away. All products with tampers should be installed per the product's installation instructions. When installing the tamper switch assembly, make sure that it is connected to the burglar alarm, not the fire alarm. A licensed alarm installer should perform alarm wiring and testing.

