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### Route To:

- Chiefs
- Fire Prevention
- Station Captains
- EMS
- Haz-Mat Team
- Other

## Residential Key Box Program



Many departments have community projects and educational programs they would like to implement within their community but lack the resources to actually implement them. The West Bend (Wisconsin) Fire Department was one such department. They wanted to implement a Residential Key Box Program within their community but did not have the necessary funds. They did not let the lack of funds stop them though. Rather, they looked for alternative sources.

"We had funds remaining from the previous years exhaust extraction system grant, and thought it could be used for these residential boxes," Captain Ed Geidel shared. The department was able to put \$11,000 towards the Residential Key Box Program from that grant money. This program targets at-risk, independent seniors and disabled residents living in single family dwellings within their jurisdiction. With this program, firefighters have immediate access to the residences of those participating in the program, reducing the time required to make contact with the patient. "It gives those living alone security for their own person yet it allows us to get in if they call for a medical

emergency without causing any damage to their structure," Geidel said.

Currently, there are seniors within the community that use the unsafe practice of hiding keys for fire department access. In these instances, the responding crew is requested to call dispatch on a cell phone for the key location. This is done so that the location is not broadcast over the radio



*Battalion Chief John Spartz, who has been assisting Captain Ed Geidel with the program, is shown placing a residential box on a home in West Bend.*

for all to hear, but calling in for the location increases a crew's response time. With the new residential program, all residences with a residential key box are noted in the 911 System. Dispatch lets the responding crews know that there is a Residential Knox-Box at the residence at the time they are dispatched. Crews are able to access the key box with their Knox® Master Key. There's no longer any need to place a separate call to dispatch.

# Editorial

*Over the past three years, there have been many changes at the Knox Company. These changes are the direct result of wanting to provide our customers with the best service possible. While most of the changes have been fairly minor, several have been fairly large.*

*Today, we are experiencing another change at Knox – we are implementing a system conversion. This more robust system will allow us to be better equipped to serve our customers for years to come. As a result of this conversion, some delays in the processing and fulfillment of orders have been experienced. These delays are very short-term. By the time this newsletter is printed and mailed, the delays will have been resolved. We apologize for any inconvenience these delays may have caused.*

*Again, thank you for your support of the Knox System. We look forward to serving your department for years to come.*



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## Updating Sentralok® A Firmware and Software



If you have Sentralok units or Sentralok PC software that were received prior to January 2007, you need to update your firmware and software following the instructions listed below. A change was made to the communications portion of the firmware and software to make the infrared communications more reliable and faster. The new software also supports the use of a "USB to IR" cable.

Please note it is important that the update instructions be followed in the exact order listed. If at any time you have a question regarding the firmware/software update, contact our electronic technical support at 1-866-566-9269. They are available to help walk you through the update.

1. You must update the firmware in all of your Sentralok A units using the software already installed on your PC and your Palm PDA units. Your firmware must be updated prior to completing the following steps.
2. After the new firmware is uploaded to all of your Sentralok A units, your older Palm PDA and PC programs will no longer be unable to talk to your Sentralok A units.
3. Delete the KnoXSAA and KnoxSAC programs on your PDA units.
4. Uninstall the Knoxware Sentralok A program from your PC.
5. Once steps 1-4 have been completed, you can begin to install the new PC/PDA software.
6. Install the new PC Knoxware Sentralok A program on your PC.
7. Install the new PDA programs on your PDA.
8. HotSync your PDA to your PC.
9. Lastly, go back to each Sentralok A unit and update the configuration data in each unit. This last step makes sure everything is working correctly.

Remember, before installing the new software on your PC and PDA, you must first use the old software to update all your units with the latest firmware.

**If you have any questions regarding this process, please call 1-866-566-9269 for technical assistance.**

# Knox System Maintenance



The Knox Master Key is a high security key with many security features built into the actual key. Normally you should not encounter any problem with your Knox Master Key, particularly if it is kept in a master key retention device. Unfortunately, not everyone utilizes a master key retention device. This leaves master keys vulnerable to additional wear and tear. Due to the security features of the key, additional wear and tear on the key can result in difficulty in the locking and unlocking of a Knox box.

The Knox Company recommends you test your existing master keys on a regular basis to ensure they operate correctly. If you encounter a master key that does not consistently open a box, we suggest you follow the steps below to determine if it is the master key that is damaged or if the lock core has been contaminated with grit.

1. Try three, or more, different master keys to determine if it's the key or the keyway.
2. If all keys have difficulty opening the box, it is most likely an issue of the lock core having been contaminated with grit. Complete the annual maintenance steps listed below and retry the keys.

## Medeco Lock Annual Maintenance

- Spray lock mechanism with a dry Teflon lubricant such as Key Lube or LPS-1.
- **CAUTION:** DO NOT USE OIL-BASED PRODUCTS SUCH AS WD40.
- Operate lock several times to check operation and spread lubricant.

If the lock still does not open consistently, perform the following procedure:

- Spray the lock cylinder generously with a good carburetor cleaner such as Gumout®, Poxylube or LPS-1. These products leave no residue that may interfere with the moving parts of the lock.
- Take the Knox master key and work it in and out of the lock several times.

- Spray the lock cylinder with a dry Teflon lubricant a second time.

- With a rubber mallet lightly tap the lock (if rubber mallet unavailable, place a piece of wood against the lock core and lightly tap it with a wrench or hammer). This sends a vibration through the lock core to help free the pins.
- Re-try all three keys. If all three keys still experience problems, contact Knox Fire Service at 1-866-566-9269.

If one or more keys function properly, i.e. have no difficulty in opening the box, then the keys that have difficulty are most likely damaged and need to be replaced.

In line with Knox key security policies, fire department requests for master keys must be written on department letterhead, signed by an authorized signer and mailed to the Knox Company. In the letter please state that you are replacing a damaged master key.

Please mail the original letter when making key requests. We cannot accept faxes or copies when you are requesting keys. In addition, keys are shipped to your department's physical address via FedEx and require a signature acknowledging receipt. Please provide your street address rather than a post office box.

The original master key being replaced must be returned to the Knox Company for evaluation. Once our evaluation is complete, the key will be destroyed.

Again, problems with the master key are very rare. To reduce the likelihood of there being a problem, the Knox Company highly recommends you store your master key in a master key retention device.



# Storz: What's in a Name?

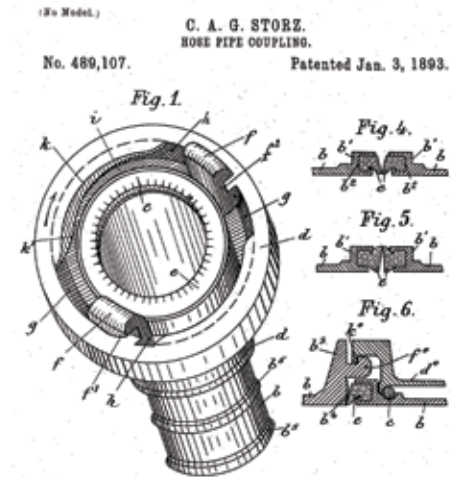


In parts of the world it is called a Storz fitting. In the U.S. it is most commonly spelled Storz. Regardless how you spell it, a Storz connection is the generally accepted coupling used on all large diameter fire supply hose and a growing number of fire hydrants and fire department connections. How did it come into existence? What are the practical uses?

## Historical Background

The concept of a fast action coupling was the late 1800s brainchild of German inventor Carl Storz. A Storz coupling is essentially a variation of a hose connection. It is quick, reliable, and has seen service in American fire departments on large diameter fire hose for decades. It is also used as the auxiliary FDC intake to supplement fire sprinkler systems or other fire protection applications like foam deluge systems. It is generally used in 4 inch and 5 inch sizes in America, but is available in Europe in a variety of sizes for applications other than fire fighting. NFPA 1963 Standard for Fire Hose Connections defines the requirements for 4 inch and 5 inch non-threaded connections. It defines them as: "A coupling or adaptor in which mating is achieved with locks or cams but without the use of screw threads." Compared to a conventional connection that has a threaded male and female screw connection at either end that can be attached in only one direction (without the use of an adaptor), a Storz connection is a two-way universal coupling that can be joined to another Storz coupling end. Carl Storz patented his design in Switzerland in 1890 and submitted it to the U.S. Patent Office in 1893. It soon became a standard for fire hydrants throughout much of Europe. While it saw wide spread usage in Europe in the early 20th century, it

took almost one hundred years before the concept was embraced and implemented in the United States. In 2007, all major U.S. hydrant manufacturers offer Storz as an original equipment option.



*A detail of the original Storz fitting illustration submitted to the U.S. Patent Office in 1893 by Carl Storz.*

## Regulating Standards

There are essentially two recognized standards that impact the construction, and application of Storz Connections; NFPA 1963 and DIN (Deutsches Institut für Normung, or the German Institute for Standardization). While NFPA 1963 is the generally accepted Standard in America and addresses/sets all pertinent acceptance standards, the original DIN Standards have long been the benchmark for Storz application and construction acceptance in the rest of the world. In some cases the DIN Standards are higher. Since Storz was a German invention and it has enjoyed over a century of actual usage, the DIN Standards do merit considerable respect and consideration. An example is DIN 14303 and 1725 standards that specifically state that any aluminum used in a Storz application must be 'forged' (hammered, machined, and formed like a Blacksmith might do) and not 'cast' (heated until it is liquefied, then poured or 'cast' into a

mold). The DIN standard goes on to state that in the interest of firefighter safety, any cast aluminum connection components must be reserved for non-fire fighting applications and suggest these products be used for agricultural purposes. This should be something local jurisdictions and contractors take into account when setting acceptance criteria for their community. It is interesting to note that the top U.S. component suppliers including Knox Company's StorzLok™ use only forged and/or machined materials on all Storz products.

## Tactical Benefits

The impact is evident in several ways. Storz connections typically connect more easily and more positively. Things were different in the days prior to Storz and large diameter hose when fire departments used multiple sections of 2½" hose. Once a supply line was laid between the fire hydrant and the engine, many times a distance of hundreds of feet, a firefighter, after flushing, connecting the hose, and turning on the hydrant, would have to walk the entire lay with a couple of spanner wrenches in hand and tighten each connection along the way. Depending on the length of the lay and the number of connections that needed to be tightened, this could take a significant amount of time. With Storz connections, the firefighter still has to make that walk, but less time is needed to walk/inspect the hose, getting the firefighter back to the engine and available to fight the fire. Another tactical benefit is that there is not as much need to have engines with different hose lays for either supply or attack evolutions. This has made it easier for individual engines to be more self-sufficient, allowing fire departments to spread out more with single engine stations, compared to multi-engine stations, potentially lowering initial

response times. It may be also partially responsible for the advent of the multi-purpose pieces of equipment like quintuple combination pumpers (quints) that can supply their own large stream appliances. Another potential benefit is in the standardization of equipment for mutual aid responses. There are literally dozens of different hose thread configurations used in America. If a neighboring fire department crosses jurisdictional lines to come to the aid of another fire department in a major incident, and can not connect to the fire hydrants and fire sprinkler connections once they arrive, the results could be devastating. That is exactly what happened in the Oakland Hills, California fire in 1991. That single incident claimed the lives of 25 people, including a police officer and a firefighter. Close to 2500 homes and over 400 apartments were destroyed at a cost of over \$1.5 Billion. Case study reports on the fire have listed incompatibility of fire hose and fire hydrant connections as contributing factors. Storz connections and large diameter hose have



had an impact on the sprinkler industry too. These connections are used in FDC applications because of the higher gpm flow rates (500-1000 gpm) associated with large diameter supply hose. In sprinkler applications where higher flow rates are required, many jurisdictions have opted to require one large Storz connection as opposed to a manifold with a large number of conventional 2½" connections. While in Denver recently, a building official relayed

that their choice for a new construction project was a large manifold with eight 2½" FDC connections, or one 5" Storz. While it does take more water to fill a larger diameter hose, in a dynamic fire scenario, it is faster, more efficient, and will flow more water with less friction loss, to lay one large diameter line as compared to multiple smaller ones.

### Types of Storz Connections

NFPA 1963 gives the general requirements for Storz connections used by the fire service. Some types utilize a gasket, some do not. Both have particular applications, and may or may not be interchangeable.

### Gasket Type

There are two types of gaskets utilized in some Storz connections. One is a Pressure Gasket and the other is a Suction Gasket. While the end result is similar, they go about achieving a water tight seal in different ways. The difference is in the type and location of the gasket. Pressure gaskets


(which are black) have a flap that is open on the inside facing the flow of the water. Water pressure will seat these gaskets from behind as they swell making a waterproof

seal. The Suction type gasket (grey or white) has a ridge flap on the outside rim that forms an air tight seal when pressed against another suction gasket. Remember: Pressure and Suction gaskets are not meant to be connected together, that is why they are significantly different in color. Some manufacturers state that if mated together they will leak resulting in a loss of pressure. Like any other gaskets associated with fire sprinkler system connections, NFPA 25 the

Standard for Inspecting and Testing of Fire Protection Systems, requires these gaskets be inspected regularly to insure that they are in place and fully operational.

### Metal Face

While metal faced Storz connections have historically been reserved for use on fire hydrants, they are now seeing use on intake FDC applications. Instead of a rubber gasket the inside face of the connection is raised, reducing the space between the two opposing coupling sections. Since it is essentially a discharge connection, the outward flow of the water offers a more natural seal. Additionally since there is no gasket, there is less need to periodically inspect to make sure it is in place. Again, the thing to remember about these various configurations of connections is that while they generally work as advertised, according to some manufacturers, they are not interchangeable and will not work well if mated to the wrong type opposing fitting.

Storz is more than a slogan. It is the standard that all large diameter connections are judged. The spelling may change as you move around the world, but the material and construction specifications of the best suppliers and manufacturers remain true to the original design. The tactical advantages are realized by many fire departments all around the world. Hopefully, you will find this information both informative and enlightening and use it as a tool when developing acceptance and applications standards. 



# Residential Key Box Program

Continued from page 1

West Bend outlined the program's many benefits in their request. Below is an excerpt from their grant proposal.


- Give senior citizens and physically disabled people independence for a longer period of time in their own home. Seniors and disabled residents living independently are becoming more common within the fire department's jurisdiction. More independence and a sense of security embody a better quality of life.
- Give the same independence and security to individuals living in single family residential occupancies that individuals in multi-family housing receive. City code currently requires the owners of multiple family occupancies to provide a key lock box at the front of the building.
- Decrease fire department patient contact times. First contact times increase when access to a residence is not immediate. This program allows independent seniors and disabled residents to receive quick access by the fire department for fire and medical emergencies, improving their chance of a more successful outcome.
- Provide rapid access the fire department needs to quickly mitigate incidents without causing unnecessary forcible entry damage to the residence.
- Enhance the West Bend Fire Department's ability to protect the health and safety of the public, as well as that of firefighting personnel. Public protection and firefighter safety is our goal! An effective key lock box program is one component of a complete Public Education & Life Safety Program to bring us one step closer to achieving our goal.
- A File of Life (medical information) is also placed inside of the lock box. This gives responding units important medical information about the resident in case they cannot communicate with the responding ambulance crew.
- We also will perform a fire safety check of the home and make any recommendations they need to change to make their home a safer place to live in.



Captain Don Peil accessing the residential box to gain entry into the house.

those who would benefit from this program – approximately 150 individuals in the county. At this point, we have 78 boxes so we can't benefit everyone but we have at least gotten a start," explained Geidel. "We will continue to try to get additional grants to purchase additional boxes. We also intend to contact the resident by phone every 6-months to see how they are doing or if their medical condition has changed, or that the individual has moved into a facility where they need to receive extended care."

West Bend first implemented the Knox System in the early 1980s. In 2001 an ordinance was passed requiring the boxes on sprinklered or alarmed buildings. Additionally multi-housing units were required to have a box. This ordinance was retroactive. "The system has been a tremendous assist for our EMS calls," shared Geidel, Approximately 15% of the city's population is 65 years of age or older.

West Bend is on the outer suburbs of Milwaukee. The city got its name from the course of the Milwaukee River running through their community. 

Community agencies are encouraged to refer eligible candidates to the fire department. Eligible candidates receive the use of a Knox residential key box at no charge. When the box is no longer needed, it is returned to the fire department for use at another residence. All key boxes have been marked with an identification

tag to notify residents that the key box is the property of the fire department so they can be returned when occupancy changes occur.

The goal of this program is to provide each resident of the target population a residential key box at no charge. "The local county health agency has given us a list of

# Knox Contacts

## FIRE SERVICE MANAGERS

<b>Bill Brown</b> 888-342-3530 Fax 888-342-6655	<b>Jon Kemp</b> 866-436-0493 Fax 866-436-0494
Alabama Florida Georgia	Connecticut Maine Massachusetts New Hampshire New York Rhode Island Vermont
<b>Bryan McIntosh</b> 877-707-5286 Fax 877-773-4197	<b>Larry Lulich</b> 866-889-4181 Fax 866-613-9412
Delaware Maryland New Jersey North Carolina South Carolina Virginia Washington D.C.	Indiana Michigan Ohio Pennsylvania West Virginia
<b>Jeff Moser</b> 866-361-5844 Fax 866-361-5845	<b>Marlene Briones</b> 866-702-4406 Fax 866-275-4039
Alaska Colorado Idaho Montana Nevada Oregon Utah Washington Wyoming	Arizona California Hawaii
<b>Joe Shanley</b> 866-223-2623 Fax 866-223-2640	<b>Rebecca Heller</b> 866-417-8458 Fax 800-704-0889
Illinois Iowa Minnesota North Dakota South Dakota Wisconsin	Kansas Louisiana Nebraska New Mexico Oklahoma Texas
	<b>Virginia Cardwell</b> 866-504-7230 Fax 901-685-2125
	Arkansas Kentucky Missouri Mississippi Tennessee

## FIRE DEPARTMENT SUPPORT

This department provides customer service to fire departments.  
**800-KNOX-BOX**  
**(800-566-9269)**

## ELECTRONIC SUPPORT

This department deals exclusively with technical questions regarding KeySecure® and Sentralok® units.  
**866-KNOX-BOX**  
**(866-566-9269)**

## PROPERTY OWNER SUPPORT

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

# KNOX NEWS

## 2007 Tradeshow Schedule

Oklahoma Fire Chiefs	Broken Arrow	OK	April 25-27
NFSA	Las Vegas	NV	May 2-5
Idaho Fire Chiefs	Lewiston	ID	May 3-5
New Mexico Fire Chiefs	Ruidoso	NM	May 8-11
Chattanooga Fire	Chattanooga	TN	May 10
Northwest Fire & Rescue Expo	Portland	OR	May 18-19
Fire Expo	Harrisburg	PA	May 18-20
Winnebago CO Fire Chiefs	Rockford	IL	May 23
NFPA	Boston	MA	June 3-5
Georgia Emergency Conference	Atlanta	GA	June 5-7
MS Fire Chiefs	Natchez	MS	June 6-9
SFFMA	Amarillo	TX	June 8-9
IL Assoc Fire Protection	Springfield	IL	June 10-11
Arkansas Fire Chiefs	Forrest City	AR	June 14-16
NY Fire 2007	Lake George	NY	June 14-16
Maryland Fire Convention	Ocean City	MD	June 16-22
Wisconsin Fire Chiefs	Green Bay	WI	June 20-24
SEAFAC	Wisconsin Dells	WI	June 21-23
New England Fire Rescue	West Springfield	MA	June 22-24

## The Key to a Secure System

Knox System security is always important. Protecting the Knox® Master Key and documents listing installation addresses helps ensure that the Knox System is solely for the benefit of your department.

The four security steps listed below are the ways your department contributes to the security of the Knox program in your community. Thank you for following these simple yet important rules.

- 1. Keep all Knox keys in a secure place.**
- 2. Do not release the Knox provided keys to any non fire department or law enforcement personnel.**
- 3. Do not provide Knox installation database access to any non fire department or law enforcement personnel unless required by law.**
- 4. Notify Knox immediately of loss, theft or attempted duplication of any key.**



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## Field Testing in Lake Oswego

The Knox Company has two new products that will be available this summer – SecureCap™ and StorzLok™. These two new water-tight locking devices will join our FDC Product Family. While these two products were initially designed for conventional FDC and standpipe connections, they are also applicable to hydrants.

Currently, these products are being field tested by several departments. The Lake Oswego (Oregon) Fire Department is one such department. The fire department was first approached by their local water department about locking several hydrants that had repeatedly experienced unauthorized use. The three hydrants in question are located near a horse arena. During certain times of the year, individuals open the hydrants and steal water. The water department wanted to stop the theft of water but still allow the fire department access to the hydrants.

Gert Zoutendijk, Fire Prevention Officer for Lake Oswego, contacted Knox about the availability of locking devices for hydrants. “We wanted to make it simple,” Zoutendijk stated. The Lake Oswego Department is a FDC plug user and wanted a product that locked the hydrants to unauthorized users but that was easily accessible to the fire department. Most importantly, they didn’t want to have to carry any additional tools. Both the SecureCap and StorzLok were designed to use the Knox Keywrench. Since Lake Oswego already carries

the keywrench, they would not need any additional tools to access the hydrants.

So far, SecureCap and StorzLok have worked as designed and water has not been stolen. These products have a projected release date of June 1. As soon as the products are available, Knox will send out product announcements.



*SecureCap (left) and StorzLok (right) installed on a hydrant.*

*Gert Zoutendijk removing a SecureCap.*



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