



The Impact of Key Control on Campus Safety and Security

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Safety and security on campus environments has become a significant concern for education officials. Today's campus administrators are under heightened pressure to secure their facilities, and to provide a safe educational environment – and to do so in the midst of mounting budgetary constraints. Functional influences such as rising student enrollment, changes in the ways education is conducted and delivered, and the size and diversity of the educational facilities all contribute to make the task of securing a campus facility increasingly challenging. Keeping faculty, administrative staff, and the students their schools are entrusted to educate safe, is now a much more complex and time consuming endeavor for campus administrators.

A broad range of solutions are available to administrators searching for ways to meaningfully elevate their campus safety and security programs. Innovations in technology have made it possible for schools to acquire security solutions that may previously have been out of reach due to cost or infrastructure restraints. State-of-the-art enhancements such as integrated camera and alarm monitoring systems, electronic door access control, visitor identification database applications, and emergency communication platforms are just a few of the options available to campus security or facility administrators looking to add layers to their safety and security programs. Yet, while all of these newer, more high-tech, applications are invaluable additions to the campus environment, the cornerstone to any truly effective campus safety and security program is still the mechanical key system.

A mechanical key system serves as the foundation of a fully realized campus safety and security program, and therefore should not be overlooked when security upgrades are considered. A mechanical solution is still the most economical means of access control through non-common entries, for securing most offices and classrooms, and for base building locations such as electrical rooms and utility closets. Mechanical cylinders are also frequently used for higher priority locations that have electronic access, but where a mechanical override is needed. However, conventional mechanical systems have a number of deficiencies that can be particularly challenging for a campus security or facility administrator, making them inherently difficult to manage and maintain.

A well designed key system is perfect the day it is installed. But because day-to-day operation involves the continual interaction of locks, keys, and key holders which all change over time, the system can degrade quickly. Keys are cut and distributed, but no records are made to document these transactions. Locks are changed ad-hoc to accommodate a transition of personnel or office function, and inconsistencies are created in the key system organization and design. Key system records – if they exist at all – are often manually administered from a single location, resulting in inefficiency and causing discrepancies in the system data. And, lacking any viable alternative, a complete system replacement is required if a master key is lost or stolen. These are issues that challenge any organization managing a conventional key system. They are especially daunting to a K-12 or college campus administrator who may be responsible for managing a system with hundreds of keyed locations, and potentially thousands of keys and key holders. The complex and continually evolving nature of K-12 and college campus environments exposes the need for a mechanical key system solution that will enable campus facility administrators to achieve key control.

In simple terms, 'key control' may be defined as knowing *definitively at any point* how the doors in a key system are locked, how many keys there are, who has the keys, and what those keys open. Key control is therefore accomplished with a mechanical key system that enables the end user have such knowledge. Conventional mechanical key systems have inherent deficiencies that prevent end users from knowing definitive information about their system and, subsequently, establishing key control. A technical analysis of conventional mechanical key system solutions uncovers 4 common problems:

1. **Control over unauthorized key duplication and distribution.** Most mechanical key systems do not provide effective control of unauthorized key duplication and distribution. Keys are either non-restricted, leaving them vulnerable to unauthorized duplication, or they are not uniquely identifiable, making it impossible for the system Owner to know definitively how many keys exist within the system or to track them. Some key systems offer patent restricted key blanks, which for a period of time solves the issue of unauthorized key duplication and distribution*. However, patent restriction by itself cannot provide true key control. Without the means to uniquely track the lifecycle of the keys within a key system, there is simply no way for the system Owner to efficiently and accurately monitor the distribution or duplication of keys. Some manufacturers offer to individually serialize key blanks as a value-added feature at an additional cost. But such serialization is done after the point of manufacture, and the Owner typically becomes responsible for managing the inventory of serial numbers within the system. Such key blank identification is helpful, but does not ultimately establish control over the distribution of keys within the system because the lifecycle of a key blank does not trace an origin back to the manufacturer.

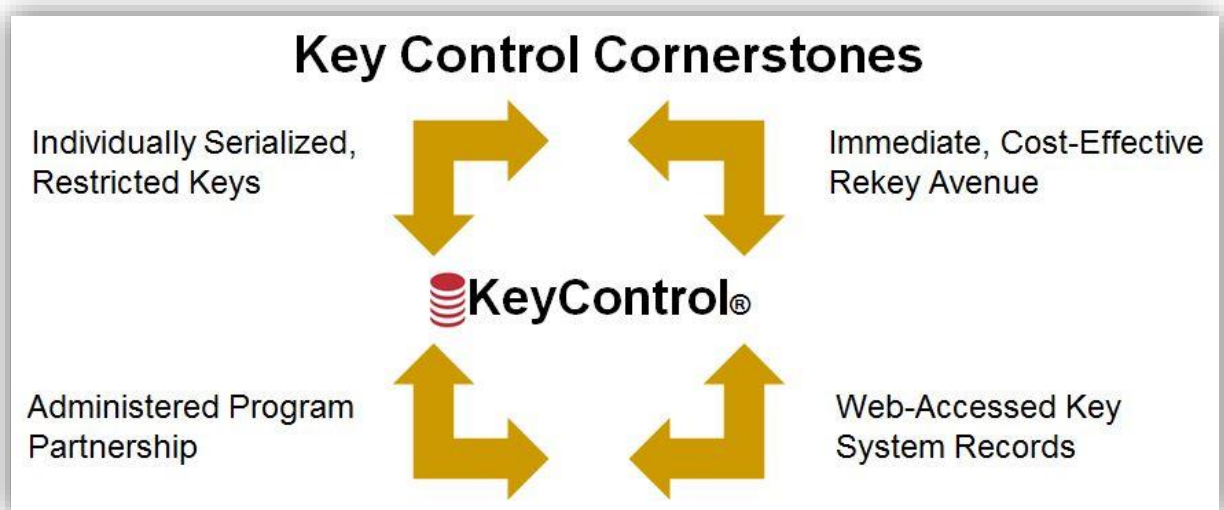


**The common safeguard designed into many mechanical key systems to regulate unauthorized key duplication and distribution is the patented keyway. However, while effective in helping to provide some control over unauthorized key duplication and/or distribution, even patented keyways cannot completely eliminate these issues. Patents will eventually expire, leaving a key system vulnerable to unauthorized key duplication. Additionally, control over distribution from the point of manufacture is typically enforced by restricting the sale of key blanks to authorized dealers within certain geographies, with no means to track sets of blanks or even individual blanks to any specific dealer. Lacking unique identifying marks, keys cannot be tracked by the manufacturer to enforce distribution agreements.*

2. **Absence of an economical rekey avenue.** One of the primary drawbacks of mechanical key systems is that they are by nature rigid in design and function. When a system is built, available codes are allocated to designated doors or groups of doors (denoted by DHI) and these locations become 'fixed' within the system. If any location requires a change due to lost keys or a transition of the location to some other position in the key system hierarchy, the lock must be manually altered by a technician. This process is often time consuming and costly – exponentially more so if the change required involves the loss of a Master key. In the worst case scenario of a lost Master level key, the system Owner is faced with the sudden and unexpected burden of replacing the entire key system. This involves both a very tangible expense in materials (the locks and keys themselves), and a less tangible expense associated with the administrative burden of re-assigning the new keys to the key holders. These two factors often combine to cause a system Owner to neglect or ignore the problem due to budget and time restraints, thereby compromising security.
3. **Attention to key system records.** With most mechanical offerings, the management of key system records is relegated to the system Owner, with little or no support from the manufacturer. All well designed mechanical key systems begin with records detailing the mathematics and hierarchical organization of the locks that will secure the access points of a given environment, and the keys that will operate them. Such records exist at the point a system is produced, and may or may not be delivered to the Owner with the materials of the key system. But access to, and use of, these records is vital. System integrity, accuracy, and expansion are all dependent upon records established at installation, and maintained throughout the lifecycle of a mechanical solution. Many manufacturers offer a software platform for use in managing key system records. However, the responsibility for entering and maintaining system data in these records management applications falls largely to the system Owner. Additionally, because most of the key tracking software offerings available are stand-alone programs intended to be loaded onto specific computers within the system Owner's organization, access to the system records becomes computer-specific. This is problematic in relation to support for operation and maintenance of the key records software, and of the key system records that software stores. With a stand-alone application software updates must be externally provided, creating administrative burden. The loss of one or more of the computers with key system records data impairs the ability for the system Owner to maintain the integrity of the key system, resulting in compromised system security and stability.

4. **Assistance with program policy and management.** Mechanical key systems have traditionally been built and delivered to the Owner, and it is then the Owner's sole responsibility to manage and maintain the system. Integral to the management and maintenance of any key system are the policies and procedures that must be put into place to ensure ongoing system integrity and stability. Larger system Owners may utilize internal personnel designated to monitor and service the system, or they may rely on an outsourced system maintenance provider. However, support and guidance on program policy and procedure directly from the manufacturer is typically not available. This is something of a contradiction, as the manufacturer, by virtue of being a vendor in the security marketplace, is in a unique position to be able to provide the Owner with assistance on best practices in policy and procedure. However, the efforts made by mechanical key system manufacturers to help a system Owner learn from others is negligible, and the Owner is subsequently left to his or her own to enact and enforce key system policy and procedure.

A mechanical key solution that addresses these deficiencies is needed to enable Campus Facility Administrators to better manage locks and keys. InstaKey® Security Systems of Lakewood, Colorado, has spent 25 years developing a solution that addresses the challenges inherent in mechanical keyed access and enables Campus Facility Administrators to achieve key control. Through the integration of a series of fundamental components proven to establish key control, the InstaKey® KeyControl® Program delivers long-term system stability, security, and cost savings. The InstaKey® KeyControl® Program combines the 4 essential elements of **individually serialized, restricted key blanks, a simple, cost-effective rekey avenue, web-accessible key system records, and administered program partnership** into a comprehensive solution that establishes key control in the Campus environment. By combining these **key control cornerstones** into an integrated program, the InstaKey® KeyControl® solution is uniquely suited to help Campus Facility Clients realize increased keyed access security, decreased liability, greater efficiency and convenience, and meaningful cost savings.



InstaKey® KeyControl® Program – Key Control Cornerstones

- 📌 **Individually serialized, restricted key blanks.** Through the use of individually serialized, restricted key sections, InstaKey® has addressed the issue of unauthorized key duplication and distribution. Key blanks are distributed and tracked by way of unique serialization identifiers that are assigned at the point of manufacture. Using InstaKey®'s patented, web-accessed key tracking software, Campus Administrators can track individual keys by way of their serial numbers to the locations they access, and to the individuals who are carrying them. And since key identification is established at the point the key blank is produced at the factory, all InstaKey® keys can be tracked through their entire lifecycle. This enables InstaKey® to solve the issue of control over distribution in the sales channel, and provides Campus Administrators added confidence in knowing that protocols exist to ensure unauthorized key blanks do not make their way into their systems. With the size and complexity typical to the campus environment, a solution that provides Campus Administrators the assurance of control over key distribution and duplication, and the ability to account for how many keys exist and where they are, is crucial to the long term goals of ensuring key system stability, integrity, and security.
- 📌 **Immediate, Cost Effective Rekey Avenue.** With proprietary, single key turn rekey technology incorporated into every lock cylinder, InstaKey® provides the Campus Administrator an immediate, cost saving solution for re-securing a compromised locked location. InstaKey® lock cores can be quickly and conveniently changed in seconds with just the turn of a key. By simply inserting and turning a proprietary 'Step Change' key in the affected lock or group of locks, the pinning within the associated lock cores is reconfigured. Thus, instead of changing the lock (cylinder swap or re-pin), InstaKey®'s rekey solution is to just change the keys. This enables Campus Facility Administrators to establish a consistent, fixed cost associated with lock changes. It also provides added flexibility by allowing non-technical personnel the ability to effect lock changes as the process for changing an InstaKey® lock involves nothing more than literally turning a key in a lock. InstaKey® locks are also designed with the capability to rekey at the Master level, independent of the subordinate Sub-Master or door levels. This means that, in the event



of a lost Master key, a change can be made wherein the InstaKey® system can be rekeyed at the Master level only, independent of the other key system levels. This innovative feature provides Campus Facility Administrators the ability to re-secure a compromised Master key at a fraction of the time and cost normally associated with lost Master keys. InstaKey®'s rekey technology gives Campus Facility Administrators the means to control the expenses associated with lock changes, and it provides the assurance of a built in 'fail-safe' feature that enables a Master key breach to be resolved in exponentially less time and cost than with a conventional mechanical solution.

📄 **Web-Accessed Key System Records Software.** InstaKey® views key system records as paramount to establishing true key control. Without a robust records platform with cross-referencing capability, Campus Facility Administrators are essentially relegated to tracking the locks and keys in their systems manually, leaving their systems vulnerable to errors and rapid degradation. InstaKey® has addressed this problem by developing the only web-accessed, 1-to-1 relational database available for key system management. InstaKey®'s SecurityRecords.com® key tracking software enables Campus Administrators to track and monitor the status of their key system in real time. Since InstaKey®'s records module is web-based, access to key system data is de-centralized. This enables authorized campus personnel to access the records and make queries or changes according to their approved level of access, and reduces the burden on any one specific department or individual. With the InstaKey® solution, Campus Administrators can efficiently delegate administrative tasks relevant to the key system records to subordinate personnel or even ancillary departments, and focus on the global management of the system and its performance utilizing the many options for reporting and auditing that the InstaKey® platform provides. InstaKey®'s SecurityRecords.com key system records solution gives Campus Facility Administrators visibility into the operation of their key system, and the tools to effectively manage it.

📄 **Administered Program Partnership.** With over 25 years of history helping Clients with key control program development, management, and assistance with best practices, InstaKey® is uniquely positioned to assist the Campus Facility Administrator in maintaining system stability and security. InstaKey® believes that a key system should be built to last for decades. The many checks and balances built into every InstaKey® KeyControl® Program are designed to enable the system to do just that. However, InstaKey® also understands that a significant part of the solution is supporting Clients to help them realize the full potential of their KeyControl® Program. This is why InstaKey® allocates a dedicated Program Administrator to every Client as a commitment to help that Client manage and maintain their system. As a manufacturer with a vested interest in the physical access industry, InstaKey® is in a unique position to provide assistance with Program management and market specific best practices that have been developed and refined over years of business, and in support of a broad range of customers and varying circumstances. It is therefore an InstaKey® standard to share best practices discovered in the support of any one Client across the entire InstaKey® customer base. Campus Facility Administrators benefit from direct interaction with a single point of contact from the manufacturer who helps build and maintain campus Program, and who provides assistance with best practices gained from the experience InstaKey® has acquired in its 25 year history.



A mechanical key system is an integral part of any campus safety and security program. However, conventional mechanical offerings do not address all of the underlying challenges common to key system management. This presents a problem to Campus Facility Administrators striving to establish a comprehensive safety and security program. By incorporating 4 elements critical to key control into an integrated program, the InstaKey® KeyControl® solution resolves the complications inherent to key management, and provides Campus Facility Administrators with a mechanical system that forms the foundation of a balanced and fully realized safety and security program.



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