



**HOW TO ORDER KEY SYSTEMS**

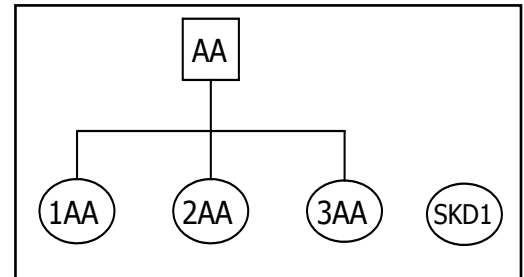
**2 LEVEL SYSTEMS**

**Simple Master Key System**

The master key symbol consists of TWO letters, such as **AA**. The change key numbers are added to the master key letters. The numbers come **FIRST: 1AA, 2AA, 3AA**, etc.

When locks are required which are not operated by the master key or other change keys in the system, they are referred to as "single keyed" and given symbols **SKD1, SKD2**, etc.

When all higher levels of master keys are to be disallowed, suffix (**NMK**) to the symbol of the key which is to operate. This means "not master keyed." Cylinder **1AA(NMK)** is operated by **1AA** only. The **AA** master is blocked from operation.



**3 LEVEL SYSTEMS**

**Grand Master Key System**

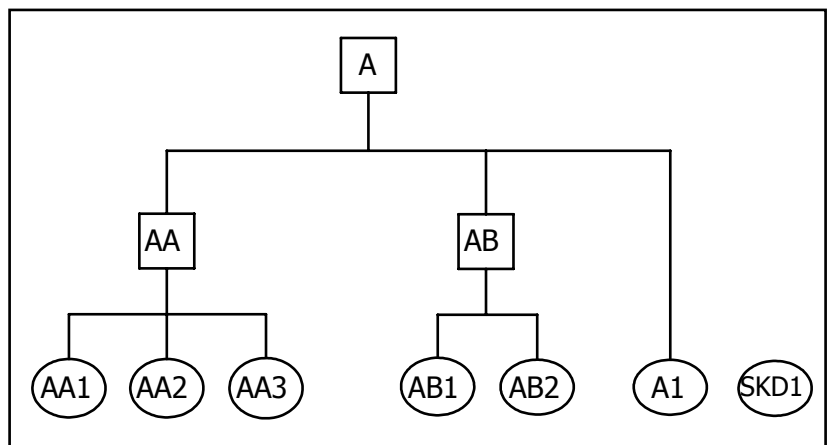
The grand master is assigned any ONE letter, such as **A**. The master keys under this grand are assigned *two* letters, the first of which must be the same as the grand: **AA, AB, AC**, etc. are all masters under grand **A**. Masters **BA, BB, BC**, etc. are all under grand **B**. Caution: Do not use the letters **I** or **O** because of possible confusion with the numerals **1** and **0**, respectively. Change key numbers come after the letters.

For master keys beyond **AZ**, insert a numeral between the letters to designate which pass through the alphabet they represent. **A2A** through **A2Z** represents the second pass of masters under grand **A**. **A3A** through **A3Z** would be the third. Change keys under these masters have the numbers suffixed in the usual way: **A2A1, A2A50**, etc.

If the cylinder is to be operated by its change key and nothing lower than the single lettered GMK, the change number is added to the GMK symbol. This is illustrated by the example **A1** in the schematic shown.

When locks are required which are not operated by ANY master keys or other change keys in the system, they are referred to as "single keyed" and given symbols **SKD1, SKD2**, etc.

When all higher levels of master keys are to be disallowed, suffix (**NMK**) to the symbol of the key which is to operate. This means "not master keyed" and can be applied to any level in the system. Cylinder **AA1(NMK)** is operated by **AA1** only. The **AA** master and **A** grand are blocked from operation. Cylinder **AA(NMK)** would be operated by the **AA** master only. Grand **A** does not operate.





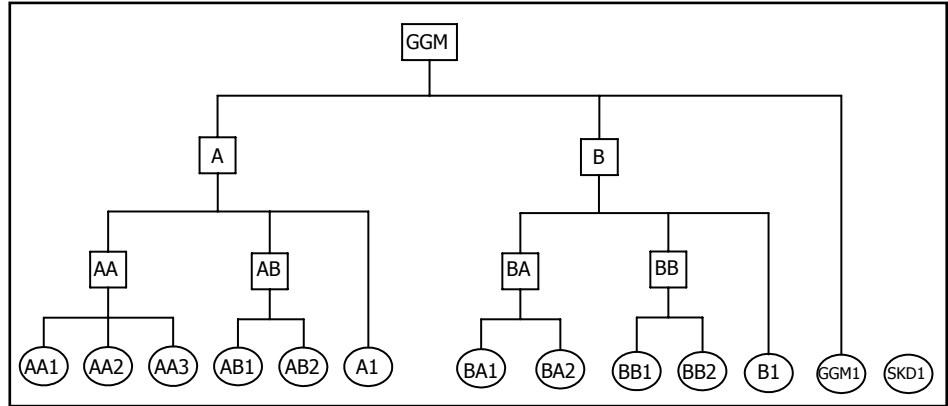
# LOCKS

## HOW TO ORDER KEY SYSTEMS (CONTINUED)

### 4 LEVEL SYSTEMS

#### Great Grand Master Key System

The great grand master key is assigned the symbol **GGM**. The rest of the symbols are the same as those in 3-level systems: The GMKs are assigned single letters, e.g., **A, B, C, D**, etc. Caution: Never use **X** for a grand master key due to the confusion which will result with cross keying symbols presented on the next page.



Masters under each GMK are assigned two letters, the first of which is the same as its respective grand master key. Change key numbers come after the letters. Changes under the grand (**A1, B1**, etc.) and masters beyond **AZ** are handled exactly as in the 3-level system already described.

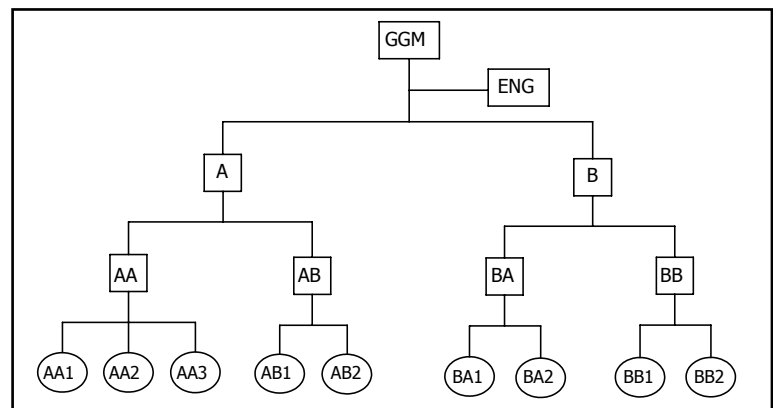
Changes directly under a grand are also handled as illustrated in the 3-level system. For changes directly under the **GGM** with no intermediate level masters, the change number is added directly to **GGM** as shown by the example **GGM1** in the schematic.

When locks are required which are not operated by ANY master keys or other change keys in the system, they are referred to as "single keyed" and given symbols **SKD1, SKD2**, etc.

When all higher levels of master keys are to be disallowed, suffix (**NMK**) to the symbol of the key which is to operate. This means "not master keyed" and can be applied to any level in the system. Cylinder **AA1(NMK)** is operated by **AA1** only. The **AA** master, **A** grand and **GGM** are all blocked from operation. Cylinder **AA(NMK)** is operated by the **AA** master only. Grand **A** and the **GGM** do not operate. Cylinder **A(NMK)** would be operated by the **A** grand only, without the **GGM**.

### SELECTIVE MASTER KEYS

It is often useful in large keying systems to issue a high level master key to maintenance personnel which allows access across all master and grand master key boundaries of a keying system. A selective master key is usually very close to the system's top master key, both physically and through its realm of access. Nevertheless, it must be blocked from operating in many areas.



To designate that a lock be operated by a selective master key, suffix the symbol in parentheses to the standard symbol. Example: **AA1 (ENG)**. This must be added every time the selective key is to operate and left off whenever the selective key is NOT to operate. For instance, you may lay out a system in which key **AA1** is to operate two different offices. Inside one of them is an electrical cabinet which must be accessible to maintenance personnel carrying the **ENG** key. That lock must be specified as **AA1(ENG)** while the lock for the other office must be specified as **AA1**. Change keys directly under the selective key, such as **ENG1**, are operated by all higher level keys, such as **GGM**.

Like cross keying, a selective master key is a convenience feature which decreases the security of the cylinders it operates and limits the expansion and flexibility of the overall keying system. Each selective master key typically eliminates 20 - 25% of the capacity of the system where it is used, so it should only be specified when absolutely required. It is recommended that no more than one system-wide selective master key be used within the same system.





**CROSS KEYING**

**Convenience May Reduce Cylinder Security and Hinder System Expansion**

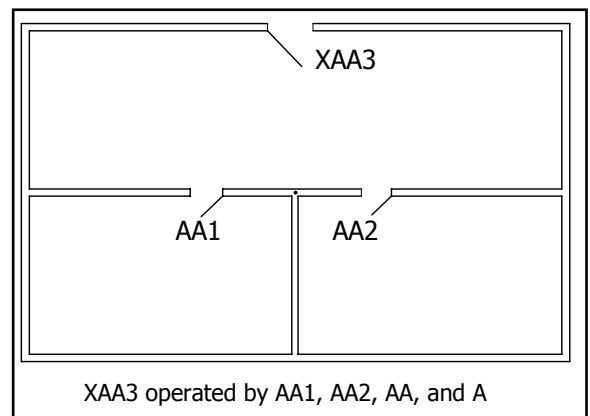
Whenever two or more different keys such as **AA1 and AA2** are both required to operate the same cylinder, the cylinder’s security is reduced. This is called cross keying. When the cross keying occurs under all the same higher level keys, such as **AA1 and AA2**, it is known as controlled cross keying. When it combines keys under different higher level keys, such as **AA1 and AB1**, it is known as uncontrolled cross keying.

In addition to reducing the security of the cylinder, cross keying usually imposes limits on the flexibility and expansion of the overall keying system. This is especially true of uncontrolled cross keying. For these reasons, it is strongly recommended to allow personnel to carry more than one key. Cross keying should be discouraged whenever possible. However, when cross keying is required, it is specified as follows, and should be summarized at the beginning of each order. It cannot normally be added later. Each cross keyed set should also be limited to keys which are all under the same higher level master keys.

**Case #1**

Cylinder requires its own change key. The illustration depicts part of a small medical building where two doctors share a common receptionist. The receptionist gets the **AA3** key. Each doctor carries a key which operates only one office, but is also cross keyed into the entrance from the corridor.

Determine the symbol of the change key (example: **AA3**). Then prefix the letter **X** (example: **XAA3**). Then list all keys which are to operate in an “operated by...” phrase. Example: “**XAA3** operated by **AA1, AA2, AA** and **A**”. Note that **X** is a cylinder specification only. The keys for cylinder **XAA3** are designated **AA3**.

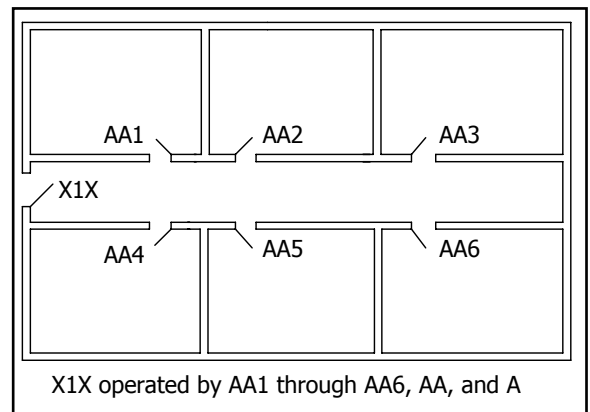


**Case #2**

Cylinder does NOT require its own change key. This illustration depicts a section of a floor in a dormitory. Each student’s bedroom key operates the hall door lock. There is no need to construct a key which operates only the hall door.

In this case, place an **X** at both the beginning and end of the symbol and a number between them. Example: **XIX, X2X**, etc. Again, always include the “operated by . . .” phrase with a complete listing of key symbols to operate.

**Note: Hager will not do uncontrolled cross-keying due to reduced security and expansion capabilities.**



**KEYED ALIKE**

Use keyed alike groups to conserve key combinations. Study blueprints or building structures to identify areas where more than one door leads into the same space, and where several different areas are used by the same personnel. These areas should be keyed alike (use the same key symbol). This conserves combinations for future use as well as reduces the need to issue master keys.



# Master Keying Form

This form is also available in electronic format and submission on our website.

Hager order number: \_\_\_\_\_  
 Account number: \_\_\_\_\_  
 Customer: \_\_\_\_\_  
 Customer PO number: \_\_\_\_\_  
 Job name: \_\_\_\_\_  
 Location: \_\_\_\_\_

Ship to: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

### 1. System

- New
- Existing

If existing, please attach biting sheet and complete following field:

Original Hager order number: \_\_\_\_\_

Requested ship date: \_\_\_\_\_

### 4. Key stamping (visual key control)

- Key set symbol
- Door number
- Bitting number
- Do not duplicate (standard with interchangeable core)
- Other

Please note that visual key control is recommended, otherwise, keys will be tagged with temporary identification.

### 2. System type

- Conventional keyed 5-pin (standard)
- Conventional keyed 6-pin
- Small Format Interchangeable core keyed 6-pin
- Small Format Interchangeable core keyed 7-pin

### 5. Packing

- Pack keys with lock
- Pack keys separate from lock

Marking instructions (labels, packaging, etc.):

\_\_\_\_\_

### 3. System level and key quantity

Level	Quantity
<input type="radio"/> GGGMK	_____
<input type="radio"/> GGMK	_____
<input type="radio"/> GMK	_____
<input type="radio"/> MK	_____
<input type="radio"/> Construction MK (Lost Ball) (for conventional only)	_____
<input type="radio"/> Other	_____

Change keys	Quantity
<input type="radio"/> Per core/cylinder	_____
<input type="radio"/> Per key symbol	_____
<input type="radio"/> Per cylinder/core per KA/KD	_____

Special function	Quantity
<input type="radio"/> Control	_____
<input type="radio"/> Maintenance	_____
<input type="radio"/> Housekeeping	_____
<input type="radio"/> Mechanical	_____
<input type="radio"/> Engineering	_____
<input type="radio"/> Janitorial	_____
<input type="radio"/> SKD	_____
<input type="radio"/> Other	_____

Special shipping instructions: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

### 6. 3998 biting list - no charge if specified with original order

- Yes
- No

Ship to: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

CYLINDERS, CORES, AND KEYING



7. Future expansion (list future MK symbols, approximate number of change key symbols)

8. Contact

Name \_\_\_\_\_  
Title: \_\_\_\_\_  
Phone: \_\_\_\_\_  
Fax: \_\_\_\_\_  
Email: \_\_\_\_\_  
Signature: \_\_\_\_\_

Is a signature required for future keying?     Yes     No

Please note that this document will become part of the permanent keying files for this project. If the requirements for this master keying form change, it is the responsibility of the end user/owner to notify their local factory representative or Hager Companies.

9. Additional information

Note: If forms are not completely filled out, it will delay shipment of order.

