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ASSA ABLOY, the global leader  
in door opening solutions

# **DKC Digital Keypad Controller Installation & Operating Instructions**

**How to install and program the  
DKC with the DKC Programming Tool**

**Table of Contents**

Introduction..... 3  
Installation..... 3  
Connecting to ASSA ABLOY Aperio™ Products..... 6  
DIP Switch Position..... 7  
Additional Hard Wired Options ..... 7  
System Reset..... 9  
Battery Maintenance..... 9  
The DKC Programming Tool..... 9  
Connecting the DKC to the DKC Programming Tool ..... 9  
DKC Programming Tool Overview..... 11  
The Status Form..... 11  
The Configuration Form ..... 11  
DKC Programming Using the DK-37 or DK-38 Digital Keypads ..... 17  
DKC Programming Options on the DKC CPU Board ..... 19  
Technical Support ..... 19

## Introduction

The DKC Digital Keypad Controller by Securitron is a dual door access control system designed for medium/high security control of electric locks. It can be connected to two external keypads (sold separately), card readers (sold separately) and/or ASSA ABLOY Aperio™ hubs (sold separately) and controls two doors either independently or combined for a man trap function. With three different means of programming, the setup and maintenance of the DKC can range from easy to advance depending on the user's needs.

## Product Features

- Access control of up to two doors either independently or combined for a man trap function
- Compatible with most 26-bit, Wiegand 2601 devices, including DK-37 and DK-38 keypads and HID Wiegand-compatible Prox and iClass® readers, as well as the ASSA ABLOY Aperio™ family of wireless products
- Wiegand communications for cable lengths of up to 500 feet
- A database of 250 codes for each door stored in non-volatile memory
- Three programming method options include on-board programming, advanced programming using the DK-37 or DK-38, and computer-based programming using the DKC Programming Tool
- Real time clock with battery back-up
- Three programmable user selectable option relays for each door
- Door position switch inputs, user code disable inputs and hard code disable inputs, request to exit inputs, and tamper inputs that alert user that the keypad/reader has been removed from its mounting surface
- Facility code only mode for Wiegand 2601 devices
- Outputs for red, yellow, and green light indicators, along with an audible beeper
- Time/date stamped event log that maintains the last 2000 events
- Two unregulated DC power outputs for powering external equipment and locks
- Two 12 VDC regulated outputs for powering of the external keypads/readers
- Expansion port for future upgrades
- USB 2.0 computer interface
- DKC Programming Tool saves setup and database information to files on the computer for extra protection along with encryption of the files for security

## Box Contents

DKC Digital Keypad Controller with cover screws

USB Memory Stick with DKC Programming Tool

3' USB Cable

Installation & Operating Instructions

## Installation

The DKC must be installed in a dry location free from extreme temperature and humidity.

## Power Selection

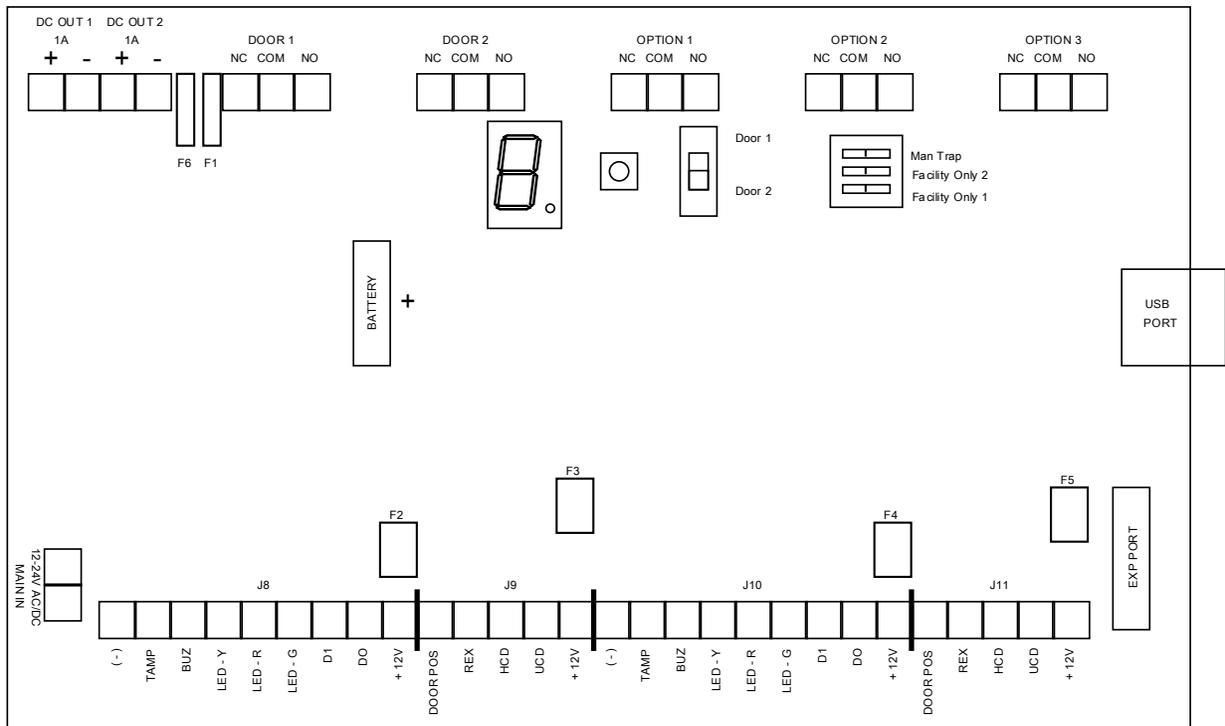
The DKC operates on either 12V or 24V AC or DC. This connection is made at the terminal marked MAIN IN. The polarity of this connection for AC or DC can be connected to either terminal because of the on-board rectifier. Be sure that the power source is of adequate capacity to operate the lock, keypads and the DKC. Please see Table 1 for power consumption.

DKC Power Consumption	12V	24V
DKC (excluding keypads)	250 mA	250 mA
DK-37 or DK-38 Keypad (each)	100 mA	100 mA
Electronic Lock	Consult lock manual	Consult lock manual
Aperio Hub (each)	250 mA	250 mA

Table 1: DKC Power Consumption

### Connecting the Keypad Cable to the CPU Board

There are 9 color coded wires in the keypad cable. Refer to Figure 1 and Table 2 below and connect each wire to the indicated terminal on the CPU board.



Overview of CPU Board

Figure 1

DKC Terminal	DKC Wiring Reference	Suggested Wire Color	DK-38 Terminal
+12V	Positive DC supply lead	Red	DC+
D0	Wiegand data zero	Green	D0
D1	Wiegand data one	White	D1
LED-G	Green light	Orange	GRN
LED-R	Red light	Brown	RED
LED-Y	Yellow light	<b>Blue</b>	YEL
BUZ	Audible buzzer	<b>Yellow</b>	BUZ
TAMP	Tamper indicator	Purple	TAMP
(-)	Ground	Black	GND

Table 2: Wiring Terminal Connections

Note that suggested wire color for 'LED-Y' terminal is BLUE and suggested wire color for 'BUZ' terminal is YELLOW.

### Power and Electric Lock Wiring

When using transformers or power supplies with the DKC, select a transformer or power supply of the same voltage as the lock (12V or 24V).

## DKC CPU Board Configuration

### AC Lock with AC Power

When a fail secure lock operating on AC is used, power must be applied to release the lock. The two transformer secondary wires connect to the AC input terminals (there is no polarity with AC). Power from one terminal then goes to the common of the associated door relay. The NO contact of the relay will power the lock to release the door when a correct code is entered. Note that if the AC lock is fail safe (secure when powered) make the connection to the lock from the NC terminal.

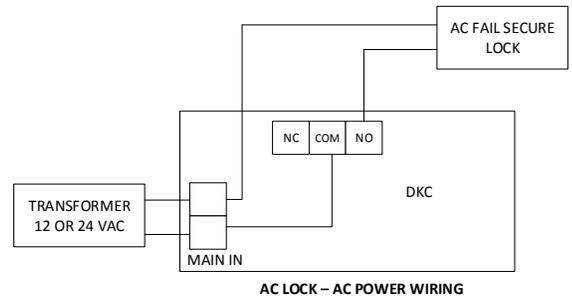


Figure 2

### DC Lock with AC Power

Most DC electric locks can be operated from an AC transformer when the DKC is used. The DKC converts the input AC to DC to operate the lock. The lock must accept full wave rectified DC power. This is true of most DC locks (including Securitron Magnalocks) but some specialty units require regulated DC power.

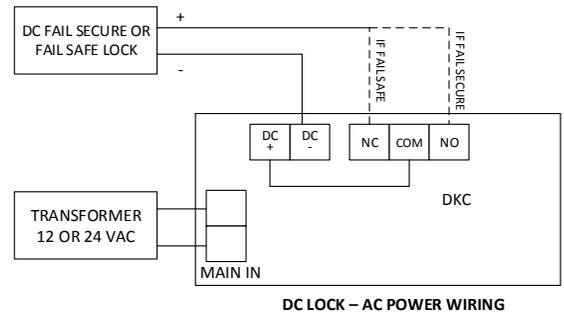


Figure 3

The DC terminals furnish output power for the lock. DC locks must not draw more than 1 Amp. The positive DC terminal connects to the common of associated door relay and either the NO terminal (if the lock is fail secure) or the NC terminal (if the lock is fail safe) connects to the locks' positive power input. Only connect one of these terminals. Consult lock instructions to determine if the lock is polarized and must connect lock power correctly to positive and negative.

Note that many DC lock installations call for battery backup. To achieve this, employ a DC battery backup power supply.

### DC Lock with DC Power

The DKC does not require regulated power but certain specialized electric locks do. Please match the power supply to the requirements of the lock. DC locks come in fail secure (secure when not powered) and fail safe (secure when powered) versions. All magnetic locks are fail safe. The positive DC terminal connects to the common of associated door relay and either the NO terminal (if the lock is fail secure) or the NC terminal (if the lock is fail safe) connects to the locks positive power input. Only connect one of these two terminals. Consult lock instructions to determine if the lock is polarized and must connect lock power correctly to positive and negative.

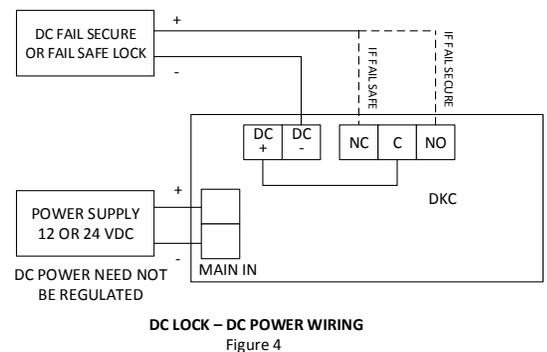


Figure 4

## Adding Other Lock Control Switches

Sometimes other control switches are needed that are not appropriate for the REX input, as use of this input triggers the timed release capability of the DKC. A typical example would be a switch located centrally which would release the lock in response to an intercom call for example. If the lock is fail safe, the switch will need to break power to the lock and if it is fail secure, the switch will need to send power to the lock. Figure 5 shows how to add external contacts for non-timed remote release of the lock for both lock types.

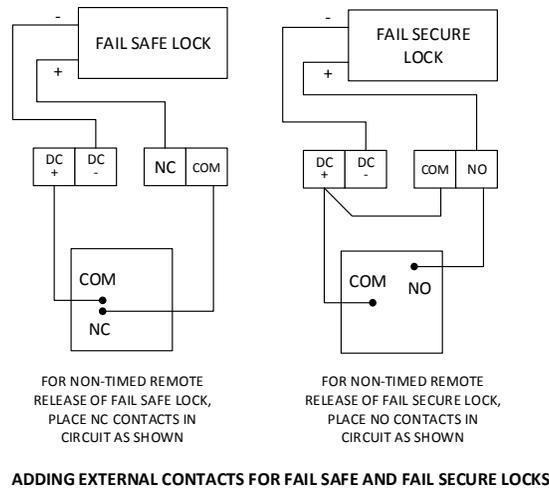


Figure 5

## Connecting to ASSA ABLOY Aperio™ Products

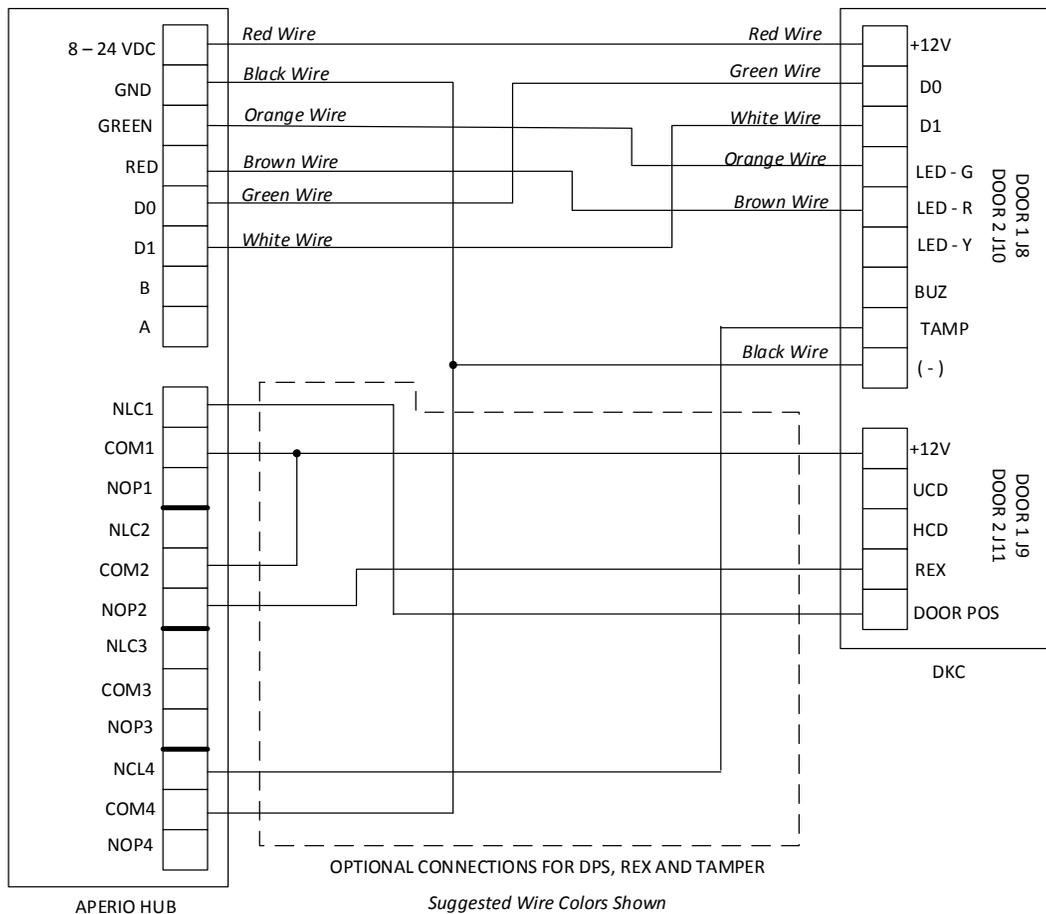
Aperio™ technology is a global wireless platform that reduces the cost and inconvenience of traditional access control – without the hassle of complex site surveys. It utilizes local wireless communication between the lock and a communications hub to connect to an online electronic access control system. This offers facilities an easy, affordable way to expand the reach of existing access control systems and secure additional openings.

When using Aperio™ products with the DKC, an AH20 Aperio™ Wiegand Hub must be used. Please note that the green/red light logic must be set to 'Reverse'. Additionally the 'Aperio hub' option button must be selected on the 'Keypad/Aperio Hub' option for the associated door. These options are selected in the Door Options tab in the DKC Programming Tool. Please note that Passage mode CANNOT be used with an Aperio™ hub. Aperio™ products conform to higher security requirements that do not allow passage mode to be used.

Wiring the Aperio™ hub to the DKC is shown in Table 3 and Figure 6.

DKC Terminal	DKC Wiring Reference	Suggested Wire Color	Aperio Hub Terminal
+12V	Positive DC supply lead	Red	8-24V DC
D0	Wiegand data zero	Green	D0
D1	Wiegand data one	White	D1
LED-G	Green LED	Orange	GREEN
LED-R	Red LED	Brown	RED
(-)	Ground	Black	GND

Table 3: Minimum Wiring Terminal Connections from DKC to Aperio hub



Suggested Wire Colors Shown  
**WIRING THE DKC TO THE APERIO HUB**

Figure 6

The Dip 1 switch called 'A0' on Aperio™ hub must be switched to 'ON' to connect with the DKC.

**DIP Switch Position**

The DKC controller is shipped from the factory with the DIP switches set with 'Facility Only' turned OFF and in 2-door operation mode. If the DKC is being used in a man trap application, DIP switch 1 labeled "Man Trap" must be switched to the ON position. If facility codes are being used, DIP switch 2 or 3 must be turned ON for the corresponding door and the facility code must be entered in the Door Options tab.

**Additional Hard Wired Options**

**The Request to Exit Function (REX)**

Additional control devices such as an exit switch may be required if a solenoid operated lock or electromagnetic lock is used. Connection of exit switches is most easily accomplished by using the DKC's Request to Exit or REX input terminal.

When a normally open switch activates the REX terminal, the DKC's control relay will open the lock for the amount of time programmed into the DKC's access relay timer. The result is the same as if the DKC was used from the outside of the door. The REX terminal is activated by being connected to the +12V (voltage source) terminal.

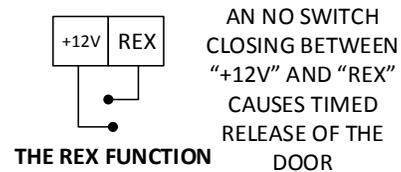
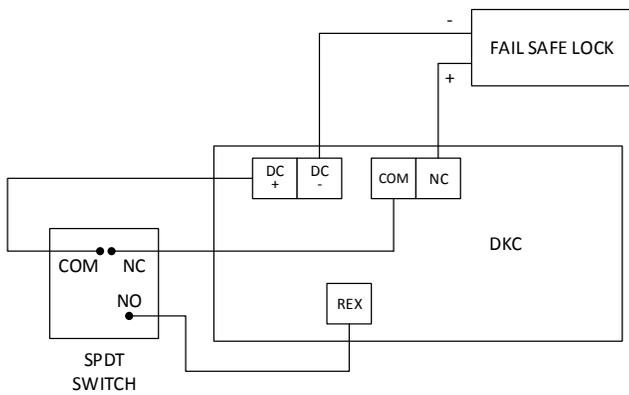


Figure 7

There are some special characteristics as to how the REX input works. It does not start the timer when the input is closed but rather when it reopens; therefore, the REX input can be used to release the door for an extended period of time. As long as terminals REX and +12V remain connected, the lock will be released. When they disconnect, the lock will remain released for the amount of time programmed. The REX input is also re-triggerable. This means that if the lock has been released and the REX input is triggered, the release time will be extended to the full value that has been programmed.

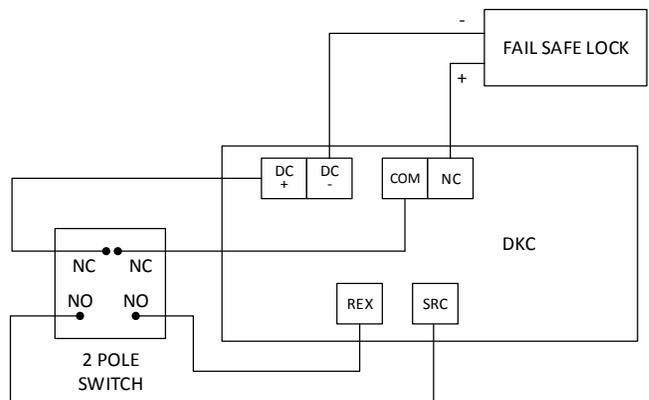
When using exit switches, the possibility must be considered that an electronic failure may occur to the DKC and a person will not be able to exit. If the DKC controls the only door exiting the area, additional steps should be taken to improve the reliability of exiting so as to avoid trapping someone. This can most easily be done by implementing a secondary means of releasing the lock not dependent on the DKC's REX input. Additional switch contacts should be used that directly control the electric lock. In the case of a fail safe lock, which should always be employed when there is only one exit path, this can be easily accomplished with "double break" wiring between the exit button, electric lock, and DKC. If the exit button has a set of normally open and normally closed contacts, it should then be wired according to Figure 8 or Figure 9 below. When the exit button is depressed, its normally closed contacts directly break power to the lock while its normally open contacts activate the DKC. If for any reason a failure occurs with the DKC, a person can still exit by holding the exit button down while pushing the door open. **Always consult local building or fire department when securing doors that are part of an emergency exit path to ensure compliance with local codes.**



WHEN THE EXIT SWITCH IS ACTIVATED, THE NC CONTACTS OPEN WHICH RELEASE THE FAIL SAFE LOCK. AT THE SAME TIME, THE NO CONTACT DIRECTLY ACTIVATES THE REX INPUT. THIS DEENERGIZES THE LOCK CONTROL RELAY WHICH RELEASES THE LOCK "A SECOND TIME" FOR THE AMOUNT OF TIME THAT HAS BEEN PROGRAMMED. IF THE DKC SUFFERS A FAILURE, THE EXIT SWITCH CAN STILL RELEASE THE LOCK FOR SAFETY.

DOUBLE BREAK WIRING FOR FREE EGRESS (SPDT SWITCH)

Figure 8



WHEN THE EXIT SWITCH IS ACTIVATED, THE NC CONTACTS OPEN WHICH RELEASE THE FAIL SAFE LOCK. AT THE SAME TIME, THE NO CONTACTS CLOSE WHICH ACTIVATE THE REX INPUT. THIS DEENERGIZES THE LOCK CONTROL RELAY WHICH RELEASES THE LOCK "A SECOND TIME" FOR THE AMOUNT OF TIME THAT HAS BEEN PROGRAMMED. IF THE DKC SUFFERS A FAILURE, THE EXIT SWITCH CAN STILL RELEASE THE LOCK FOR SAFETY.

DOUBLE BREAK WIRING FOR FREE EGRESS (TWO POLE SWITCH)

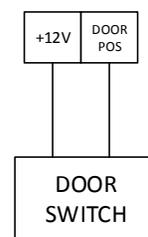
Figure 9

### Man trap Function

The DKC can be set up to operate two doors to work together as a man trap function. In order to use the man trap function, the DKC must be programmed with a user code on each door. The door position switches must be connected to each door as in Figure 10. The DIP switch 1 labeled "Man Trap" must be switched to the ON position. **Always consult local building or fire department when securing doors that are part of an emergency exit path to ensure compliance with local codes.**

### Anti-Tailgating

Particularly when using the longer time ranges, the user may be concerned that after an authorized person has used the door, a second unauthorized person can also use it before the lock has reset. By the addition of a door switch which opens when the door opens, the DKC can be made to re-engage the lock as soon as the door has re-closed regardless of the status of the timer. This feature can be implemented either using the DKC Programming Tool or using a system keypad.



CONNECT A DOOR SWITCH WHICH OPENS WHEN THE DOOR OPENS

ANTI-TAILGATING

Figure 10

## Hard Wired Code Disabling

Hard wired code disabling means making a switch connection to the CPU board which will cause valid codes to not be accepted. The DKC has two terminals marked "HCD" and "UCD" which will respectively disable the Hard code and all User codes. Simply connect the +12V terminal to either of these terminals via an external switch and the respective codes will not function while the switch is closed.

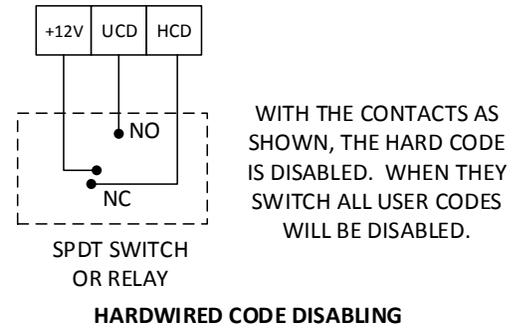


Figure 11

The purpose for hard wired code disable is to support day/night operations. For example, all User codes are active during the day but disabled at night by closing a switch between +12V and UCD. The Hard code would be the only method of entry at night, or, there could be no Hard code programmed so that there would be no entry at night. This could be done by SPDT switch or relay timer controlled contacts from a timer such as the Securitron DT-7.

## System Reset

A system reset will clear the DKC of all programmed codes and reset the unit to factory settings. If a complete system reset is required:

- Press and hold the push button switch on the DKC CPU board.
- Turn DKC power on. Continue holding the push button switch for 10 seconds.
- When 'C' is illuminated on the display, all codes and options have been erased and returned to factory settings.

## Battery Maintenance

The battery on the DKC CPU board is used to maintain the correct time for the event log in the event of power failure. Remove battery tab prior to installing the DKC. The battery should be replaced every 5 years. When installing a new battery, verify the correct battery orientation by checking the CPU board for polarity (BAT+).

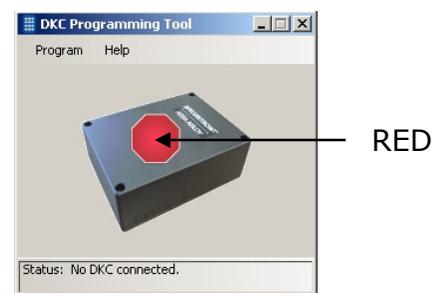
## The DKC Programming Tool

The DKC Programming Tool runs on any of the following operating systems: Windows XP, Windows Vista, or Windows 7. Before beginning, ensure the computer meets the system requirements for the DKC Programming Tool and DKC controller. The DKC Programming Tool is supplied on a memory stick. Ensure the computer is equipped with a USB port. Connect the DKC controller to the computer loaded with the DKC Programming Tool using the supplied USB cable. Please visit Securitron.com for the latest update to the Programming Tool.

If a "Common Language Runtime Error" is encountered during Programming Tool installation, it is easily resolved by visiting [www.Microsoft.com](http://www.Microsoft.com) and downloading "Microsoft .NET Framework 4 (Web Installer)".

## Connecting the DKC to the DKC Programming Tool

Using the memory stick provided, install the DKC Programming Tool onto a PC or laptop computer. Once the application is opened, the DKC Status Form displays the status of the DKC controller. When the DKC controller is not connected to the computer with the DKC Programming Tool the following message will appear:



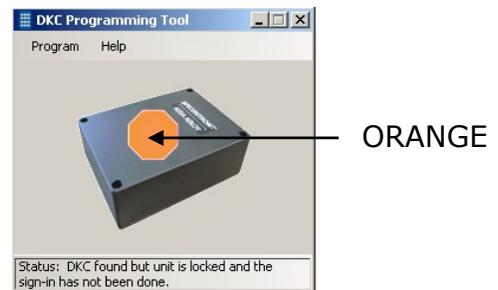
Status: No DKC connected

When the red octagon appears on the form, the DKC Configuration form is accessible, but the following tabs will be grayed out and unusable:

- Import/Export tab
- Real Time Clock tab
- Event Log tab

To connect the Programming Tool to the DKC controller plug one end of the USB cable into the USB port on the computer. Plug the other end of the cable into the DKC controller. The connection is now complete. The DKC may be powered by connecting it to a Securitron power supply, a plug-in regulated power supply or an AC transformer.

Once connected and powered the orange octagon will appear on the form, which means the USB port of the DKC must be unlocked either by using the user-defined USB Enable code or USB Enable card (if a Wiegand card reader or Aperio™ hub is being used).



*Status: DKC found but unit is locked and sign-in has not been done*

If the DKC has no USB Enable code, one must be programmed to access the DKC Programming Tool. The USB Enable code allows the user to enable (unlock) the USB port of the DKC. This must be done before any data can be imported or exported between the DKC and the host computer. Ensure that the slide switch on the DKC CPU board is set to the correct door corresponding to the installed keypad or credential reader. On the DKC CPU board, press the push button switch SW2 until a '5' is shown on the display. The yellow LED on the digital keypad will flash once per second (if connected to a DK-37 or DK-38). Within 30 seconds enter a 2 to 7 digit code then press the \* key. The red LED will flash twice signifying acceptance of the USB Enable code. The display on the CPU board will turn off. If the DKC is connected to a credential reader, present the USB Enable card instead of entering a 2 to 7 digit code that the keypad. Note that only one USB Enable code may exist per door in the code database.

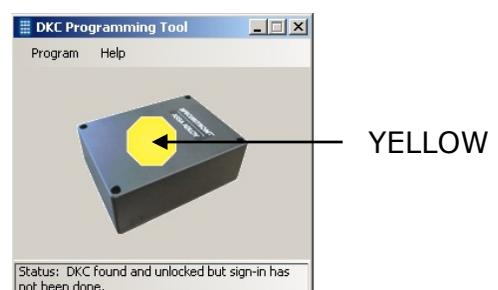
Once the code or card is entered, proceed with the steps shown in The Status Form section. When using a DK-37 or DK-38 keypad type in the code on the keypad, followed by the \* (default) button. If the \* has been programmed as the doorbell key, then use the # key instead.

### How to Sign In

The yellow octagon appears if a username and password has already been programmed into the DKC. For information on how to program a username and password into the DKC, see the Custom Names and Security section of this document.

Click on the picture of the yellow octagon for the sign-in box.

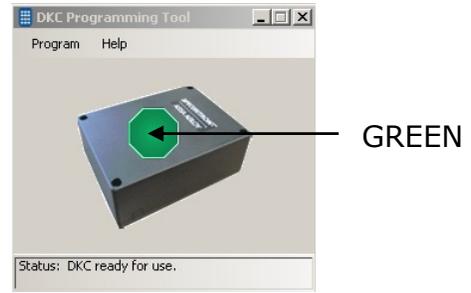
If the username or password is forgotten, click the 'Forgot Your Username and/or Password' link to display the Username Password and Recovery dialog box.



*Status: DKC found & unlocked but sign-in has not been done*

When the green octagon appears, the DKC Programming Tool is connected to the controller and ready to communicate with the DKC.

Click on the picture of the green octagon to start the programming the DKC.



Status: DKC ready for use

**DKC Programming Tool Overview**

The Securitron DKC Programming Tool allows easy programming from a computer using an easy-to-use graphical interface. An event log displays detailed information to help troubleshooting problems or errors.

When connecting the DKC to a computer all information stored in the DKC must be IMPORTED into the Programming Tool. Once changes are made in the Programming Tool the information must be EXPORTED to the DKC for the changes to be in effect.

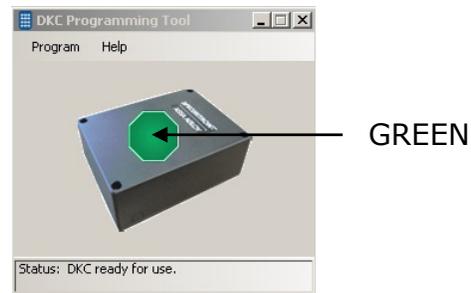
**About the Three Forms**

The DKC Programming Tool interface is comprised of three Forms: the Status Form; the Configuration Form; the Event Log Form.

**The Status Form**

The Status Form indicates the status of the DKC Programming Tool and consists of:

- A visual status queue (a colored octagon)
- A status bar (at the bottom of the form), indicating status of DKC Programming Tool
- Two pull-down menus: the Program menu and the Help menu



Status: DKC ready for use

To open the Configuration Form and begin programming the DKC, click in the center of the green octagon.

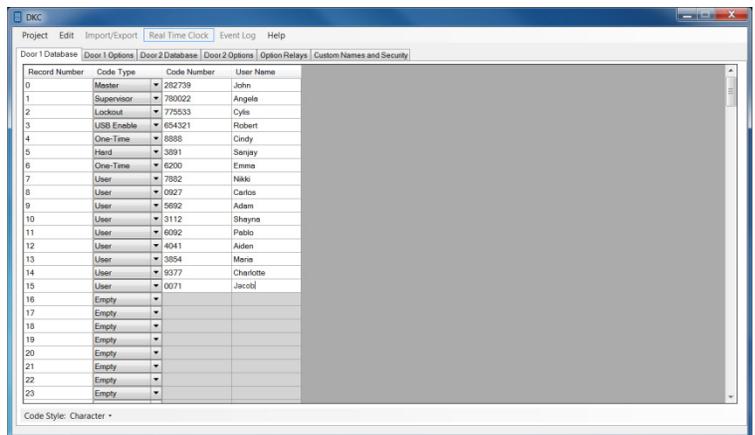
**The Configuration Form**

The Configuration Form has six tabs: a database tab for each door, an option tab for each door, an option relays tab and a customization and security tab. The Configuration Form contains five menus, plus the online Help menu: Project, Edit, Import/Export, Real-Time Clock, and Event Log.

**Configuration Form Tabs**

**The Database Tabs**

The Configuration Form contains two database tabs; one for each door. Up to 250 codes can be recorded per database.



## The Code Style Field

Located in the lower left-hand corner of the Database tabs, the Code Style field contains a menu with two selections. Note that when the code style is changed, the on-screen database is erased.

**Character:** to be used with the Securitron DK-37 and DK-38 keypads.

**Wiegand 2601:** to be used with any Wiegand 2601-compatible device including the Aperio™ AH20 hub.

## The Columns

The Configuration Form contains either four or five columns depending upon the Code Style selected at the bottom left corner of the Configuration Form. When Character is selected four columns appear. When Wiegand 2601 is selected five columns appear:

**Record Number:** Indicates the record number, and is un-editable.

**Code Type:** This column has a pull-down menu to select a code type for each record. There are various codes that can be programmed into the DKC depending on the keypad/reader connected to it. Note that in the table below "code" refers to any code entered on a keypad or card presented to a Wiegand 2601 device.

Code Name	Definition	Applicable Devices
Master	Allows the Master user to enter program mode with unrestricted access. There can only be one Master Code in the code database. Master code must be 5 to 7 digits in length.	Used only with a DK-37 or DK-38
Supervisor	Allows the Supervisor user to enter program mode with limited access. Only user codes and one-time codes can be added and/or deleted. There can only be one Supervisor code in the code database. Supervisor code must be 5 to 7 digits in length.	Used only with a DK-37 or DK-38
Hard	Allows simple single code "fixed" operation. It can also be used to trigger an option relay set for duress mode. There can only be one Hard code in the code database. Hard code must be 2 to 7 digits in length when using a DK-37 or DK-38.	Can be used with any connected keypad or reader
Master Add	Allows the user to program a new user code. The code that is entered immediately after is learned as a new user code. There can only be one Master Add code in the code database.	Used only with a Wiegand 2601 device.
Master Delete	Allows the user to delete a user code. The code that is entered immediately after is deleted from the database. There can only be one Master Delete in the code database.	Used only with a Wiegand 2601 device.
USB Enable	Allows the user to enable (unlock) the USB port of the DKC. This must be done before any data can be transmitted or received between the DKC and the host computer. There can only be one USB Enable code in the code database. USB enable code must be 2 to 7 digits in length when using a DK-37 or DK-38.	Can be used with any connected keypad or reader

Code Name	Definition	Applicable Devices
Passage	Allows the user indefinite uncontrolled passage through an opening. Entering the Passage code again returns operation to normal. Lockout and man trap modes take precedent over passage mode. Any attempt to put the DKC in passage mode while either lockout or man trap modes are active will result in an error. There can only be one Passage code in the code database for the DK-37 and DK-38 but multiples can be used on Wiegand 2601 devices. Passage code must be 2 to 7 digits in length when using a DK-37 or DK-38.	Can be used with any connected keypad or reader; EXCEPT an Aperio™ hub. Aperio products conform to high security requirements that do not allow passage mode to be used.
Lockout	Allows the user to lock the keypad or reader indefinitely. Entering the Lockout code again returns operation to normal. The REX can still be used while lockout mode is enabled to allow exiting. There can only be one Lockout code in the code database for the DK-37 or DK-38 but multiples can be used on Wiegand 2601 devices. Lockout code must be 2 to 7 digits on a DK-37 or DK-38.	Can be used with any connected keypad or reader
One-Time	Allows access but is automatically erased when it is used. There can only be one One-Time code in the code database. One-time code must be 2 to 7 digits on a DK-37 or DK-38.	Can be used with any connected keypad or reader

**Facility Code:** Use this column when the code style (selected in the lower left-hand corner of the Configuration Form database tab) is set for Wiegand 2601. This column can contain numbers from 0 to 255.

**User ID:** The user ID is the unique number by which a user is recognized. This column can contain numbers from 0 to 65535

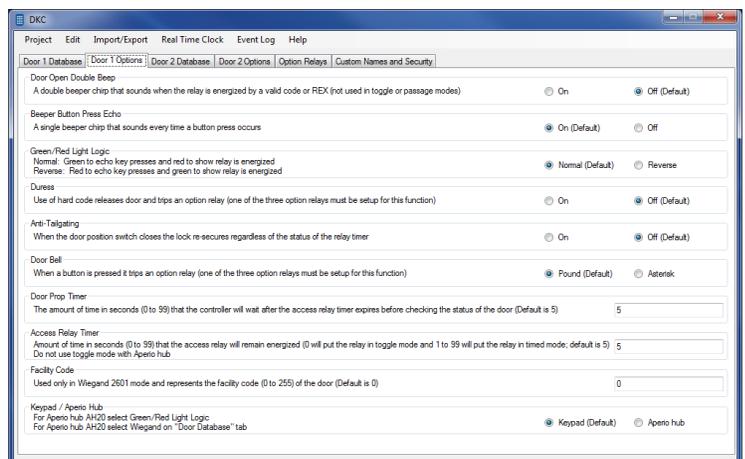
**User Name:** The use of this column is optional. It is used to associate a name to a user code.

### The Door Options Tab

There are two Door Options tabs—one for Door 1 and one for Door 2, each with a total of ten options per door.

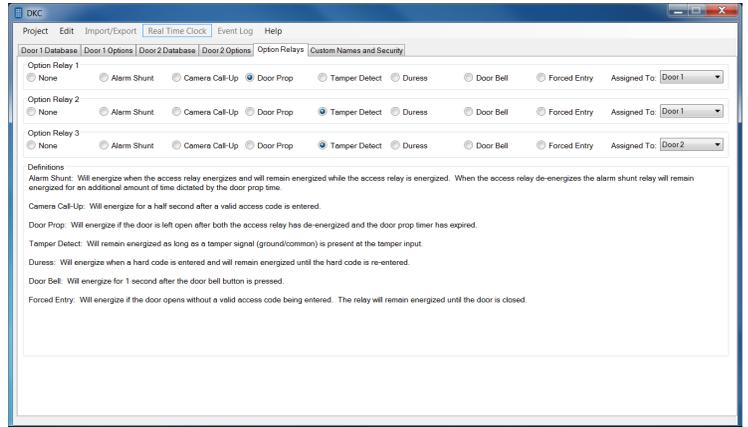
### Aperio™ Products

Please note that the green/red light logic must be set to 'Reverse' when an Aperio™ AH20 Wiegand hub is being used. Additionally 'Aperio hub' option button must be selected on the 'Keypad/Aperio Hub' option for the associated door.



## The Options Relay Tab

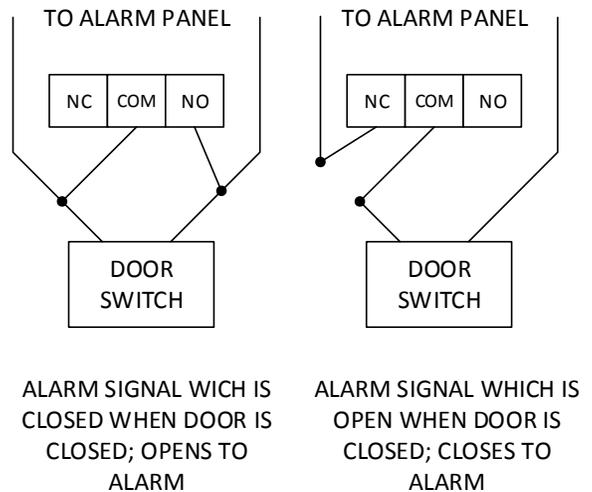
There are three programmable 5 Amp option relays for each door that are marked on the CPU board as NC, COM, and NO. Each relay can perform one of the functions listed below and can be assigned to one door. These functions are chosen using this tab to select the relay and options for each door. The option relays can also be programmed directly on the DKC CPU board while the unit is in Programming Mode.



Note that a door position switch (DPS) is used to monitor the status of a door. A DPS is required for alarm shunt, door prop and forced entry option relays. A DPS is also required for each door operating in a man trap.

### Alarm Shunt

If a door opens without the DKC being activated, an alarm signal should result. When the DKC is employed to open the door, the alarm should be shunted. The relay energizes when the access relay energizes and will remain energized while the access relay is energized. When the access relay de-energizes, the alarm shunt relay will remain energized for an additional amount of time dictated by the door prop time. Note that a door position switch (DPS) is required for alarm shunt function.



WIRING TO SHUNT ALARM SYSTEM ON DOOR

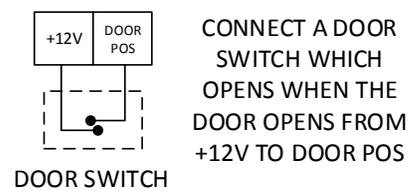
Figure 12

### Camera Call-Up

When a valid code is entered the camera call-up is initiated to record activity during door opening. The relay energizes for a half second after a valid access code is entered.

### Door Prop Alarm Function

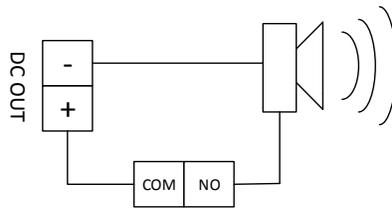
This function provides enhanced security at the door by creating an alarm signal any time the door is left open too long while being used for entry or exit. A relatively long door open time must be selected when this function is enabled. A door position switch (DPS) is required for this application whose contacts open when the door opens.



DOOR PROP ALARM

Figure 13

If the door remains open for a longer period of time than is set on the timer, the programmable relay will switch and will remain energized until the door closes or the keypad is used again. Connection from the programmable relay is generally not made to an alarm system, because if an alarm system is active on the door the same "door open too long" signal can be communicated simply by using the second pole of the lock NC NO control relay to shunt the door switch. Generally, a Sonalert will be mounted on the CPU board enclosure. It will sound if the door is left open too long and will act as a prompt for someone near the door to close it.



AUDIBLE DOOR PROP ALARM SONALERT

Figure 14

## Tamper

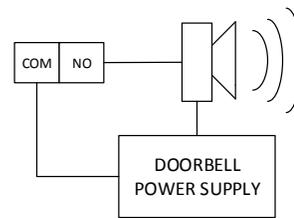
If a total of 16 wrong digits are entered, a continuous audible alarm sound is made and the keypad will lock itself out for 30 seconds while the green light remains on constantly. After the 30 second lockout the audible alarm will silence, the green light will turn off, and the keypad will become active. This feature discourages attempts to guess the code. The relay remains energized as long as a tamper signal (ground/common) is present at the tamper input.

## Duress

The duress function is used for high security applications. It allows a person being threatened to release the door but simultaneously trigger a silent alarm, which would be employed to summon assistance. The DKC establishes the Hard code as the duress code. The relay energizes when the Hard code is entered and will remain energized until the Hard code is re-entered to reset it. Duress function must be selected in two places in the DKC Programming Tool: the duress option must be selected on the Door Options tab and one of the three option relays must be selected for the duress function.

## Door Bell

The purpose of the door bell function is to allow unauthorized persons outside the controlled door to request entry. The relay energizes for one second after the door bell button is pressed.



DOORBELL FUNCTION

Figure 15

## Forced Entry

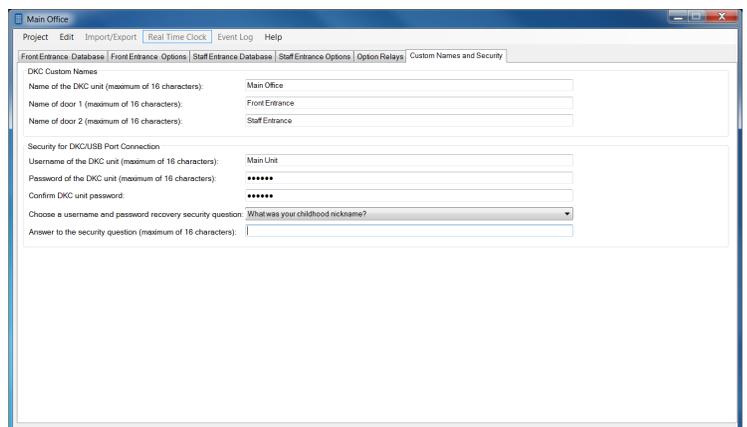
If a door opens without the DKC being activated, an alarm signal should result until a valid code is entered and the door is closed. The relay energizes if the door opens without a valid access code being entered. The relay remains energized until the door is closed. Note that a door position switch (DPS) is required for forced entry function as in Figure 13.

## The Custom Names and Security Tab

Completing the information in the Security tab is optional. It contains two sections:

**Custom Names:** In this section, a name is assigned to the unit itself, as well as a name to each of the doors. The names are a maximum of 16 characters each. Everywhere 'Door 1' and 'Door 2' appear in the Programming Tool will now be replaced with the customized names assigned to the doors.

**Security:** Add a second layer of protection to the DKC port in this section. A username and a password can be added as well as a recovery security question and answer, in case the username and/or password is forgotten. The username, the password, and the answer to the security question are all 16 characters maximum.



## Configuration Form Menus

The Configuration Form contains five menus, plus the online Help menu:

1. Project
2. Edit
3. Import/Export
4. Real-Time Clock
5. Event Log
6. Help

### The Project Menu

The Project menu allows access to door programming project with three selections:

**Open Configuration File:** The Configuration file contains all information for the tabs except the Event Log tab, which has its own file.

**Save Configuration File:** This selection saves all information entered in the Configuration file.

**Exit:** This selection closes the Project menu.

### The Edit Menu

The Edit pull-down menu contains two selections:

**Copy:** Copy the information from a database tab or copy one door options tab to another door options tab.

**Paste:** Paste the information from one database tab into another database tab.

### The Import/Export Menu

When connecting the DKC to a computer all information stored in the DKC must be IMPORTED into the Programming Tool. Once changes are made in the Programming Tool the information must be EXPORTED to the DKC for the changes to be in effect. The Import/Export pull-down menu contains two selections:

**Import Configuration:** Uploads all configuration information from the DKC into the computer.

**Export Configuration:** Downloads all configuration information from the computer into the DKC.

Note that when importing Configuration data, it will erase and replace ALL configuration information currently in all the tabs.

### The Real-Time Clock Menu

The Real Time Clock pull-down menu contains three selections:

**Show Current Date/Time:** Click this selection and the current date and time stored in the DKC is displayed.

**Set Date/Time from System:** Click this selection and the current date and time stored in the computer is sent to the clock inside the DKC

**Set Date/Time Manually:** This selection allows the date & time of the DKC to be entered manually in either a US (m/d/yr) or international (d/m/yr) format.

Note that the only time the date format is seen is when the event log is displayed or when the user requests the date and time of the DKC

### The Event Log Menu

The Event Log Menu selection displays three pull-down items: File, Event Log, Help

#### File

This selection has six options:

**Open Event Log:** Open an Event Log from the computer. The system will ask which event log to open. Select the name of the log to open – the system will prompt for user name and password.

**Save Event Log:** Save all the events listed in the current log being displayed, to the computer – the system will prompt for a user name, password and a security question (depending upon user configuration).

**Page Setup:** Select the paper size, source, orientation (portrait or landscape) and margins, and printer.

**Print Preview:** Preview what the Event Log will look like prior to printing it.

**Print:** Print the active document.

**Exit:** Close the Event Log screen. Note that selecting *Exit will delete all Event Log information* currently displayed.

### **The Event Log**

The Event Log selection has four options:

**Read All Events:** Uploads all events from the DKC (the entire event log) from the DKC to the computer.

**Number of Events Displayed:** Provides a count of how many events are currently displayed.

**Read Only New Events:** Only reads in events that are new since the Event Log was last read.

**Clear Displayed Events:** Clears all events from the log.

### **DKC Programming Using the DK-37 or DK-38 Digital Keypads**

Advanced programming features can be accessed through a connected DK-37 or DK-38. These features allow a user to customize the operation of the DKC to fit the specific needs of their installation. Please note that the keypad is shipped in 'Wiegand mode' from the factory. When interfacing with the DKC, please change the keypad to 'Character mode' and ensure that 'Character' is selected in the DKC Programming Tool.

There are two programming levels available to the user. In master program mode all programming can be done without restriction. In supervisor program mode only commands related to user or one-time codes can be accessed.

### **Enter Programming Mode**

Enter master or supervisor code on the keypad, then press the \* key. Yellow light will flash indicating the digital keypad is now in programming mode. Note that once in programming mode, the yellow light will continue to flash until program mode is exited by pressing the \* key or after a 30 second timeout period.

### **Setting a Code**

Once in programming mode, enter a single digit prefix to indicate the type of code being entered:

1 = Master Code	5 = USB Enable Code
2 = Supervisor Code	6 = Passage Code
3 = User Code	7 = Lockout Code
4 = Hard Code	8 = One-Time Use Code

Then enter the desired code and press the \* key.

The red light will flash twice to confirm a valid entry has been entered. Note that the code length for master and supervisor codes must be 5 to 7 digits long. Code length for all other codes must be 2 to 7 digits long.

### **Deleting a Non-User Code**

Once in programming mode, enter the single digit prefix to indicate the type of code being deleted (same codes as above for setting a code), then press the # key twice to complete the deletion. The red light will flash twice to confirm deletion.

### **Programming Special Functions**

Once in programming mode, enter the two or single digit command followed by the \* key; see table below for the commands. The red light will flash twice to confirm when the command is completed.

<b>Command</b>	<b>Function</b>
70*	Turns on the double beeper chirp that sounds when the relay is energized by a valid code or REX (not used in toggle or passage modes)
71*	Turns off the double beeper chirp (default)
72*	Turns on the key press single beeper chirp (default)
73*	Turns off the key press single beeper chirp
74*	Reverses light logic (red to echo key presses and green to show relay is energized)
75*	Returns light logic to factory setting (green to echo key presses and red to show relay is energized)
76*	Duress option turned on. Use of hard code releases door and trips one of the three option relays. Note that one of the three option relays must be setup for this function; see code 78*
77*	Duress option turned off (default)
78*	Program option relay. By default there are no functions assigned to any of the three relays. Follow the command by the relay number (1, 2, or 3) followed by one of the function numbers listed below: 1 = Alarm Shunt 2 = Camera Call-Up 3 = Door Prop 4 = Keypad Tamper 5 = Duress 6 = Door Bell 7 = Forced Entry
79*	Delete a User code. Any valid user code entered will be deleted. Press the # key twice to complete the deletion.
80*	Anti-tailgating option turned on. When the door position switch closes the lock re-secures regardless of the status of the relay timer.
81*	Anti-tailgating option turned off (default)
82*	Door bell button assigned to the # key (default). Note that one of the three option relays must be setup for this function; see code 78*
83*	Door bell button assigned to the * key. Note that one of the three option relays must be setup for this function; see code 78*
84*	Set real time clock in "US" mode. Follow the command by mm dd yy hh mm (month, day, year, hour, minute). Enter hours in 24-hour time format (i.e. 12am = 00, 9am = 09, 12pm = 12, and 9pm = 21).
85*	Set real time clock in "International" mode. Follow the command by dd mm yy hh mm (day, month, year, hour, minute). Enter hours in 24-hour time format (i.e. 12am = 00, 9am = 09, 12pm = 12, and 9pm = 21).
86*	Erase all User codes in the database. Press the # key twice to complete the erasure. The yellow LED on continuously indicates that there are no codes in the database.
87*	Followed by '00' through '99' sets the door prop timeout in seconds (defaults to 5 seconds).
88*	Erase all codes except master, supervisor, and hard codes. Press the # key twice to complete the erasure.
89*	Returns all functions (including timers) to factory default settings; all codes are unchanged. Press the # key twice to complete factory reset.
9*	Followed by '00*' puts the relay in toggle mode
9*	Followed by '01' through '99' sets relay timeout in seconds (defaults to 5 seconds).

Deleting all codes except Master, Supervisor, and Hard codes:

- Enter the master program code followed by the \* key and the yellow LED will flash once per second
- Enter 88\* followed by # twice
- After less than 2 seconds the red LED will flash twice
- Exit programming mode by pressing either the \* or # key and the yellow LED will stop flashing

### **DKC Programming Options on the DKC CPU Board**

1. Slide switch to select door to be programmed
2. Press push button switch SW2 until the desired code option is reached
  - 0 for Master code (DK-37 DK-38)
  - 1 for Supervisor code (DK-37 DK-38)
  - 2 for Hard code
  - 3 for Master Add Card (Wiegand only) – AKA: User Code Add
  - 4 for Master Delete Card (Wiegand only) – AKA: User Code Delete
  - 5 USB enable code
  - 6 for Passage code
  - 7 for Lockout code
  - 8 for One-Time Use code
  - 9 Learn Facility code (Wiegand only)
3. Yellow light on keypad will flash indicating DKC is in Programming Mode. Yellow light will continue to flash until Programming Mode is exited or after a 30 second timeout period.
4. Enter the code at the keypad followed by \* key. Red light flashes twice for a valid code entry.

Note: Master and Supervisor codes must be 5 to 7 digits, user codes must be 2 to 7 digits long for DK-37 and DK-38

### **Technical Support**

For general questions concerning this or other Securitron products please visit the Securitron website [www.Securitron.com](http://www.Securitron.com) or contact **Securitron Technical Support at (800) 624-5625** or email [TechSupport@ASSAABLOYEMS.com](mailto:TechSupport@ASSAABLOYEMS.com)

### **MagnaCare Lifetime Replacement Warranty**

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[www.securitron.com/en/site/securitron/About/MagnaCare-Warranty/](http://www.securitron.com/en/site/securitron/About/MagnaCare-Warranty/)

Securitron developed the DKC to interface with these fine products and more:

The Securitron DK-37 and DK-38 digital keypads with Wiegand output for universal compatibility



Securitron AccuPower® Switching Power Supplies for clean and accurate power



Aperio® wireless technology – HES K100 Cabinet Lock, Adams Rite A100 Keyless Entry and Securitron R100 Surface Mounted Wireless Reader



HES integrated electric strikes with HID® Prox or iCLASS® reader for powerful access control



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