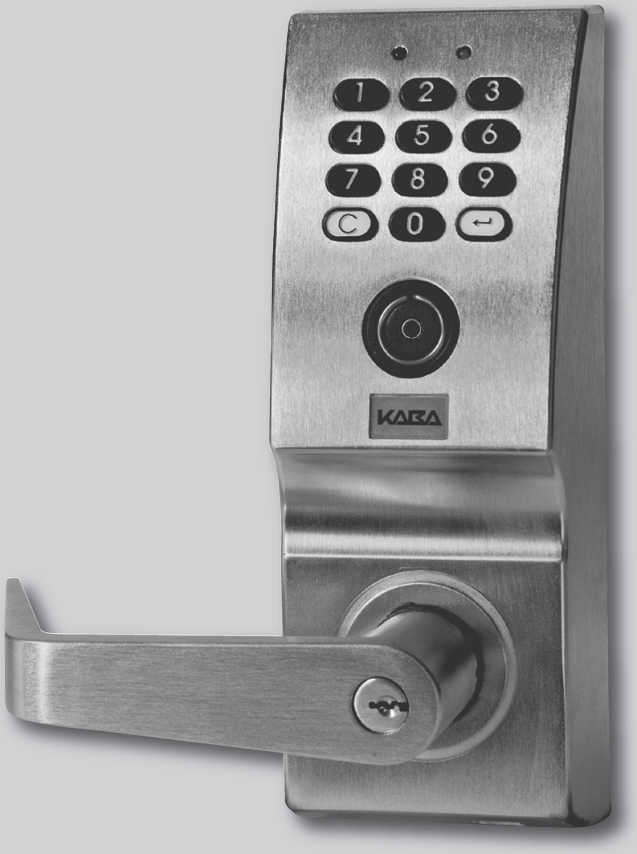

KABA®

PowerLever® 455x
Operating Instructions

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Table of Contents

Introduction

Lock Description

The PowerLever® Model 455x Door Lock is an advanced design electronic lock that operates using internally-generated power, “PowerStarTM technology”, and includes a microprocessor.

The outside cover assembly includes a keypad for entry of control data, a pair of LEDs (red and green) for visual feedback, a beeper for audio feedback, and the outside lever with a return of ½" to the door (unassembled). Downloading of audit and user table information, and uploading of user table information is enabled by a Smart Key* reader and a communication port for a PalmTM ** Personal Organizer. The Smart Key reader may also be used by a Smart Key Access User to open the lock with a Personal Identifier key.

* iButtonTM memory device manufactured by Dallas Semiconductor.

** PalmTM organizers are manufactured by Palm, Inc., a 3Com Company. Any of the Palm™ III handhelds (Palm™ III, Palm™ IIIxe, and Palm™ IIIc) or Palm™ VII handhelds may be used in this application. Memory size varies from 2-8 MB depending on the model.

Model 455x

All Model 455x Door Locks are functionally equivalent. The Model 455x may be a Model 4550 stand alone door lock or a PowerLever Exit Trim Model, where x refers to the Exit Device manufacturer and is represented as A, B, C, etc. The PowerLever Model 455x Door Lock can accommodate a total of 3,000 users and can maintain a 23,430-record audit trail.

PowerLever Operation

The PowerLever lock is designed to operate using internally-generated power. The self-contained PowerStarTM generator is triggered by depressing the outside lever. Each 67-degree open and 67-degree restore rotation of the lever constitutes a charging cycle. A door open operation will require only one charging cycle if the period of door lever inactivity does not exceed a weekend (approximately 65 hours) when operating at normal room temperature. Periods of non-use beyond a weekend will require two charging cycles for a door open operation. One simultaneous flash of the green and red LEDs accompanied by a low volume beep indicates that the lock is powered. Each additional depression of the lever will result in this same response.

Extended operations such as audit data downloads will require a charging cycle approximately every 15 seconds. A monitor will provide audio and visual cues to the user when lock power drops below a sufficient level for operation. The lock will continually beep and flash the red LED, prompting the user to depress the outside lever to provide additional power within 5 seconds.

Smart Keys

Smart Keys are self-contained electronic devices that are programmed at the PC using the PowerLever PC Software. They are sophisticated electronic devices that can be used in working with the PowerLever System. They serve as a communication link between the PowerLever software running on a PC and the PowerLever locks in the field and can even be used to open a PowerLever lock. Each Smart Key is contained in a color coded plastic holder that identifies the type of Smart Key and allows it to be carried on a key ring like a traditional key. The Smart Keys are read at the lock by a Smart Key Reader imbedded in the face of the lock. At the PC they are read by a Smart Key Reader attached to the PC through a serial interface.

Key Types

There are two different types of Smart Keys that can be used with the PowerLever system.

- **A Key** - The A key is an orange colored key with the letter ‘A’ stamped on it. The A key can be programmed at the PC system to be used as a Personal Identifier Key for a Key Access User when accessing the PowerLever locks.
- **SA Key** - The SA key is a red colored key that is used to transfer data between the PowerLever locks and a PC running the PowerLever software program. It must be initialized at the PC for a specific purpose before being used.

Lock Entry Methods

The latch will only be engaged to unlock the door when one of the following actions occurs:

1. A valid combination is entered by an authorized user.
2. A programmed Access User Key is inserted into the lock key reader and a valid PIN (if required) is entered by an authorized user.

Caution: When opening the lock, do not depress the outside lever to retract the bolt until the lock responds with three beeps/flashes of the green LED to indicate available entry.

3. The Passage Function is programmed to maintain the lock in the unlocked position. No combination is required to open the lock when it is in this state of operation.
4. A mechanical key is used to retract the latch.

Note: The door can always be opened from the inside by depressing the inside lever.

Additional Materials

A Quick Reference Guide that documents all lock operations for the PowerLever Door Lock Model 455x is included with the lock. Two Quick Reference Cards are also included, one for each type of Access User. Each card is two-sided and provides an "at-a-glance" quick summary of instructions for performing the two basic Access User lock operations - Open the Lock and Change PIN.

User Information

Before attempting to operate the lock, it is very important that you familiarize yourself with the types of users and the terminology associated with User Identifiers, PINs, Combinations, and Access Schedules. Two main types of Users can exist in the PowerLever System:

Keypad Users - These are users who program or access the lock by only using the method of keypad entry.

Key Users - These are users who access the lock using either a combined method of keypad entry and Smart Key insertion or Smart Key insertion only. Smart Key access is only available in the Model 455x Locks.

In a Model 455x lock, you can have both Keypad Users (default number of users = 2,500) and Key Users (default number of users = 500). The number of Keypad Users = 3,000 minus the defined number of Key Users.

Keypad User Lock Personnel Classifications

Five different Keypad User classifications of personnel can perform various operations at the lock:

- **Master User** - The Master User is the top-level manager who performs the initial lock setup activities and can program all lock functions. The Master User combination will open the lock. There is a maximum of one Master User per lock.
- **Manager User** - A Manager User is a second-tier manager who can program all lock functions except for 1) selecting the number of Key Users and Keypad User PIN field length, 2) adding/deleting the Master User and Manager User, 3) activating the lock and 4) shelving the lock. A Manager User combination will open the lock. The number of Manager Users is limited only by available keypad user table space.
- **Keypad Access User** - A user, added by the Master User or a Manager User, who has the ability to open the lock. Users can be added individually at the lock or can be added at the PC and then downloaded into the lock. The number of Keypad Access Users is limited only by available keypad user table space.
- **Audit User** - A user, added by the Master User or a Manager User, who has the ability to retrieve audit information at the lock. Audit Users can only be added individually at the lock. The number of Audit Users is limited only by available keypad user table space.
- **Service User** - A user authorized for a one-time entry. The number of Service Users is limited only by available keypad user table space. Each Service User combination is automatically deleted after its use.

Note: All Keypad Users, regardless of personnel classification, will occupy one of the available Keypad User ID positions when added to the lock. A Keypad User ID is unique to a particular Keypad User; i.e., no two Keypad Users can have the same User ID. It is possible however, for a Keypad User and a Key User to have the same User ID.

The Master User and Manager Users are referred to as managerial users or managerial personnel throughout these instructions.

Key User Lock Personnel Classifications

Only one lock personnel classification is defined within the Key User type:

- **Key Access User** - A user, added by the Master User or a Manager User, who has the ability to open the lock using a Smart Key. The Personal Identifier Smart Key must be created at the PC.

Note: All Key Users will occupy one of the available Key User ID positions when defined at the PC and added to the lock. A Key User ID is unique to a particular Key User; i.e., no two Key Users can have the same User ID. It is possible however, for a Key User and a Keypad User to have the same User ID.

At lock setup, while in Shelved state, the number of Key Users is defined along with the Keypad User Personal Identifier Number (PIN) field length. The number of Key Users defined must be a multiple of 5 and the maximum allowed is 2,995.

Lock Personnel Classification Activity Chart

The chart below shows the activities that can be performed by each personnel classification.

Activity	Master User	Manager User	Keypad Access User	Key Access User	Audit User	Service User
Determine Model Type	√	√				
Select Number of Key Users and Keypad User PIN Field Length		√				
Change Keypad User PIN Field Length	√					
Activate Lock	√					
Activate/Deactivate Manager User	√					
Set Re-Lock, Wrong Try Penalty	√	√				
Add/Delete Access User(s)	√	√				
Issue Service User Combination(s)	√	√				
Remove Service User Combination	√	√				√
Change Manager User PIN		√				
Change Keypad Access User PIN			√			
Change Key Access User PIN				√		
Change Combination (User ID + PIN)	√					
Switch Passage Function (Off / On)	√	√				
Switch Time Mode	√	√				
Shelve Lock	√					
Enable/Disable Access User ID	√	√				
Open Lock with Combination	√	√	√			√
Open Lock with Access User Key				√		
Retrieve Audit Records	√	√	√	√	√	√
Retrieve User Information	√	√				
Set Lock Time and Date	√	√				
Load Lock User Table Data from PC	√	√				
Load Holiday/DST Changeover Data	√	√				
Enable Palm Communications	√	√	√	√	√	√

Combinations (Keypad Users)

For all keypad users, the PowerLever Model 455x Door Lock is accessed via a combination entered at the keypad. A Variable Length Combination is a feature of the Model 455x lock. The combination can consist of as little as a one-digit User ID or the length can be up to eight digits in length and consist of a User ID followed by a PIN. Regardless of the combination length, a combination will always be unique to a given user. **The default combination length is eight digits (four-digit User ID + four-digit PIN).**

User IDs

The length of the User ID for Keypad Users will vary depending on the number of Key Users defined in the lock. The number of Keypad Users (3,000 minus the number of Key Users) defines the Keypad User ID field length according to the following table. Note that the number of Keypad Users is always calculated as a multiple of 5. In all cases the possible User IDs will range from 0 through the number of Keypad Users minus one.

Keypad User ID Field Length	Number of Keypad Users	Number of Key Users
1	5 – 10	2,990 – 2,995
2	15 – 100	2,900 – 2,985
3	105 – 1,000	2,000 – 2,895
4	1,005 – 3,000	0 – 1,995

All operations performed by Keypad Users require the entry of the User ID as the first digits of the combination. User IDs for Manager Users, Keypad Access Users, Audit Users, and Service Users are assigned by the Master User. The Manager User can also assign User IDs for Keypad Access Users, Audit Users, and Service Users. **The default User ID field length for Keypad Users is four digits.**

Note: All Keypad Users including the Master User, Manager Users, Keypad Access Users, Audit Users and Service Users occupy one of the available keypad User IDs when added to the lock. For example, if the Master User activates the lock and changes the default combination from “00000000” to “00011234” the Master User then occupies the User ID “0001”. No other Keypad User can then be assigned the User ID of “0001”.

User IDs for Key Access Users are assigned at the PC using the PowerLever Software when a Key Access User is added to the system. **The Key Access User ID is always a length of four digits**. The User ID can be used at the lock by a Master or Manager User to Enable/Disable a Key Access User or to Delete a Key Access User from the lock.

User PINs (Personal Identification Numbers)

Use of the User PIN is optional for both Keypad Users and Key Users. At lock setup, the User PIN length for Keypad Users is defined. It can be defined to be a length of 0 (in which case no PIN has to be entered with the User ID) or it can be defined to a length of 1-4 digits. **The default PIN length is four digits**. If defined to a length other than 0, the User PIN can be any value in the range from all 0’s through all 9’s. It is initially assigned the default value of all 0’s (which will not open the lock until it has been changed), and can be changed at any time by the user for added security. If defined, it serves as the second part of the combination, always following the User ID.

The User PIN field length for each individual Model 455x Key User is defined at the PC. The Personal Identifier Smart Key is programmed using the PowerLever software, and the PIN length for each Key User is set when the Key User is added to the system at the PC. The PIN can be defined to be a length of 0 (in which case no PIN has to be entered after inserting the Smart Key into the Smart Key reader) or it can be defined to a fixed length of 4 digits. **The default PIN length is four digits**. If defined to fixed length of 4 digits, the User PIN can be any value in the range from 0000 through 9999. The default PIN may initially be assigned a random value (which will not open the lock until it has been changed), and can be changed at any time by the user for added security. If defined, the PIN must be entered via the keypad after inserting the Smart Key into the lock key reader.

Access Schedules

Note: This feature requires the PowerLever PC software to complete the operation.

Each lock has six available access schedules (1-6) that can be defined by managerial personnel using the PowerLever PC program for Keypad User access to the lock. An access schedule is a period of time, or shift, during which users can open the lock. Schedules are defined by selecting the days the schedule is active and specifying the start time and duration of the schedule. A descriptive schedule name can be assigned to each schedule. Once defined at the PC, access schedules must be downloaded to the lock. In the case where users are also being downloaded from the PC, this can all be done with the same operation. See Load Lock User Table Data (page 33) and the PowerLever Software Reference Manual for more detailed information.

In addition to the access schedules defined at the PC for each lock, the value “0” may be assigned to the access schedule for a user, giving the user access to the lock at all times. This is the default value when no other schedule is assigned.

An access schedule is actually assigned to a user during the Add Access User(s) operation (page 17) if adding users at the lock or from the PC software if uploading user table data created on the PC (page 33).

Note: In a similar fashion you can define Access Time Windows for a specific Key User when adding the Key User to the PC System (page 17).

Note: To change an access schedule assignment for a user at the lock, the user must first be deleted and then re-added to the lock with the new schedule assignment. Only the Master User and Manager User can set the access schedule for each user. The other method to change an access schedule occurs at the PC and requires downloading of the users into the lock again after the change has been made at the PC.

Communicating with the Lock

In order to properly operate the lock, you must know what the lock is expecting you to do and you must also understand what it means when the lock responds to your actions.

Operating Conventions

The following conventions apply to the operation of the lock:

- Once the lock is powered, you have a maximum of 20 seconds to enter a valid combination for an operation.
- To clear any uncompleted keypad entry, press the **Clear** key. This will clear any input that was entered since the last accepted input (as indicated by 2 flashes of the green LED along with 2 beeps).
- To initiate a lock operation other than opening the lock, you must:
    1) Power the lock and enter a valid combination
    2) Before re-lock, press the Enter key followed by the number associated with the lock operation. For example when adding an Access User, you would press **Enter** and then **2**.
- When performing multiple passes within an operation for multiple access users, the Enter key is used as a terminator for the operation.

Lock Responses

The tables below summarize how the red and green LEDs are flashed individually, simultaneously, or in combination to indicate various conditions. Each LED flash is accompanied by a beep for audio reinforcement.

Flashes	Green LED	Red LED
Continuous	SA Key* Required at Reader	Low Power
1	Keystroke Entry	
2	Input Accepted	General Error
3	Lock Ready to Open	Bad Attempt to Open
4	User ID Added/Deleted Manually	

* The SA key is used to transfer information between the lock and the PC.

Flashes	Green / Red Sequence	Simultaneous Green-Red
Continuous	Download in Progress	
1	CLR Key Depression	Lock Powered
2	Device Error **	Procedure End; Re-lock or Penalty Time Expired

** Contact Customer Service for assistance.

- One simultaneous flash of the green and red LEDs accompanied by a beep indicates that the lock is powered.
- When power drops below a sufficient level for operation, the lock will continually beep and flash the red LED. At this point, the operator has 5 seconds in which to regenerate power to a sufficient level before the lock will systematically shutdown. To regenerate power, depress the outside lever through a 67-degree open and 67-degree restore rotation.
- After each accepted step of an operation, two flashes of the green LED display and two beeps sound, prompting you to enter additional information for the next step of the operation. **The User must wait for these prompts before proceeding**.
- After you have completed all the steps of an operation, two simultaneous flashes of the green and red LED display and two beeps sound if the operation is successful. Two red flashes display and two beeps sound if the operation is unsuccessful and you will need to re-key the operation which caused the error.

Programmable Features

The PowerLever Door Lock has the following programmable features.

Lockout

Managerial personnel can control the entry of Access Users and Service Users by enabling and disabling available entry. Lock entry rights can be programmed for specific users or all Access Users and Service Users.

Note: The Master User and Manager Users are not affected by the lockout.

Re-Lock Time

The re-lock time (i.e. the time that the lock remains open before re-locking) can be programmed by managerial personnel from 2 to 20 seconds, with a factory set default of 4 seconds. The lock automatically re-locks after the re-lock time has expired. The re-lock is indicated by an audible “click”.

Passage Function

Programming the Passage Function will change the state from locked to unlocked of the PowerLever Door Lock. When programmed to the unlocked, or Passage function, no combination or key override is required for entry. Only managerial personnel are authorized to program the Passage Function. The factory default of a new lock is Passage Function = Off (Locked).

Wrong Try Limit and Penalty Time

The wrong try limit is the maximum number of consecutive failed entry attempts that can occur before the lock temporarily shuts down (to prevent combination tampering). The **wrong try limit** is programmable from 3-9 with a **default of 3**.

The **penalty time** is the time period for which the lock shuts down when the wrong try limit is reached. The shutdown time is programmable from 0 to 90 seconds with a **factory set default of 20 seconds**. Only managerial personnel are authorized to program these parameters.

During the shutdown period, the lock will not respond to any user actions. If you attempt to power the lock during the shutdown period, the lock will display two simultaneous flashes of the red LED to indicate an error condition. When the shutdown period has elapsed the lock will respond to user actions. Each additional wrong try will result in the lock shutting down for the programmed penalty time. This cycle will continue until a correct combination is entered for a Keypad User or a valid Smart Key is presented for a Key Access User.

Audit Features

Audit features require the PowerLever software to report on the audit and user information retrieved from the lock. If you have purchased the PowerLever Door Lock PC software for reporting capabilities, data stored in the lock can be read from the lock and taken to the PC for reporting. See the PowerLever Door Lock Software Reference Manual for more detail.

Retrieve Audit Records

The lock's audit feature will track the following types of lock transactions in sequential order of occurrence:

- lock user table configured (i.e., number of Smart Key users and Keypad User PIN field length)
- lock opened
- lock activated
- lock shelved
- PIN / combination changed
- add User ID
- delete User ID
- user enabled
- user disabled
- re-lock / wrong try penalty time set
- failed attempts penalty
- audit report retrieved
- set date/time
- Daylight Savings Time ON
- Standard Time ON
- holiday / Daylight Savings Time changeover data loaded to lock
- Service User activated
- Audit User activated
- Access User report retrieved
- Passage Mode ON
- Passage Mode OFF
- Manager User activated
- Manager User deactivated
- Master combination reset via hardware button
- lock disabled to Access Users and Service Users
- lock enabled to Access Users and Service Users
- Palm handheld connect
- Palm handheld disconnect

Retrieve User Information

Note: The Lock User Table contains information for Keypad Access Users, Key Access Users, Audit Users, and Service Users. When a Master User downloads the user table, information for Manager Users and the Master User is also included.

The lock's user information reporting feature lists the following for users of an activated lock:

- User IDs
- User access schedule
- User type and whether the User has an active or inactive PIN
- Whether the User has been enabled or disabled
- User name (if entered into PC database)

Operational Modes

The PowerLever Door Lock will always be in one of two operational modes: Shelved or Activated.

Shelved Mode

When a lock is shipped from the factory, it will be in the **Shelved Mode**. The shelved mode enables the lock to be opened before the user has placed it in service, activated it, and authorized users to open it. Shelved mode is also useful when a lock is to be temporarily removed from service and stored.

Note: The lock should be placed in shelved mode to assure that it can be opened and placed back in service when desired without having to retrieve old combinations.

While in the shelved mode, the lock will be set up for entry only by the Master User via a combination of all 0's. Within the Shelved Mode the Master User can:

- Define the number of Smart Key Users and Keypad User PIN field length.
- Specify re-lock, wrong try limit, and wrong try penalty times.
- Set the lock in Passage or Entrance Function to Locked or Unlocked.
- Change the Master User combination to activate the lock.
- Download the lock audit trail to a Smart Key or Palm organizer.

If a lock has been Activated and then is Shelved, all users are removed except for the Master User. The Master User's combination is returned by the Shelving to the default of **all 0's**. Values that are retained in the lock once it is Shelved are as follows:

- PIN lengths
- Re-lock, Wrong Try Limit, and Wrong Try Penalty Times
- Audit Information
- Access Schedule definitions
- Holiday definitions

Activated Mode

Once the Master User combination has been changed from all 0's, the lock is placed in the **Activated Mode**. In activated mode the Master User can add Manager Users, Keypad Access Users, Audit Users and Service Users to the lock. Each type of personnel activated in the lock has the full range of capability described within these instructions while the lock is in Activated Mode.

Note: Whenever the Master User changes his combination back to **all 0's**, the lock returns to Shelved Mode.

Getting Started

This section identifies lock setup activities and startup operations.

Open Shelved Lock Using Default Combination

The lock can be opened while in a Shelved state using the default Master User combination of **all 0's**.

Note: The lock is shipped pre-set from the factory with the default Master User combination of 00000000 (User ID=0000; PIN = 0000).

	Step	Detailed Instructions
1.	**Power lock.**	Power the lock by depressing the outside lever.
2.	**Enter Master User default combination of all 0's.**	Enter the Master User default combination of **all 0's**. The lock will beep and flash the green LED on each keystroke entered. (If the **Clear** key is pressed during data entry, the lock responds with one alternate beep/flash of the green and red LED, and all digits of the combination must be re-entered.) The lock responds with three beeps/flashes of the green LED to indicate available entry. If the combination is not valid, the lock responds with three beeps/flashes of the red LED.

Caution: When opening the lock, do not depress the outside lever until the lock responds with three beeps/flashes of the green LED to indicate available entry.

3.	**Open lock.**	Before re-lock time expires, depress the outside lever to open the lock. At the end of the re-lock interval the lock will respond with two simultaneous beep/flashes of the red and green LEDs.

Note: If a lock has been Activated and then Shelved, the lock returns to a state where it can be opened with the default Master User combination of **all 0's**. The length of the default combination will be the currently defined length of the User ID + the currently defined length of the PIN.

Lock Setup Activities

The following provides a brief list of the activities that are to be performed by the Master User and, optionally, Manager Users to configure the lock for lock operations. The instructions for performing these activities are located on the indicated pages.

Master User

1. Determine Model Type* (Optional) (page 23)

   * This operation can also be performed by Manager Users when activated.

2. Define number of Key Access Users and Keypad User PIN Field Length (page 14)
3. Activate the Lock (page 14)
4. Activate a Manager User (Optional) (page 15)

Master User / Manager User

5. Set Lock Time and Date (page 16)
6. Set Re-Lock, Wrong Try Limit, and Penalty Times (page 16)

Lock Startup Operations

Note: Before any startup operations can be performed, the activities listed in the previous "Lock Setup Activities" section must be completed.

The following provides a brief list of the operations that should be performed to enable full operation capabilities of the lock. The instructions for performing these activities are located on the indicated pages.

Master User / Manager Users

1. Add Keypad Access User(s) (page 17)
   - or -
   Load Lock User Table Data (page 33)

Key Access Users

1. Change PIN* (page 19)
   * If PIN length is not 0.
2. Open Lock (page 21)

Keypad Access Users

1. Change PIN* (page 18)
   * If PIN length is not 0.
2. Open Lock (page 20)

Additional Lock Operations

The following provides a brief list of the lock operations that may be performed after initial setup and startup activities have been completed. The instructions for performing these activities are located on the indicated pages.

Master User

1. Change Combination (page 19)
2. Deactivate a Manager User (page 28)
3. Shelve the Lock (page 29)

Master User / Manager Users

1. Add Keypad Access User(s) (page 17)
2. Delete Keypad User(s) Using the Keypad (page 26)
3. Delete Key Access User(s) Using the Keypad (page 27)
4. Delete a Key Access User Using the Smart Key (page 28)
5. Issue Service User Combination (page 21)
6. Remove Service User Combination (page 22)
7. Enable a Keypad User (page 24)
8. Disable a Keypad User (page 25)
9. Enable a Key Access User (page 25)
10. Disable a Key Access User (page 26)
11. Retrieve User Information (page 31)
12. Switch Passage Function (Off/On) (page 23)
13. Change Keypad User PIN Field Length (page 29)

Master User / Manager Users / Access Users

1. Change PIN* (page 19)
   * If PIN length is not 0.

Audit Users

1. Retrieve Audit Records (page 30)

All Users

1. Open the Lock (page 20)
2. Retrieve Audit Records (page 30)
3. Enable Palm Communications (page 35)

Lock Operations

Define Number of Key Access Users and Keypad User PIN Field Length

Note: The lock must be in the Shelved mode to select this menu.

	Step	Detailed Instructions
1.	**Power lock.**	Power the lock by depressing the outside lever.
2.	**Enter Master User combination.**	Enter the Master User combination on the lock keypad. The lock will beep/flash the green LED on each keystroke entered. (If the **Clear** key is pressed during data entry, the lock responds with one alternate beep/flash of the green and red LED, and all digits of the combination must be re-entered.) The lock responds with three beeps/flashes of the green LED to indicate available entry. If the combination is not valid, the lock responds with three beeps/flashes of the red LED.
3.	**Press ⏎ then 15.**	Before re-lock time expires, press ⏎ (Enter key) followed by the **1** key and then the **5** key. The lock responds with two beeps/flashes of the green LED.
4.	**Enter Four-Digit Number of Key Users (Refer to table of p. 5.)**	Enter a four-digit number for the maximum number of Key users to be used in the lock. This number must be in the range of 0000–2995 and a multiple of 5. The lock responds with two beep/flashes of the green LED if the data entered is acceptable. If the entered data is not acceptable, the lock responds with two beep/flashes of the red LED.
5.	**Enter a One-Digit Keypad User PIN Field Length.**	Enter a one-digit keypad user PIN field length. This number must be in the range of 0–4. For a lock that has not been previously configured, the lock responds with two beep/flashes of the green LED if the data entered is acceptable. For a lock that has been previously configured, the lock alternately beeps/flashes the red and green LEDs while the lock is being reconfigured and terminates with two simultaneous beeps/flashes of the green and red LEDs. If the entered data is not acceptable, the lock responds with two beeps/flashes of the red LED. The lock is now configured to support the defined maximum number of Key Users and the defined Keypad User PIN length. The maximum number of Keypad Users has also been set based on the number of Key Users defined. (Number of Keypad Users equals 3000 minus the defined maximum number of Key Users.)

Activate the Lock

Note: To activate the lock, the Master User must change the default Master User combination of all 0's. The default combination must be changed before any lock operations can be performed.

	Step	Detailed Instructions
1.	**Power lock.**	Power the lock by depressing the outside lever.
2.	**Enter Master User default combination of all 0's.**	Enter the Master User default combination of **all 0's**. The lock will beep/flash the green LED on each keystroke entered. (If the **Clear** key is pressed during data entry, the lock responds with one alternate beep/flash of the green and red LED, and all digits of the combination must be re-entered.) The lock responds with three beeps/flashes of the green LED to indicate available entry. If the combination is not valid, the lock responds with three beeps/flashes of the red LED.

	Step	Detailed Instructions
3.	**Press ⏎ then 50.**	Before re-lock time expires, press ⏎ (Enter key) followed by the **5** key and then the **0** key. The lock responds with two beeps/flashes of the green LED.
4.	**Enter new Master User combination.**	Enter the new Master User combination. The lock responds with two beeps/flashes of the green LED.

Note: The User ID selected must be in the range from 0 to the number of keypad users minus one.

Note:When PIN length = 0, Combination = User ID only; otherwise, Combination = User ID + PIN.

5.	**Enter Master User combination again.**	Enter the Master User's new combination again for verification. The lock responds with two simultaneous beeps/flashes of the green and red LEDs if the combination was verified successfully. The lock responds with two beeps/flashes of the red LED to indicate an error. The lock is now activated and the new Master User combination is in effect.

Activate a Manager User

Note: As many Manager Users can be activated as there are available keypad user table spaces in the lock.

	Step	Detailed Instructions
1.	**Power lock.**	Power the lock by depressing the outside lever.
2.	**Enter Master User combination.**	Enter the Master User combination. The lock will beep/flash the green LED on each keystroke entered. If the **Clear** key is pressed during data entry, the lock responds with one alternate beep/flash of the green and red LED, and all digits of the combination must be re-entered. The lock responds with three beeps/flashes of the green LED to indicate available entry. If the combination is not valid, the lock responds with three beeps/flashes of the red LED.
3.	**Press ⏎ then 90.**	Before re-lock time expires, press ⏎ (Enter key) followed by the **9** key and then the **0** key. The lock responds with two beeps/flashes of the green LED.
4.	**Enter Manager User combination.**	Enter the combination for the Manager User. The lock responds with two beeps/flashes of the green LED.

Note: The User ID selected must be in the range from 0 to the number of keypad users minus one.

5.	**Enter Manager User combination again.**	Enter the Manager User combination again for verification. The lock responds with two simultaneous beeps/flashes of the green and red LEDs if the combination was verified successfully. The lock responds with two beeps/flashes of the red LED to indicate an error. If PIN length > 0, the Manager User must change his PIN in order to activate his combination.

Set Lock Time and Date

This feature enables managerial personnel to set the time and date in the lock.

Note: Only the Master User and Manager Users can set the time and date in the lock.

To set the lock time and date, complete the following steps:

	Step	Detailed Instructions
1.	**Power lock.**	Power the lock by depressing the outside lever.
2.	**Enter Master User or a Manager User combination.**	Enter the Master User or a Manager User Combination. The lock will beep/flash the green LED on each keystroke entered. If the **Clear** key is pressed during data entry, the lock responds with one beep/flash of the green LED followed by the red LED, and all digits of the combination must be re-entered. The lock responds with three beeps/flashes of the green LED to indicate available entry. If the combination is not valid, the lock responds with three beeps/flashes of the red LED.
3.	**Press ⟵ then 8.**	Before re-lock time expires, press ⟵ (Enter key) followed by the **8** key. The lock responds with two beeps/flashes of the green LED.

Note: If you are setting the lock time for the first time since the lock was shipped from the factory, enter the time in Standard Time, regardless if Daylight Savings Time is in effect or not. Otherwise, enter the current local time.

4.	**Enter time in 24-hour format (HHMMSS).**	Enter a time in the hh:mm:ss 24-hour format (i.e. hour has range of 00–23). For example, a time of **1:30:10 PM** would be entered as **133010**. The lock responds with two beeps/flashes of the green LED.
5.	**Enter date (MMDDYY).**	Enter a date in the mm:dd:yy format. For example, a date of **August 30, 1997** would be entered as **083097**. The lock responds with two simultaneous beeps/flashes of the green and red LEDs. The entered lock time and date are now in effect.

Set the Re-Lock and Wrong Try Limit and Penalty Times

	Step	Detailed Instructions
1.	**Power lock.**	Power the lock by depressing the outside lever.
2.	**Enter Master User or a Manager User combination.**	Enter the Master User or a Manager User Combination. The lock will beep/flash the green LED on each keystroke entered. If the **Clear** key is pressed during data entry, the lock responds with one beep/flash of the green LED followed by the red LED, and all digits of the combination must be re-entered. The lock responds with three beeps/flashes of the green LED to indicate available entry. If the combination is not valid, the lock responds with three beeps/flashes of the red LED. The lock responds with three beeps/flashes of the green LED to indicate available entry. If the combination is not valid, the lock responds with three beeps/flashes of the red LED.
3.	**Press ⟵ then 10.**	Before re-lock time expires, press ⟵ (Enter key) followed by the **1** key and then the **0** key. The lock responds with two beeps/flashes of the green LED.
4.	**Enter two-digit re-lock time.**	Enter a new two-digit re-lock time in the range of 02-20 seconds. The lock responds with two beeps/flashes of the green LED.
5.	**Enter one-digit wrong try penalty.**	Enter a new one-digit wrong try penalty limit in the range of 3-9 tries. The lock responds with two beeps/flashes of the green LED.
6.	**Enter two-digit wrong try penalty time.**	Enter a new two-digit wrong try penalty time in the try range of 00-90 seconds. The lock responds with two simultaneous beeps/flashes of the green and red LEDs. The re-lock time and wrong try limit and penalty time are now in effect.

Add Keypad Access User(s)

Note: You do not need to perform this operation if you are downloading users from the PC.

Note: If at any time during the procedure the lock power drops below a sufficient level for operation, the lock will continually beep and flash the red LED, prompting the user to depress the outside lever to provide additional power within 5 seconds.

	Step	Detailed Instructions
1.	**Power lock.**	Power the lock by depressing the outside lever.
2.	**Enter Master User or a Manager User combination.**	Enter the Master User or a Manager User combination on the lock keypad. The lock will beep/flash the green LED on each keystroke entered. If the **Clear** key is pressed during data entry, the lock responds with one beep/flash of the green LED followed by the red LED, and all digits of the combination must be re-entered. The lock responds with three beeps/flashes of the green LED to indicate available entry. If the combination is not valid, the lock responds with three beeps/flashes of the red LED.
3.	**Press ⏎ then 2.**	Before re-lock time expires, press ⏎ (Enter key) followed by the **2** key. The lock responds with two beeps/flashes of the green LED.
4.	**Enter Keypad Access User ID.**	Enter a User ID for a Keypad Access User. The lock responds with two beeps/flashes of the green LED if the User ID is valid.

Note: The User ID selected must be in the range from 0 to the number of keypad users minus one.

5.	**Enter Access User ID again.**	Enter the Keypad Access User ID again for verification. The lock responds with two beeps/flashes of the green LED. The lock responds with two beeps/flashes of the red LED if the User ID was unconfirmed, or if the User ID was already in use, or no space was found in the Keypad Access User Table.
6.	**Enter one-digit user access schedule.**	Enter a one-digit value to select the access schedule for the User ID. The value must be in the range of 0–6 where 0 indicates no access time restriction. The lock responds with four beeps/flashes of the green LED if the access schedule designation is valid. The lock responds with two beeps/flashes of the red LED to indicate an error. Refer to the "Access Schedules" section on page 8 for more detailed information.

Note: If the value of "0" is assigned for the access schedule, the Keypad Access User can access the lock at all times. To assign a value other than "0", defined access schedules must have been down loaded from the PC.

		The Keypad Access User is now added to the lock with the entered User ID and a default PIN of all 0's if PIN length is not 0.
7.	**Repeat Steps 4–6 to add more users or go to Step 8.**	If additional Keypad Access Users are to be added, repeat Steps 4-6 until all User IDs have been added. If no additional Keypad Access Users are to be added, go to Step 8.

Caution: If you are adding multiple Keypad Access Users, you may need to depress the outside lever to provide additional power.

8.	**Press ⏎.**	Press ⏎ (Enter key) to exit this procedure. The lock responds with two simultaneous beeps/flashes of the green and red LEDs and exits this procedure.

Note: If PIN length is not 0, a default PIN of all 0's is assigned to the new Access User. The Access User must change this default PIN before the Access User's combination can be used to open the lock. Refer to the "Change PIN" section for instructions on changing an Access User's PIN.

Note: To change an access schedule assignment for a user at the lock, the user must first be deleted and then re-added to the lock with the new schedule assignment. The other method to change an access schedule occurs at the PC and requires downloading of the users into the lock again after the change has been made at the PC.

Add Audit User(s)

Note: As many Audit Users can be activated as there are available keypad user table spaces in the lock.

Note: If at any time during the procedure the lock power drops below a sufficient level for operation, the lock will continually beep and flash the red LED, prompting the user to depress the outside lever to provide additional power.

	Step	Detailed Instructions
1.	**Power lock.**	Power the lock by depressing the outside lever.
2.	**Enter Master User or a Manager User combination.**	Enter the Master User or a Manager User combination on the lock keypad. The lock will beep/flash the green LED on each keystroke entered. If the **Clear** key is pressed during data entry, the lock responds with one beep/flash of the green LED followed by the red LED, and all digits of the combination must be re-entered. The lock responds with three beeps/flashes of the green LED to indicate available entry. If the combination is not valid, the lock responds with three beeps/flashes of the red LED.
3.	**Press ⏎ then 93.**	Before re-lock time expires, press ⏎ (Enter key) followed by the 9 key and then the 3 key. The lock responds with two beeps/flashes of the green LED.
4.	**Enter Audit User combination.**	Enter the Audit User combination. The lock responds with two beeps/flashes of the green LED if the User ID portion of the combination is unique. The lock responds with two beeps/flashes of the red LED to indicate an error.

Note: The User ID selected must be in the range from 0 to the number of keypad users minus one.

5.	**Enter Audit User combination again.**	Enter the Audit User's combination again for verification. The lock responds with two simultaneous beeps/flashes of the green and red LEDs if the combination was verified successfully. The lock responds with two beeps/flashes of the red LED to indicate an error. An Audit User is now activated with the entered combination. The Audit User is not allowed to open the lock, but is empowered to retrieve audit records from the lock.

Note: The PIN portion of the combination issued to the Audit User cannot be changed.

Note: Audit Users can be removed from the lock by the Master User or a Manager User via Keypad Command 30.

Change Manager / Keypad Access User PIN

Note: This operation is only applicable if PIN length is not 0. Manager User and Keypad Access User PINs can be changed, but Service User and Audit User PINs cannot be changed. A Keypad Access User's PIN may only be changed if the user is enabled and is not currently restricted from access to the lock for any reason. The default PIN for a Keypad Access User is all 0's and must be changed before the lock will open.

	Step	Detailed Instructions
1.	**Power lock.**	Power the lock by depressing the outside lever.
2.	**Enter a Manager User or Keypad Access User combination.**	Enter a Manager User or Keypad Access User combination. The lock will beep/flash the green LED on each keystroke entered. If the **Clear** key is pressed during data entry, the lock responds with one beep/flash of the green LED followed by the red LED, and all digits of the combination must be re-entered. The lock responds with three beeps/flashes of the green LED to indicate available entry. If the combination is not valid, the lock responds with three beeps/flashes of the red LED. (Note: For a User who has not changed the default PIN, the lock will not open.)

	Step	Detailed Instructions
3.	**Press ⏎ then 50.**	Before re-lock time expires, press ⏎ (Enter key) followed by the **5** key and then the **0** key. The lock responds with two beeps/flashes of the green LED.
4.	**Enter User's new combination.**	Enter the new Manager User or Keypad Access User combination (User ID + new PIN). The lock responds with two beeps/flashes of the green LED if the combination was verified successfully. The lock responds with two beeps/flashes of the red LED to indicate an error.
5.	**Enter User's new combination again (User ID + <u>new</u> PIN).**	Enter the Manager User or Keypad Access User combination again for verification. The lock responds with two simultaneous beeps/flashes of the green and red LEDs if the combination was verified successfully. The lock responds with two beeps/flashes of the red LED to indicate an error. The new PIN is now active for the user.

Change Key Access User PIN

Note: This operation is only applicable if PIN length is not 0.

	Step	Detailed Instructions
1.	**Power lock.**	Power the lock by depressing the outside lever.
2.	**Insert Access User Key into key reader.**	Insert the Access User Key into the lock key reader. The lock responds with two beeps/flashes of the green LED.
3.	**Enter Key Access User PIN.**	Enter the four-digit PIN for the Key Access User. The lock responds with three beeps/flashes of the green LED to indicate available entry. If the lock PIN is not valid, the lock responds with two beeps/flashes of the red LED. (Note: For a User who has not changed the default PIN, the lock will not open.)
4.	**Press ⏎ then 51.**	Before re-lock time expires, press ⏎ (Enter key) followed by the **5** key and then the **1** key. The lock responds with two beeps/flashes of the green LED. The lock responds with two beeps/flashes of the red LED if the opener was a Keypad Access User or a Key Access User that does not require a PIN for lock access.
5.	**Enter new PIN.**	Enter the Key Access User's new PIN. The lock responds with two beeps/flashes of the green LED. The lock responds with two beeps/flashes of the red LED to indicate an error.
6.	**Enter the new PIN again.**	Enter the Key Access User's new PIN again for verification. The lock responds with two simultaneous beeps/flashes of the green and red LEDs. The lock responds with two beeps/flashes of the red LED to indicate an error. The new PIN is now active for the Key Access User.

Change Master User Combination (User ID + PIN)

Note: The new User ID that is selected must be an available ID (one that has not already been selected for another user).

	Step	Detailed Instructions
1.	**Power lock.**	Power the lock by depressing the outside lever.
2.	**Enter Master User combination.**	Enter the current Master User combination. The lock will beep/flash the green LED on each keystroke entered. If the **Clear** key is pressed during data entry, the lock responds with one beep/flash of the green LED followed by the red LED, and all digits of the combination must be re-entered. The lock responds with three beeps/flashes of the green LED to indicate available entry. If the combination is not valid, the lock responds with three beeps/flashes of the red LED.

	Step	Detailed Instructions
3.	**Press ⟷ then 50.**	Before re-lock time expires, press ⟷(Enter key) followed by the **5** key and then the **0** key. The lock responds with two beeps/flashes of the green LED.
4.	**Enter new Master User**	Enter a new Master User combination. The lock responds with two simultaneous beeps/flashes of the green LED if the User ID portion of the combination is unique. The lock responds with two beeps/flashes of the red LED to indicate an error.

Note: The User ID selected must be in the range from 0 to the number of keypad users minus one.

Note: When PIN length = 0, Combination = User ID only; otherwise , Combination = User ID + PIN.

5.	**Enter new Master User combination again.**	Enter the new Master User combination again for verification. The lock responds with two simultaneous beeps/flashes of the green and red LEDs if the combination was verified successfully. The lock responds with two beeps/flashes of the red LED to indicate an error. The new combination is now active for the Master User.

Open the Lock with Combination

	Step	Detailed Instructions
1.	**Power lock.**	Power the lock by depressing the outside lever.
2.	**Enter combination.**	Enter the combination to open the lock. The lock will beep/flash the green LED on each keystroke entered. If the **Clear** key is pressed during data entry, the lock responds with one beep/flash of the green LED followed by the red LED, and all digits of the combination must be re-entered.

Caution: When opening the lock, do not depress the outside lever until the lock responds with three beeps/flashes of the green LED to indicate available entry.

The lock responds with three beeps/flashes of the green LED to indicate available entry. If the combination is that of an Keypad Access User or Service User and the User ID has been disabled by managerial personnel, the lock responds with two beeps/flashes of the red LED. If the combination is not valid, the lock responds with three beeps/flashes of the red LED.

Note: After the limit of consecutive failed entry attempts has been reached, the lock will temporarily shut down to prevent combination tampering for the time programmed by managerial personnel. During the shutdown period, the lock will not respond to any user actions. When the shutdown period has elapsed the lock can be used normally. Any additional failed entry attempt results in the lock being disabled again for the programmed shutdown time. This cycle will continue until a correct combination is entered.

3.	**Open lock.**	Before re-lock time expires, depress the outside lever to open the lock. At the end of the re-lock interval the lock will respond with two simultaneous beep/flashes of the red and green LEDs.

Open the Lock with Access User Key

	Step	Detailed Instructions
1.	**Power lock.**	Power the lock by depressing the outside lever.
2.	**Insert Access User Key into key reader.**	Insert the Access User Key into the lock key reader. If the Access User Key is programmed to not require a PIN (PIN length =0), the lock responds with three beeps/flashes of the green LED to indicate available entry. Go to step 4. If the Key is that of an Access User whose has been disabled by managerial personnel, the lock responds with two beeps/flashes of the red LED. If the Access User Key is not valid, or if a holiday is in effect, or if the Key Access User's time windows do not allow entry at the time that the key is applied, the lock responds with three beeps/flashes of the red LED. If the Access User Key is programmed to require a PIN, the lock responds with two beeps/flashes of the green LED.

Note: If the number of consecutive wrong tries defined in the lock is reached by repeatedly inserting an incorrect key, the lock will shut down for the defined penalty time. During the shutdown period, the lock will not respond to any user actions. When the shutdown period has elapsed the lock can be used normally. Any additional failed entry attempt results in the lock being disabled again for the programmed shutdown time. This cycle will continue until a valid key is inserted.

3.	**Enter Key Access User PIN.**	Enter the four–digit PIN for the Key Access User. The lock responds with three beeps/flashes of the green LED to indicate available entry. If the lock PIN is not valid, the lock responds with two beeps/flashes of the red LED. (Note: For a User who has not changed the default PIN, the lock will not open.)

Note: If the number of consecutive wrong tries for PIN entry defined in the key is exceeded, the Access User Key is invalidated for use.

Caution: When opening the lock, do not depress the outside lever until the lock responds with three beeps/flashes of the green LED to indicate available entry.

4.	**Open lock.**	Before re-lock time expires, depress the outside lever to open the lock. At the end of the re-lock interval the lock will respond with two simultaneous beep/flashes of the red and green LEDs.

Issue Service User Combination

This operation issues a one-time combination for a Service User that can be used to open the lock.

Note: As many Service Users can be activated as there are available keypad user table spaces in the lock.

	Step	Detailed Instructions
1.	**Power lock.**	Power the lock by depressing the outside lever.
2.	**Enter Master User or a Manager User combination.**	Enter the Master User or a Manager User combination. The lock will beep/flash the green LED on each keystroke entered. If the **Clear** key is pressed during data entry, the lock responds with one beep/flash of the green LED followed by the red LED, and all digits of the combination must be re-entered. The lock responds with three beeps/flashes of the green LED to indicate available entry. If the combination is not valid, the lock responds with three beeps/flashes of the red LED.
3.	**Press ⏎ then 92.**	Before re-lock time expires, press ⏎ (Enter key) followed by the **9** key and then the **2** key. The lock responds with two beeps/flashes of the green LED.

	Step	Detailed Instructions
4.	**Enter new Service User**	Enter the Service User combination (1–8 digits depending on combination. the maximum number of Keypad Users allowed and the Keypad User PIN field length). The lock responds with two beeps/flashes of the green LED if the User ID portion of the combination is unique. The lock responds with two beeps/flashes of the red LED to indicate an error.

Note: The User ID selected must be in the range from 0 to the number of keypad users minus one.

Note: When PIN length = 0, Combination = User ID only; otherwise, Combination = User ID + PIN. **Do not set Service User PIN to all 0's**.

5.	**Enter Service User combination again.**	Enter the Service User combination again for verification. The lock responds responds with two simultaneous beeps/flashes of the green and red LEDs if the combination was verified successfully. The lock responds with two beeps/flashes of the red LED to indicate an error.
6.	**Enter one-digit user access schedule (0–6).**	Enter a one-digit user access schedule in the range of 0–6. The lock responds with two simultaneous beeps/flashes of the green and red LEDs if the access schedule designation is valid. The lock responds with two beeps/flashes of the red LED if the access schedule designation is invalid. Refer to the "Access Schedules" section on page 8 for more detailed information.

Note: If the value of "0" is assigned for the access schedule, the user can access the lock at all times. To assign a value other than "0", defined access schedules must have been downloaded from the PC.

A Service User is now activated with the entered combination.

Note: The PIN portion of the combination issued to the Service User cannot be changed.

Note: The Service User is removed from the lock either by use of the issued combination or by the Master User or a Manager User via Keypad Command 30.

Remove Service User Combination

This operation removes a one-time combination that was issued for a Service User so that it is not available to open the lock.

	Step	Detailed Instructions
1.	**Power lock.**	Power the lock by depressing the outside lever.
2.	**Enter Service User combination.**	Enter the Service User combination. The lock will beep/flash the green LED on each keystroke entered. If the **Clear** key is pressed during data entry, the lock responds with one beep/flash of the green LED followed by the red LED, and all digits of the combination must be re-entered. The lock responds with three beeps/flashes of the green LED to indicate available entry. If the combination is not valid, the lock responds with three beeps/flashes of the red LED. The Service User combination is now deactivated.

Determine Model Type

This feature provides identification of the model type, i.e., Model 455x. To determine the model type, complete the following steps:

	Step	Detailed Instructions
1.	**Power lock.**	Power the lock by depressing the outside lever.
2.	**Enter Master User or a Manager User combination.**	Enter the Master User or a Manager User combination. The lock will beep/flash the green LED on each keystroke entered. If the **Clear** key is pressed during data entry, the lock responds with one beep/flash of the green LED followed by the red LED, and all digits of the combination must be re-entered. The lock responds with three beeps/flashes of the green LED to indicate available entry. If the combination is not valid, the lock responds with three beeps/flashes of the red LED.
3.	**Press ⟵ then 11.**	Before re-lock time expires, press ⟵ (Enter key) followed by the **1** key and then the **1** key again. The lock responds with beeps/flashes of the green LED corresponding to the model type as follows: 4 beeps/flashes – Model 455x

Switch Passage Function (Off / On)

This operation allows Passage Function to be toggled Off and On.

	Step	Detailed Instructions
1.	**Power lock.**	Power the lock by depressing the outside lever.
2.	**Enter Master User or a Manager User combination.**	Enter the Master User or a Manager User combination. The lock will beep/flash the green LED on each keystroke entered. If the **Clear** key is pressed during data entry, the lock responds with one beep/flash of the green LED followed by the red LED, and all digits of the combination must be re-entered. The lock responds with three beeps/flashes of the green LED to indicate available entry. If the combination is not valid, the lock responds with three beeps/flashes of the red LED.
3.	**Press ⟵ then 16.**	Before re-lock time expires, press ⟵ (Enter key) followed by the **1** key and then the **6** key. The lock responds with two beeps/flashes of the green LED. If Passage mode was Off, it is now On. If Passage mode was On, it is now Off.

Toggle Lock Enabled / Disabled Status

Note:When the lock is disabled, all Access Users and Service Users are prohibited from using the lock.

	Step	Detailed Instructions
1.	**Power lock.**	Power the lock by depressing the outside lever.
2.	**Enter Master User or a Manager User combination.**	Enter the Master User or a Manager User combination. The lock will beep/flash the green LED on each keystroke entered. If the **Clear** key is pressed during data entry, the lock responds with one beep/flash of the green LED followed by the red LED, and all digits of the combination must be re-entered. The lock responds with three beeps/flashes of the green LED to indicate available entry. If the combination is not valid, the lock responds with three beeps/flashes of the red LED.
3.	**Press ⟵ then 13.**	Before re-lock time expires, press ⟵ (Enter key) followed by the **1** key and then the **3** key. The lock responds with two beeps/flashes of the green LED. The lock status has now been toggled from enable to disable or from disable to enable.

Display Lock Enabled / Disabled Status

	Step	Detailed Instructions
1.	**Power lock.**	Power the lock by depressing the outside lever.
2.	**Enter Master User or a Manager User combination.**	Enter the Master User or a Manager User combination. The lock will beep/flash the green LED on each keystroke entered. If the Clear key is pressed during data entry, the lock responds with one beep/flash of the green LED followed by the red LED, and all digits of the combination must be re-entered. The lock responds with three beeps/flashes of the green LED to indicate available entry. If the combination is not valid, the lock responds with three beeps/flashes of the red LED.
3.	**Press ⏎ then 14.**	Before re-lock time expires, press ⏎ (Enter key) followed by the 1 key and then the 4 key. The lock responds with two beeps/flashes of the green LED if the lock is enabled, and with four beeps/flashes of the green LED if the lock is disabled. Subsequently, the lock responds with two simultaneous beeps/flashes of the green and red LEDs.

Enable a Keypad User

Note: This operation is used to enable lock access for either Keypad Access Users or Service Users.

	Step	Detailed Instructions
1.	**Power lock.**	Power the lock by depressing the outside lever.
2.	**Enter Master User or a Manager User combination.**	Enter the Master User or a Manager User combination. The lockwill beep/flash the green LED on each keystroke entered. If the **Clear** key is pressed during data entry, the lock responds with one beep/flash of the green LED followed by the red LED, and all digits of the combination must be re-entered. The lock responds with three beeps/flashes of the green LED to indicate available entry. If the combination is not valid, the lock responds with three beeps/flashes of the red LED.
3.	**Press ⏎ then 71.**	Before re-lock time expires, press ⏎ (Enter key) followed by the **7** key and then the **1** key. The lock responds with two beeps/flashes of the green LED.
4.	**Enter Keypad User ID.**	Enter the User ID of the Keypad User to be enabled. The lockresponds with two beeps/flashes of the green LED if the User ID is valid. The lock responds with two beeps/flashes of the red LED to indicate an error.
5.	**Enter Keypad User ID again.**	Enter the Keypad User ID again for verification. The lock responds with four beeps/flashes of the green LED. The lock responds with two beeps/flashes of the red LED if the User ID was unconfirmed, if the User ID was not in use, or if the User ID was not that of an Access User. The Keypad User is enabled.
6.	**Repeat Steps 4–5 to enable more Keypad Users or go to step 7.**	If additional Keypad Users are to be enabled, repeat steps 4-5 until all User IDs are enabled. If no additional User IDs are to be enabled, go to step 7.
7.	**Press ⏎.**	Press ⏎ (Enter key) to exit this procedure. The lock responds with two simultaneous beeps/flashes of the green and red LEDs and exits this procedure.

Disable a Keypad User

Note: This operation is used to disable lock access for either Keypad Access Users or Service Users.

	Step	Detailed Instructions
1.	**Power lock.**	Power the lock by depressing the outside lever.
2.	**Enter Master User or a Manager User combination.**	Enter the Master User or a Manager User combination. The lock will beep/flash the green LED on each keystroke entered. If the **Clear** key is pressed during data entry, the lock responds with one beep/flash of the green LED followed by the red LED, and all digits of the combination must be re-entered. The lock responds with three beeps/flashes of the green LED to indicate available entry. If the combination is not valid, the lock responds with three beeps/flashes of the red LED.
3.	**Press ⏎ then 70.**	Before re-lock time expires, press ⏎ (Enter key) followed by the **7** key and then the **0** key. The lock responds with two beeps/flashes of the green LED.
4.	**Enter Keypad User ID.**	Enter the User ID of the Keypad User to be disabled. The lock responds with two beeps/flashes of the green LED if the User ID is valid. The lock responds with two beeps/flashes of the red LED to indicate an error.
5.	**Enter Keypad User ID again.**	Enter the Keypad User ID again for verification. The lock responds with four beeps/flashes of the green LED. The lock responds with two beeps/flashes of the red LED if the User ID was unconfirmed, if the User ID was not in use, or if the User ID was not that of a Keypad Access User or a Service User. The Keypad User is now disabled.
6.	**Repeat Steps 4–5 to disable more Keypad Users or go to step 7.**	If additional Keypad Users are to be disabled, repeat steps 4–5 until all User until all User IDs are disabled. If no additional Keypad Users are to be disabled, go to step 7.
7.	**Press ⏎.**	Press ⏎ (Enter key) to exit this procedure. The lock responds with two simultaneous beeps/flashes of the green and red LEDs and exits this procedure.

Enable a Key Access User

	Step	Detailed Instructions
1.	**Power lock.**	Power the lock by depressing the outside lever.
2.	**Enter Master User or a Manager User combination.**	Enter the Master User or a Manager User combination. The lock will beep/flash the green LED on each keystroke entered. If the **Clear** key is pressed during data entry, the lock responds with one beep/flash of the green LED followed by the red LED, and all digits of the combination must be re-entered. The lock responds with three beeps/flashes of the green LED to indicate available entry. If the combination is not valid, the lock responds with three beeps/flashes of the red LED.
3.	**Press ⏎ then 73.**	Before re-lock time expires, press ⏎ (Enter key) followed by the **7** key and then the **3** key. The lock responds with two beeps/flashes of the green LED.
4.	**Enter Key User ID.**	Enter the four-digit User ID of the Key Access User to be enabled. The lock responds with two beeps/flashes of the green LED if the User ID is valid. The lock responds with two beeps/flashes of the red LED to indicate an error.
5.	**Enter Key User ID again.**	Enter the four-digit Key User ID again for verification. The lock responds with four beeps/flashes of the green LED. The lock responds with two beeps/flashes of the red LED if the User ID was unconfirmed or if the User ID was not in use. The Key Access User is now enabled.

	Step	Detailed Instructions
6.	**Repeat Steps 4–5 to enable more Key Access Users or go to step 7.**	If additional Key Access Users are to be enabled, repeat steps 4-5 until all User IDs have been enabled. If no additional Key Access Users are to be enabled, go to step 7.
7.	**Press ⏎.**	Press ⏎ (Enter key) to exit this procedure. The lock responds with two simultaneous beeps/flashes of the green and red LEDs and exits this procedure.

Disable a Key Access User

	Step	Detailed Instructions
1.	**Power lock.**	Power the lock by depressing the outside lever.
2.	**Enter Master User or a Manager User combination.**	Enter the Master User or a Manager User combination. The lock will beep/flash the green LED on each keystroke entered. If the **Clear** key is pressed during data entry, the lock responds with one beep/flash of the green LED followed by the red LED, and all digits of the combination must be re-entered. The lock responds with three beeps/flashes of the green LED to indicate available entry. If the combination is not valid, the lock responds with three beeps/flashes of the red LED.
3.	**Press ⏎ then 72.**	Before re-lock time expires, press ⏎ (Enter key) followed by the **7** key and then the **2** key. The lock responds with two beeps/flashes of the green LED.
4.	**Enter Key User ID.**	Enter the four-digit User ID of the Key Access User to be disabled. The lock responds with two beeps/flashes of the green LED if the User ID is valid. The lock responds with two beeps/flashes of the red LED to indicate an error.
5.	**Enter Key User ID again.**	Enter the four-digit Key User ID again for verification. The lock responds with four beeps/flashes of the green LED. The lock responds with two beeps/flashes of the red LED if the User ID was unconfirmed or if the User ID was not in use. The Key Access User is now disabled.
6.	**Repeat Steps 4–5 to disable more Key Access Users or go to step 7.**	If additional Key Access Users are to be disabled, repeat steps 4-5 until all User IDs have been disabled. If no additional Key Access Users are to be disabled, go to step 7.
7.	**Press ⏎.**	Press ⏎ (Enter key) to exit this procedure. The lock responds with two simultaneous beeps/flashes of the green and red LEDs and exits this procedure.

Delete Keypad User(s) Using the Keypad

Note: This operation is used to delete Keypad Access Users, Audit Users, and Service Users from the lock.

Note: If at any time during the procedure the lock power drops below a sufficient level for operation, the lock will continually beep and flash the red LED, prompting the user to depress the outside lever to provide additional power.

	Step	Detailed Instructions
1.	**Power lock.**	Power the lock by depressing the outside lever.
2.	**Enter Master User or a Manager User combination.**	Enter the Master User or a Manager User combination. The lock will beep/flash the green LED on each keystroke entered. If the **Clear** key is pressed during data entry, the lock responds with one beep/flash of the green LED followed by the red LED, and all digits of the combination must be re-entered. The lock responds with three beeps/flashes of the green LED to indicate available entry. If the combination is not valid, the lock responds with three beeps/flashes of the red LED.

	Step	Detailed Instructions
3.	**Press ⏎ then 30.**	Before re-lock time expires, press ⏎ (Enter key) followed by the **3** key and then the **0** key. The lock responds with two beeps/flashes of the green LED.
4.	**Enter Keypad User ID.**	Enter a Keypad User ID to be deleted (or press the Enter key to exit.) The lock responds with two beeps/flashes of the green LED if the User ID is valid. The lock responds with two beeps/flashes of the red LED to indicate an error.
5.	**Enter Keypad User ID again.**	Confirm the Keypad User's ID by re-entering it. The lock responds with four beeps/flashes of the green LED. The lock responds with two beeps/flashes of the red LED if the User ID was unconfirmed, if the User ID was not in use, or if the User ID was not that of an Access User, Audit User, or Service User. The Keypad User is now deleted.
6.	**Repeat Steps 4–5 to delete more User IDs or go to step 7.**	If additional Keypad User IDs are to be deleted, repeat steps 4–5 until all User IDs have been deleted. If no additional User IDs are to be deleted, go to step 7.

Caution: If you are deleting multiple Keypad User IDs, you may need to depress the outside lever to provide additional power.

7.	**Press ⏎.**	Press ⏎ (Enter key) to exit this procedure. The lock responds with two simultaneous beeps/flashes of the green and red LEDs and exits this procedure.

Delete Key Access User(s) Using the Keypad

Note: If at any time during the procedure the lock power drops below a sufficient level for operation, the lock will continually beep and flash the red LED, prompting the user to depress the outside lever to provide additional power.

	Step	Detailed Instructions
1.	**Power lock.**	Power the lock by depressing the outside lever.
2.	**Enter Master User or a Manager User combination.**	Enter the Master User or a Manager User combination. The lock will beep/flash the green LED on each keystroke entered. If the **Clear** key is pressed during data entry, the lock responds with one beep/flash of the green LED followed by the red LED, and all digits of the combination must be re-entered. The lock responds with three beeps/flashes of the green LED to indicate available entry. If the combination is not valid, the lock responds with three beeps/flashes of the red LED.
3.	**Press ⏎ then 31.**	Before re-lock time expires, press ⏎ (Enter key) followed by the **3** key and then the **1** key. The lock responds with two beeps/flashes of the green LED.
4.	**Enter Key User ID.**	Enter the four-digit User ID of the Key User to be deleted. The lock responds with two beeps/flashes of the green LED if the User ID is valid. The lock responds with two beeps/flashes of the red LED to indicate an error.
5.	**Enter Key User ID again.**	Enter the four-digit Key User ID for verification. The lock responds with four beeps/flashes of the green LED. The lock responds with two beeps/flashes of the red LED if the User ID was unconfirmed or if the User ID was not in use. The Key Access User is now deleted.
6.	**Repeat Steps 4–5 to delete Key Access Users or go to step 7.**	If additional Key Access Users are to be deleted, repeat steps 4-5 until all User IDs have been deleted. If no additional Key Access Users are to be deleted, go to step 7.

Step	Detailed Instructions
Caution: If you are deleting multiple Key Access User IDs, you may need to depress the outside lever to provide additional power.	
7. Press ⏎.	Press ⏎ (Enter key) to exit this procedure. The lock responds with two simultaneous beeps/flashes of the green and red LEDs and exits this procedure.

Delete Key Access User Using the Smart Key

Step	Detailed Instructions
1. Power lock.	Power the lock by depressing the outside lever.
2. Enter Master User or a Manager User combination.	Enter the Master User or a Manager User combination. The lock will beep/flash the green LED on each keystroke entered. If the **Clear** key is pressed during data entry, the lock responds with one beep/flash of the green LED followed by the red LED, and all digits of the combination must be re-entered. The lock responds with three beeps/flashes of the green LED to indicate available entry. If the combination is not valid, the lock responds with three beeps/flashes of the red LED.
3. Press ⏎ then 32.	Before re-lock time expires, press ⏎ (Enter key) followed by the **3** key and then the **2** key. The lock responds with two beeps/flashes of the green LED.
4. Insert the Key of the Access User to be deleted into the key reader.	Insert the Key of the Access User to be deleted into the lock key reader. The lock responds with two simultaneous beeps/flashes of the green and red LEDs and exits this procedure. The lock responds with two beeps/flashes of the red LED if the Access User's Key is not valid. The Key Access User is now deleted.

Deactivate a Manager User

Step	Detailed Instructions
1. Power lock.	Power the lock by depressing the outside lever.
2. Enter Master User combination.	Enter the Master User combination. The lock will beep/flash the green LED on each keystroke entered. If the **Clear** key is pressed during data entry, the lock responds with one beep/flash of the green LED followed by the red LED, and all digits of the combination must be re-entered. The lock responds with three beeps/flashes of the green LED to indicate available entry. If the combination is not valid, the lock responds with three beeps/flashes of the red LED.
3. Press ⏎ then 91.	Before re-lock time expires, press ⏎ (Enter key) followed by the **9** key and then the **1** key. The lock responds with two beeps/flashes of the green LED.
4. Enter a Manager User ID.	Enter a Manager User ID. The lock responds with two beeps/flashes of the green LED if the Manager User ID is allowed within the current lock configuration. The lock responds with two beeps/flashes of the red LED to indicate an error.
5. Enter the Manager User ID again.	Re-enter the Manager User ID again for verification. The lock responds with two simultaneous beeps/flashes of the green and red LEDs if the Manager User ID was verified successfully. The lock responds with two beeps/flashes of the red LED to indicate an error. The specified Manager User has now been deactivated.

Change Keypad User PIN Field Length

Note: This operation may be performed while the lock is Activated.

	Step	Detailed Instructions
1.	**Power lock.**	Power the lock by depressing the outside lever.
2.	**Enter Master User combination.**	Enter the Master User combination. The lock will beep/flash the green LED on each keystroke entered. If the **Clear** key is pressed during data entry, the lock responds with one beep/flash of the green LED followed by the red LED, and all digits of the combination must be re-entered. The lock responds with three beeps/flashes of the green LED to indicate available entry. If the combination is not valid, the lock responds with three beeps/flashes of the red LED.
3.	**Press ⏎ then 17.**	Before re-lock time expires, press ⏎ (Enter key) followed by the **1** key and then the **7** key. The lock responds with two beeps/flashes of the green LED.
4.	**Enter a One-Digit Keypad User PIN Field Length.**	Enter a one-digit keypad user PIN field length. This number must be in the range of 0–4. The lock responds with two simultaneous beeps/flashes of the green and red LEDs if the data entered is acceptable. If the entered data is not acceptable, the lock responds with two beep/flashes of the red LED. The keypad user PIN field length is now changed to the new value.

Note: If the length of the PIN has been decreased, previously defined PINs will **automatically** be truncated on the leading digits to match the new length. **Example**: PIN length = 4; PIN = 1234; PIN length changed to 3; PIN automatically changed to 234. If the lock remains Activated and the PIN length is changed back to 4, the PIN will automatically be changed to 1234 again. If the length of the PIN has been increased, previously defined PINs will **automatically** be zero filled to the left to match the new length. **Example**: PIN length = 3; PIN = 111; PIN length changed to 4; PIN automatically changed to 0111.

Shelve the Lock (Master User)

	Step	Detailed Instructions
1.	**Power lock.**	Power the lock by depressing the outside lever.
2.	**Enter Master User combination.**	Enter the Master User combination. The lock will beep/flash the green LED on each keystroke entered. If the **Clear** key is pressed during data entry, the lock responds with one beep/flash of the green LED followed by the red LED, and all digits of the combination must be re-entered. The lock responds with three beeps/flashes of the green LED to indicate available entry. If the combination is not valid, the lock responds with three beeps/flashes of the red LED.
3.	**Press ⏎ then 50.**	Before re-lock time expires, press ⏎ (Enter key) followed by the **5** key and then the **0** key. The lock responds with two beeps/flashes of the green LED.
4.	**Enter default combination of all 0's.**	Enter the default combination of **all 0's**. The lock responds with two beeps/flashes of the green LED.

Note: The length of the default combination will be the currently defined length of the User ID + the currently defined length of the PIN.

5.	**Enter default combination of all 0's again.**	Enter the default combination of **all 0's** again for verification. The lock responds with alternating beeps/flashes of the green and red LEDs while the user table is being cleared. Ensure that the lock remains powered during this operation which will take several seconds.

Note: If at any time during the procedure the lock power drops below a sufficient level for operation, the lock will continually beep and flash the red LED, prompting the user to depress the outside lever to provide additional power within five seconds.

		The lock is now shelved with all users removed except for the Master User. The combination for the Master User has now returned to the default of **all 0's**.

Retrieve Audit Records

On the Model 455x PowerLever Lock, audit records may be retrieved using either an SA Key or a Palm Organizer. Each audit transaction includes a date and time stamp. Only the most recent 1,022 audit records can be placed on the SA Key. Downloads of audit records numbering greater than 1,022 will require the Palm Organizer. If you have purchased the PowerLever Door Lock PC software for reporting capabilities, the audit trail data stored in the lock can be read from the lock and taken to the PC for reporting.

To retrieve audit records, complete the following steps:

Note:The retrieve audit records operation requires an SA key that has been initialized at the PC or a Palm organizer. Refer to Appendix B of the PowerLever Door Lock Software Reference Manual for a flowchart of the Retrieve Audit Records process that combines activity at the lock and the PC.

Audit Record Retrieval Via SA Key

	Step	Detailed Instructions
1.	**Power lock.**	Power the lock by depressing the outside lever.
2.	**Enter combination.**	Enter the combination. The lock will beep/flash the green LED on each key-stroke entered. If the **Clear** key is pressed during data entry, the lock responds with one beep/flash of the green LED followed by the red LED, and all digits of the combination must be re-entered. The lock responds with three beeps/flashes of the green LED to indicate available entry. If the combination is not valid, the lock responds with three beeps/flashes of the red LED.
3.	**Press ⏎ then 00.**	Before re-lock time expires, press ⏎ (Enter key) followed by the **0** key and then the **0** key again. The lock responds with one beep/flash of the green LED every second until the SA key is inserted into the lock key reader.
4.	**Insert SA Key into Key reader.**	Insert the SA Key into the lock key reader. The lock alternately beeps/flashes red and green LEDs while audit downloading is in progress.

Note: If at any time during the procedure the lock power drops below a sufficient level for operation, the lock will continually beep and flash the red LED, prompting the user to depress the outside lever to provide additional power within five seconds.

5.	**Ensure lock remains powered and SA Key remains in reader until complete.**	Ensure that the lock remains powered and the SA Key remains in the reader until the lock has completed downloading the reporting data. Upon completion, the lock responds with two simultaneous beeps/flashes of the green and red LEDs. The lock audit trail has now been downloaded to the SA Key.

Audit Record Retrieval Via Palm Organizer

	Step	Detailed Instructions
1.	**Connect Palm Organizer to lock.**	Connect the Palm Interface Module to the lock using the interface cable.
2.	**Power lock.**	Power the lock by depressing the outside lever.
3.	**Enter combination.**	Enter the combination. The lock will beep/flash the green LED on each key-stroke entered. If the **Clear** key is pressed during data entry, the lock responds with one beep/flash of the green LED followed by the red LED, and all digits of the combination must be re-entered. The lock responds with three beeps/flashes of the green LED to indicate available entry. If the combination is not valid, the lock responds with three beeps/flashes of the red LED.

	Step	Detailed Instructions
4.	**Press ⏎ then 6. (Audit Users press ⏎ only.)**	Before re-lock time expires, press ⏎ (Enter key) followed by the **6** key. (If an Audit User is retrieving audit records, press ⏎ (Enter key) only.) The lock responds with one beep/flash of the green LED every second until the Palm interface cable has been inserted into the lock communication connector.
5.	**Retrieve audit data.**	Turn on the Palm organizer and tap the **Connect to Lock** button at the bottom of the Main Menu. Tap the **Get Audits** button on the top of the Connect to Lock menu. After all audit records have been retrieved, tap the **Disconnect** button at the bottom of the Connect to Lock menu. Upon completion of the Palm operations, the lock responds with two simultaneous beeps/flashes of the green and red LEDs.
6.	**View audit data on Palm Organizer.**	To view audit data on the Palm organizer, select the report to view by tapping the description of the transaction. The line will highlight to show the transaction selected. Next, tap the **View** button at the top of the screen. The View form will display. The type of data will be displayed in the Title Bar. The lock serial number and data line number contained in the transaction will display at the top of the report. The audit records will display with each record including a date, time, user ID and description. To navigate the list, move the Scroll Bar on the right side or tap the **Top or Bottom** buttons at the bottom of the audit record list, if displayed. Alternatively, press the upper or lower half of the Palm Scroll Button (bottom center on Palm organizer) to page up or down. When finished viewing the report, tap the **Done** button at the bottom of the audit record list.
7.	**Attach Palm Organizer to PC.**	Insert the Palm Organizer into the Palm cradle attached to the PC. Perform Hot Sync.
8.	**View/Print audit data stored on Palm organizer.**	Logon to the PC software and click Reports; select **List Lock Data Stored on Palm Organizer.** From the “List Lock Data Stored on Palm Organizer” window, select the desired audit report and click View. The “Audit Download Report” window is displayed. **View** the data, as needed, and print the data, if required, by clicking the **Print** button. When finished click the **Close** button on the “Audit Download Report” window. Click the **Close** button on the “List Lock Data Stored on Palm Organizer” window.

Retrieve User Information

This feature requires the PowerLever software in order to complete the operation.

Note: The retrieve User information operation requires an SA key that has been initialized at the PC or a Palm Organizer to retrieve User information. Refer to Appendix B of the PowerLever Door Lock Software Reference Manual for a flowchart of the Retrieve User Information process that combines activity at the lock and the PC.

Note: The Lock User Table contains information for Keypad Access Users, Key Access Users, Audit Users, and Service Users. When a Master User downloads the user table, information for Manager Users and the Master User is also included.

Only a total user table size of 2,495 users can be downloaded on the SA Key. Downloads of user information for total users numbering greater than 2,495 will require the Palm Organizer. If this menu is used to attempt download of a user table with more than 2,495 users, the lock responds with two beeps/flashes of the red LED. If you have purchased the PowerLever Door Lock PC software for reporting capabilities, the user table information stored in the lock can be read from the lock and taken to the PC for reporting.

User Information Retrieval Via SA Key

The process for retrieving User information is the same as that for retrieving audit information (The only difference is that the SA key has been initialized to retrieve User information rather than audit information). To retrieve information:

	Step	Detailed Instructions
1.	**Power lock.**	Power the lock by depressing the outside lever.
2.	**Enter Master User or a Manager User combination.**	Enter the Master User or a Manager User combination. The lock will beep/flash the green LED on each keystroke entered. If the **Clear** key is pressed during data entry, the lock responds with one beep/flash of the green LED followed by the red LED, and all digits of the combination must be re-entered. The lock responds with three beeps/flashes of the green LED to indicate available entry. If the combination is not valid, the lock responds with three beeps/flashes of the red LED.
3.	**Press ⏎ then 01.**	Before re-lock time expires, press ⏎ (Enter key) followed by the **0** key and then the **1** key again. The lock responds with one beep/flash of the green LED every second until the SA key is inserted into the lock key reader.
4.	**Insert SA Key into Key reader.**	Insert the SA Key into the lock key reader.

Note: If at any time during the procedure the lock power drops below a sufficient level for operation, the lock will continually beep and flash the red LED, prompting the user to depress the outside lever to provide additional power within five seconds.

5.	**Ensure lock remains powered and SA Key remains in reader until complete.**	Ensure that the lock remains powered and the SA Key remains in the reader until the lock has completed downloading the reporting data. Upon compl-tion reporting data. Upon completion, the lock responds with two simultaneous beeps/flashes of the green and red LEDs. The lock user table has now been downloaded to the SA Key.

User Information Retrieval Via Palm Organizer

	Step	Detailed Instructions
1.	**Connect Palm Organizer to lock**	Connect the Palm Interface Module to the lock using the interface cable.
2.	**Power lock.**	Power the lock by depressing the outside lever.
3.	**Enter Master User or a Manager User combination.**	Enter the Master User or a Manager User combination. The lock will beep/flash the green LED on each keystroke entered. If the **Clear** key is pressed during data entry, the lock responds with one beep/flash of the green LED followed by the red LED, and all digits of the combination must be re-entered. The lock responds with three beeps/flashes of the green LED to indicate available entry. If the combination is not valid, the lock responds with three beeps/flashes of the red LED.
4.	**Press ⏎ then 6.**	Before re-lock time expires, press ⏎ (Enter key) followed by the **6** key. The lock responds with one beep/flash of the green LED every second until the Palm interface cable has been inserted into the lock communication connector.
5.	**Retrieve user information.**	Turn on the Palm organizer and tap the Connect to Lock button at the bottom of the Main Menu. Tap the Get User Table button on the top of the Connect to Lock menu. After all audit records have been retrieved, tap the Disconnect button at the bottom of the Connect to Lock menu. Upon completion of the Palm operations, the lock responds with two simultaneous beeps/flashes of the green and red LEDs.
6.	**View user information on Palm Organizer.**	To view user information on the Palm Organizer, select the report to view by tapping the description of the transaction. The line will highlight to show the transaction selected. Next, tap the **View** button at the top of the screen. The View form will display. The type of data will be displayed in the Title Bar. The

	Step	Detailed Instructions
		lock serial number and data line number contained in the transaction will display at the top of the report. All Access Users, Audit Users, Service Users, and Key Users will appear in the user table list. Master Users and Manager Users will not display unless the Master User is performing the user information retrieval. The report will list all keypad users in numerical order, then any key users assigned to the lock. For keypad users, the user ID, schedule assignment and status are displayed. Key users will only display "Key User" and the status. To navigate the list, move the Scroll Bar on the right side or tap the Top or Bottom buttons at the bottom of the user table list, if displayed. Alternatively, press the upper or lower half of the Palm Scroll Button (bottom center on Palm organizer) to page up or down. When finished viewing the report, tap the Done button at the bottom of the user table list.
7.	**Attach Palm organizer to PC.**	Insert the Palm Organizer into the Palm cradle attached to the PC.
8.	**View/Print user table data stored on Palm organizer.**	Perform a HotSync. Logon to the PC software and click **Reports**; select **List Lock Data Stored on Palm Organizer**. From the "List Lock Data Stored on Palm Organizer" window, select the desired user table report and click **View**. The "User Table Down load Report" window is displayed. View the data, as needed, and print the data, if required, by clicking the **Print** button. When finished click the **Close** button on the "User Table Download Report" window. Click the **Close** button on the "List Lock Data Stored on Palm Organizer" window.

Load Lock User Table, Holiday & Daylight Savings Time Data Created on PC

This feature provides the function to load Lock User Table, Holiday & Daylights Savings TIme data created with the PowerLever Door Lock PC software into an activated lock from either an SA Key or a Palm Organizer.

Note: The load lock user table operation requires that the lock be activated.

Lock User Table and/or Holiday & Daylight Savings Time Data Upload Via SA Key

Note: This operation requires an SA key that has been loaded with user table data using the PowerLever Door Lock PC software. Refer to Appendix B of the PowerLever Door Lock Software Reference Manual for a flowchart of the Load Lock User Table Data process that combines activity at the lock and the PC.

To upload the data, complete the following steps:

	Step	Detailed Instructions
1.	**Power lock.**	Power the lock by depressing the outside lever.
2.	**Enter Master User or a Manager User combination.**	Enter the Master User or a Manager User combination. The lock will beep/flash the green LED on each keystroke entered. If the **Clear** key is pressed during data entry, the lock responds with one beep/flash of the green LED followed by the red LED, and all digits of the combination must be re-entered. The lock responds with three beeps/flashes of the green LED to indicate available entry. If the combination is not valid, the lock responds with three beeps/flashes of the red LED.
3.	**Press ⏎ then 40.**	Before re-lock time expires, press ⏎ (Enter key) followed by the **4** key and then the **0** key. The lock responds with one beep/flash of the green LED every second until the SA key is inserted into the Key reader.
4.	**Insert SA Key into Key reader.**	Insert the SA Key into the lock key reader. The lock alternately beeps/flashes red and green LEDs while user table uploading is in progress.

Note: If at any time during the procedure the lock power drops below a sufficient level for operation, the lock will continually beep and flash the red LED, prompting the user to depress the outside lever to provide additional power.

	Step	Detailed Instructions
5.	**Ensure lock remains powered and SA Key remains in reader until complete.**	Ensure that the lock remains powered and the SA Key remains in the reader until the lock has completed uploading the lock user table data. Upon completion of the operation, the lock responds with two simultaneous beeps/flashes of the green and red LEDs. The user table has now been uploaded to the lock.

Lock User Table, Holiday & Daylight Savings Time Data Upload Via Palm Organizer

To upload the data, complete the following steps:

	Step	Detailed Instructions
1.	**Attach Palm Organizer to PC.**	Insert the Palm Organizer into the Palm cradle attached to the PC.
2.	**Create user table data on PC.**	Logon to the PC software and click **Locks**, then **Add Locks to System**. Enter the lock serial number, site number and other identifying information, and click **OK**. Define Holiday Settings, Access Schedules and create the Access User list for the lock. From the "List of Locks Processed" window, click the **Store Locks on Palm Organizer** button. When finished, click the **Close** button on the "List of Locks Processed" window. After all locks have been processed, perform a Hot Sync operation with the Palm.
3.	**Connect Palm Organizer to lock.**	Connect the Palm Interface Module to the lock using the lock interface cable.
4.	**Power lock.**	Power the lock by depressing the outside lever.
5.	**Enter combination.**	Enter the combination. The lock will beep/flash the green LED on each keystroke entered. If the **Clear** key is pressed during data entry, the lock responds with one beep/flash of the green LED followed by the red LED, and all digits of the combination must be re-entered. The lock responds with three beeps/flashes of the green LED to indicate available entry. If the combination is not valid, the lock responds with three beeps/flashes of the red LED.
6.	**Press ⏎ then 6.**	Before re-lock time expires, press ⏎ (Enter key) followed by the **6** key. The lock responds with one beep/flash of the green LED every second until the Palm interface cable has been inserted into the lock communication connector.
7.	**Upload lock user table data.**	Turn on the Palm Organizer and tap the **Connect to Lock** button at the bottom of the Main Menu. Tap the **Add Users** button on the top of the Connect to Lock menu. After all user table data has been uploaded, tap the **Disconnect** button at the bottom of the Connect to Lock menu. Upon completion of the Palm operations, the lock responds with two simultaneous beeps/flashes of the green and red LEDs.

Display Daylight Savings Time Status

This feature enables managerial personnel to display the Daylight Savings Time status in the lock.

Note: Only the Master User and a Manager User can display Daylight Savings Time status in the lock.

To display Daylight Savings Time status, complete the following steps:

	Step	Detailed Instructions
1.	**Power lock.**	Power the lock by depressing the outside lever.
2.	**Enter Master User or a Manager User combination.**	Enter the Master User or a Manager User combination. The lock will beep/flash the green LED on each keystroke entered. If the **Clear** key is pressed during data entry, the lock responds with one beep/flash of the green LED followed by the red LED, and all digits of the combination must be re-entered. The lock responds with three beeps/flashes of the green LED to indicate available entry. If the combination is not valid, the lock responds with three beeps/flashes of the red LED.
3.	**Press ⟵ then 12.**	Before re-lock time expires, press ⟵ (Enter key) followed by the **1** key and then the **2** key. The lock responds with two beeps/flashes of the green LED if lock is on Standard Time and with four beeps/flashes if lock is on Daylight Savings Time. Subsequently, the lock responds with two simultaneous beeps/flashes of the green and red LEDs.

Enable Palm Communications

This feature provides the function to set up communications between the lock and the Palm organizer.

To enable Palm communications, complete the following steps:

	Step	Detailed Instructions
1.	**Connect Palm organizer to lock.**	Connect the Palm Interface Module to the lock using the interface cable.
2.	**Power lock.**	Power the lock by depressing the outside lever.
3.	**Enter Master User or a Manager User combination.**	Enter the Master User or a Manager User combination. The lock will beep/flash the green LED on each keystroke entered. If the **Clear** key is pressed during data entry, the lock responds with one beep/flash of the green LED followed by the red LED, and all digits of the combination must be re-entered. The lock responds with three beeps/flashes of the green LED to indicate available entry. If the combination is not valid, the lock responds with three beeps/flashes of the red LED.
4.	**Press ⟵ then 6.**	Before re-lock time expires, press ⟵ (Enter key) followed by the **6** key. The lock responds with one beep/flash of the green LED every second until the Palm interface cable has been inserted into the lock communication connector.
5.	**Perform desired Palm function.**	Turn on the Palm organizer and tap the **Connect to PC** button at the bottom of the Main Menu. Tap the appropriate button on the top of the Connect to Lock menu to perform the desired function.

Quick Reference

Lock Keypad Commands

The following is a list of the keypad commands that are available for the PowerLever 455x Series lock.

Command	Description
⏎ and then **00**	Retrieve Audit Records (p. 30)
⏎ and then **01**	Retrieve User Information (p. 31)
⏎ and then **10**	Set Re-Lock, Wrong Try Penalty Limit and Times (p. 16)
⏎ and then **11**	Determine Model Type (p. 23)
⏎ and then **12**	Display Daylight Savings Time Status (p. 35)
⏎ and then **13**	Toggle Lock Between Enabled and Disabled Status (p. 23)
⏎ and then **14**	Display Lock Enabled / Disabled Status (p. 24)
⏎ and then **15**	Define # Key Access Users & Keypad User PIN Field Length (p. 14)
⏎ and then **16**	Switch Passage Function (Off / On) (p. 23)
⏎ and then **17**	Change Keypad User PIN Field Length (p. 29)
⏎ and then **2**	Add Keypad Access User(s) to Lock (p. 17)
⏎ and then **30**	Delete Keypad User(s) from Lock Using the Keypad (p. 26)
⏎ and then **31**	Delete Key Access User(s) from Lock Using the Keypad (p. 27)
⏎ and then **32**	Delete Key Access User from Lock Using the Smart Key (p. 28)
⏎ and then **40**	Load Lock User Table and/or Holiday and Daylight Savings Time Data (p. 33)
⏎ and then **50**	Change PIN for a Manager / Keypad User (p. 18)
⏎ and then **51**	Change PIN for a Key Access User (p. 19)
⏎ and then **6**	Enable Palm Communications (p. 35)
⏎ and then **70**	Disable a Keypad User (p. 25)
⏎ and then **71**	Enable a Keypad User (p. 24)
⏎ and then **72**	Disable a Key Access User (p. 26)
⏎ and then **73**	Enable a Key Access User (p. 25)
⏎ and then **8**	Set Lock Time and Date (p. 16)
⏎ and then **90**	Activate a Manager User (p. 15)
⏎ and then **91**	Deactivate a Manager User (p. 28)
⏎ and then **92**	Issue a Service User Combination (p. 21)
⏎ and then **93**	Add Audit User(s) (p. 18)

Some of the keypad commands allow the continuous entry of data until terminated by ⏎ (Enter key). The keypad commands that operate in this manner are underlined in the above listing.

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Kaba Access Control
2941 Indiana Avenue
Winston-Salem, NC 27105 USA
Tel: 800.849.8324 336.725.1331
Fax: 800.346.9649 336.725.3269

www.kabaaccess.com

438.030 0210