

DOM00002

PROGRAMMING MANUAL
ADVANCED version

RetroFit 1000

Electronic combination chamber

2nd Edition
Rev 1



smartlock systems

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CHAPTER

1

Introduction

Thank you for choosing the RetroFit 1000 electronic module. Unlike any other locks, this module is meant to be installed inside an existing lock casing, typically the 1000 or 3000 (model 1000-1) mechanical lock series so as to retrofit in place of the mechanical combination chamber.

The RetroFit 1000 turns the single code mechanical lockset into an advanced multi access codes electronic lock supporting access schedules, manual and automatic lockout modes, manual and automatic passage modes as well as dual-code access.

The lock module comes with automatic daylight saving settings for North-America, Cuba as well as Eastern Europe. The module also records the last 900 events to allow full monitoring of user accesses and programming transactions.

The RetroFit 1000 module can be operated using three AA alkaline batteries for $-20^{\circ}\text{C}(-4^{\circ}\text{F})$ to $50^{\circ}\text{C}(122^{\circ}\text{F})$ operations, or three lithium batteries for $-40^{\circ}\text{C}/^{\circ}\text{F}$ operations for the 1000 series and one single 3.6 volts lithium battery for the slimmer 3000 series. The battery holder comes embedded within the module and fits directly inside the receiving lockset – no wiring or drilling required. The module is weather resistant making it suitable for outdoor usage.

1.1 Product Content

The RetroFit 1000 product is delivered packaged with the following items:

- The standalone electronic module which includes either three alkaline batteries (Retrofit 1000-3A model), three lithium batteries (Retrofit 1000-3L model), or one lithium 3,6 volts battery (Retrofit 1000-1 model)
- One quick reference card
- One **basic** programming manual (optional)
- One compact disk (CD) containing the programming manuals (advanced and basic version) in PDF

The following is a list of optional items which can be ordered separately:

- RetroLink cable for connecting a PC to the lock for programming aids, audit trail readout and more
- Lithium or alkaline industrial batteries
- Programming manuals, **Advanced** and **Basic** versions in hardcopy form

1.2 RetroFit 1000 Features

- ✓ **Fully compatible** to the existing mechanical module. Keys can also be depressed one at a time or both simultaneously.
- ✓ **Up to 41 User codes** to be used over a possibility of more than **2.5 billion** combinations.
- ✓ **Up to 5 temporary service codes** for your guests. Service codes may last from one to 24 hours or be valid for a single access.
- ✓ **Access schedules:** each User code can be assigned up to two access schedules in order to limit its access based on the time of day, weekday or specific days.
- ✓ **Lockout mode (manual).** Managers may instantly block access to Users by manually activating a simple function at the keypad.
- ✓ **Lockout mode (auto) / Holiday.** Managers may have all User codes automatically blocked during a holiday period.
- ✓ **Passage mode.** Using the passage mode function, you may leave your door closed but unlocked. No access codes are necessary to unlock the door. Passage mode can be programmed to cancel at specific times or until the function is disabled at the keypad.
- ✓ **Dual-code access** can be used when two successively distinct access codes need to be entered within 10 seconds from each other in order to unlock the door. This function is useful whenever you want to make sure no one enters an area unnoticed.
- ✓ **Access codes are non-volatile.** Once entered, they remain in memory even if batteries are removed.
- ✓ **Prevents code duplications.** The same access code can't be entered twice as the module prevents code or sequence duplications.
- ✓ **Variable code length.** Although it is strongly recommended for access codes to all be using the same number of digits, each access code may vary in length (from 2 to 8 digits). The lock authorizes access as soon as a valid sequence is detected.
- ✓ **Low battery warning** is indicated visually and by using mechanical feedbacks. The latter is done by automatically increasing the unlock delay.
- ✓ **Programming rights.** Access codes can be programmed by the Grand Master, Master or Sub-Master as well as specially granted users.
- ✓ **Predetermined time zones.** If required, users may choose to program up to 5 common time zones and use those while setting access schedules.
- ✓ **Tamper shutdown mode** prevents any further access if more than 4 consecutives invalid access codes are entered. This is useful to prevent an intruder from guessing access codes by trial and error. Shutdown time can be set to vary from 30 seconds (default) to 30 minutes and be different during the day, night and weekends.
- ✓ **Audit Trail** capabilities. The module records the last 900 events and transactions with their respective date and time stamps. The optional RetroLink cable is required. Audit trail readout should be performed by the installer.
- ✓ **Daylight Saving.** If enabled, the lock's internal clock will automatically be adjusted at the appropriate date (time moved forward or stepped back by one hour). Since daylight saving is different among countries, different settings are supported: North-America, Cuba and Eastern Europe. **NB: the module is compliant with "The Energy Policy Act of 2005" -- section 110.**

- ✓ **Easy programming.** Programming the RetroFit 1000 module is easily done through the keypad keys. Keypad embedded lights and a buzzer are used to guide the user through programming steps. Access codes can be entered, changed or deleted in seconds
- ✓ **Terminal aid.** Optionally, the user may wish to connect a PC or laptop to the RetroFit 1000 module using the optional <RetroLink> cable and free terminal application (such as Windows® HyperTerminal) in order to read audit trail information, read programmed codes or get lock status information

*Windows® is a registered trademark of Microsoft Corporation

1.3 Installation Instructions

Please refer to the “installation instructions manual”. **It is highly recommended to have the module installed by a qualified locksmith or security professional.**

CHAPTER

2

Operating Instructions

2.1 Principles of operation

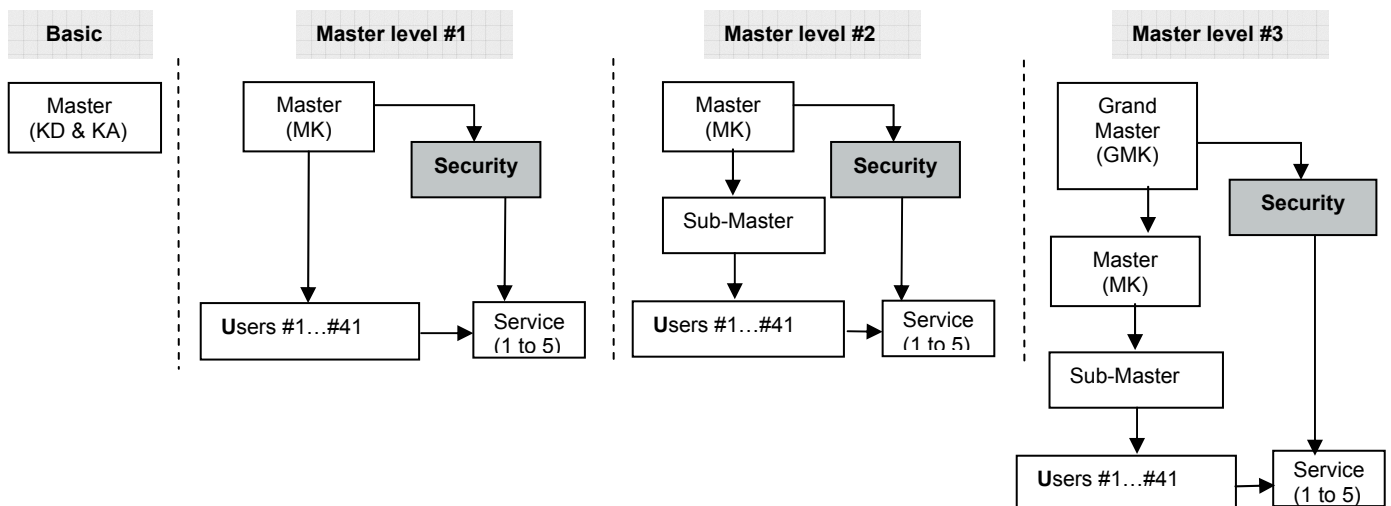
The RetroFit 1000 is programmed similar to a traditional master key system where each lock is configured to accept a master key able to open all locks within a building, where other sub master keys are limited to group of locks and where other keys are dedicated to open specific or single door locks.

The RetroFit 1000 module is based on the same “master key” principle but is using access codes (personal identification numbers) instead of keys. The module supports three master levels. Each level member(s) is assigned a unique access code which allows its owner to get access and set functions.

The Master access code has the highest security level and serves as the basis for creating lower level access codes. The module is factory programmed with a single Master access code.

THE DEFAULT MASTER CODE IS: (45) + (34) + 5 + 4 + 3 + 2 + (23)

Master levels



2.2 Choosing a master level

Before creating access codes for each of your locks, you need to decide which master level you find is appropriate for your type of application.

Deciding which one is best for you depends mostly on how many doors, departments, floors or even buildings your enterprise may have. It is important to choose the right level at the beginning. Hence if you choose level 3 and decide later to go with level 1 or 2, you will need to erase and reprogram all access codes. You can however start with the Basic level and then upgrade to level 1, 2 or 3.

Note that choosing a level only implies programming access codes within each unit in an organized way.

Programming suggestions for each level:

□ basic

Each lock is programmed with the same Master access code ("Keyed Alike" type) or each with a different Master access code ("Keyed Different" type). It is the level currently available with the mechanical pushbutton locks. In this level, lockout and Users time related functions are not used.

□ master level 1

Every single lock is programmed with a unique Master access code and each of them may be programmed with the same or different User codes. In this level, Users (except the Master) may be given time restrictions (access schedules) or be locked out when required.

□ master level 2

Every single lock is programmed with a unique Master access code. Group of locks may be assigned a unique Sub-Master code where other group of locks may be given a different Sub-Master access code. Other individual locks could then be programmed with the same or different User codes. In this level, the Sub-Master and Users (except the Master) may be given time restrictions or be locked out.

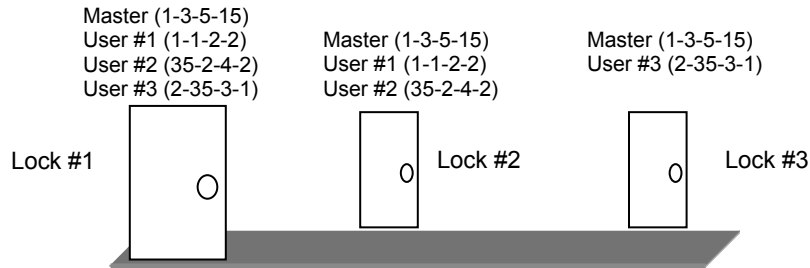
□ master level 3

Every single lock is programmed with a unique Grand Master access code. Group of locks maybe assigned a unique Master code and other group of locks may be given a different Sub-Master access code. Individual locks could then be programmed with the same or different User codes. In this level, the Master, Sub-Master and Users (except the Grand Master) may be given time restrictions or be locked out.

This level could therefore be used for large corporation where all locks within the organization are assigned a Grand Master access code (for instance, using an 8 digits access code). Each building could thus be assigned a unique Master code, each department a Sub-Master access code and so on...

Example #1

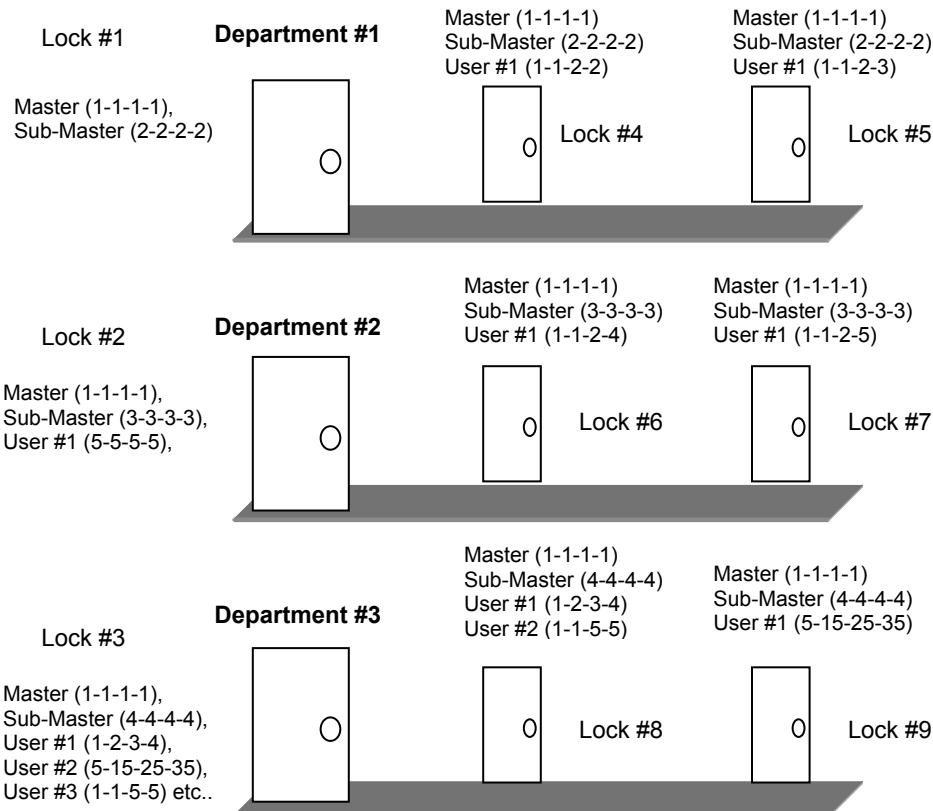
The following example shows possible ways of assigning access codes to individual locks when using **master level 1**:



TIP: In order to simplify programming, you may want to group multiple Users under the same access code instead of assigning a unique access code to each user.

Example #2

The following example shows possible ways of assigning access codes to individual locks when using **master level 2**:



2.3 User interface

2.3.1 Keypad

The keypad is the only mean for entering access codes, programming functions and also for setting delays, times and dates. All of these parameters require the ability to enter numbers from 0 to 99. However, since the keypad has only 5 keys (labeled 1 to 5 on the keypad) the following convention shall be used:

1. Entering numbers

There are two ways of entering a digit. You can either press a single key (1 to 5) or press two keys simultaneously. In the following table, the parenthesis sign “()” enclosing numbers means the keys are **depressed simultaneously**.

I want to enter	Key To Use	I want to enter	Key To Use
0	(12)	10	1, (12)
1	1	11	1, 1
2	2	12	1, 2
3	3	16	1, (51)
4	4	17	1, (52)
5	5	18	1, (53)
6	(51)	99	(54), (54)
7	(52)	Etc.	Etc.

Examples:

If the number 26 needs to be entered, key “2” must first be entered followed by key “5 and 1” depressed together.

If the number 10 needs to be entered, key “1” must first be entered followed by keys “1 and 2” depressed together.

TIP: Think of the numbers higher than 5 as *5 plus something*. Ex: Digit “9” is 5+4 so you would enter (54). Digit “7” is 5+2, so you would enter (52) or (25) which is the same.

2. Entering a programming session

To enter a programming session, you need to press one or multiple keys simultaneously according to the program you need to enter. These keys shall be depressed together and held down for about two seconds until the lock beeps twice, and then released.

Throughout the manual, all **numbers enclosed by the bracket signs “< >” represent keys that must be depressed simultaneously (together) until the buzzer beeps twice. This indicates the beginning of a programming session.**

Example:

For example, when asked to press keys <245>, you need to depress keys 2, 4 and 5 all together for about two seconds until you hear the buzzer beep twice. At this point, you may release the keys. Once keys are released, programming session begins and key light #1 starts flashing.

2.3.2 Visual indicators (during normal operation)

After entering an access code, here's the feedback you should expect from the module during normal operation (not during programming):

- ⇒ ON means light is turned ON once momentarily
- ⇒ Keypad light #5 always turns on RED, other keys always GREEN

Note that key lights may be hard to see during full daylight

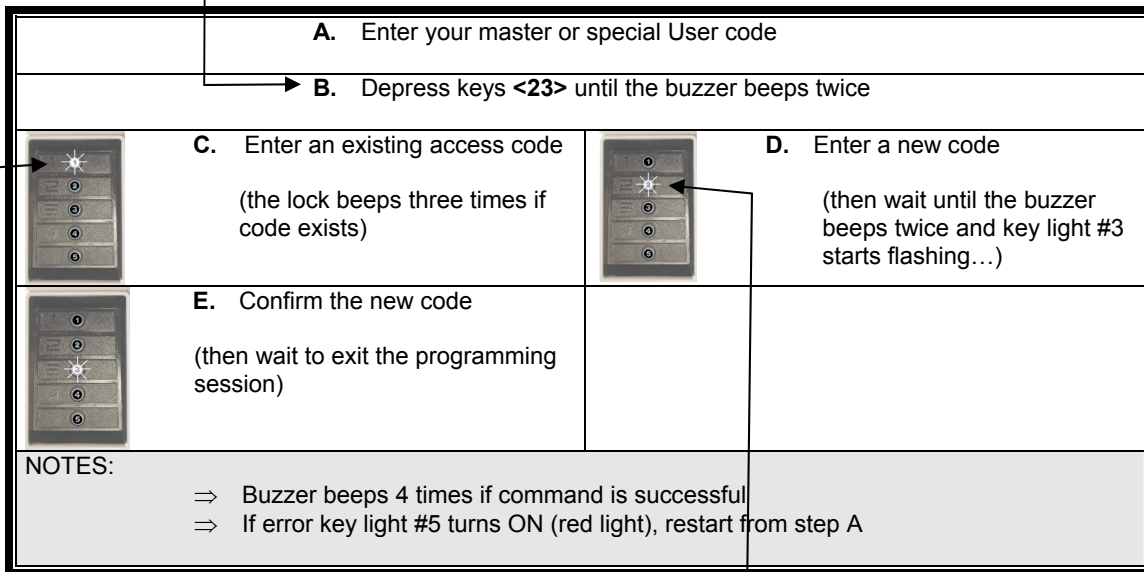
Key Lights	STATUS				
○ ₁	OFF	OFF	OFF	OFF	OFF
○ ₂	OFF	OFF	OFF	OFF	OFF
○ ₃	OFF	OFF	OFF	OFF	OFF
○ ₄	ON	ON	OFF	ON-OFF...	OFF
○ ₅	OFF	ON	OFF	BLINKS or OFF	ON or BLINKING
Feedback message	Access code valid	Access code valid (access time not allowed or lockout active)	Tamper shutdown active (or dead batteries)	Low battery warning	ERROR condition

2.3.3 Visual indicators (in programming mode)

- For visual interactions with the user, keypad lights (within keys 1, 2, 3 and 4) are used to guide the user through programming sequences. Each time a new step begins, a corresponding light starts flashing.
- If error key light #5 turns on, this usually means that an error occurred during the programming session. Exception: key light #5 will normally turn ON while programming User's access schedules to indicate a 5th programming step.

Keypad usage example: (while changing an access code) :

• Step B allows entering a programming session. The signs "< >" which enclose numbers indicate that these keys must be depressed and held down until the buzzer beeps twice



◆ Key light #1 flashes while being in step C

◆ Key light #2 flashes while being in step D

2.3.4 Audible indicator

The module integrates a buzzer which is turned ON by default during programming sessions. It provides audible beeps as each key is depressed and sounds error and valid conditions. To save battery power, the buzzer is turned OFF by default during normal operation.

The following visual and audible feedbacks are used while programming the unit:

Buzzer beeps	BEEPS
<ul style="list-style-type: none">Two short beeps indicate the beginning of a programming session or a new programming step	— —
<ul style="list-style-type: none">Four short beeps indicate that the last command was successful and that programming session is completed	— — — —
<ul style="list-style-type: none">Four short beeps followed by two beeps indicates that the last command was successful and that you may resume entering data if needed	— — — — — —

2.3.5 Mechanical feedback (low battery warning)

When a low-battery condition is detected, the module responds by adding a delay before unlocking the door. This somewhat annoying feature is meant to encourage users to replace the batteries or call service personnel. The unlocking delay will increase as the battery voltage gets weaker. This feature can not be turned off.

CHAPTER

3

Getting Started

Once the module is properly installed within the lock case, you need to perform the following steps:

1. **Change the default Master code.** The default Master code is: (45) + (43) + 5 + 4 + 3 + 2 + (23) (refer to section 4.8 Changing an access code)
2. Decide which master level is appropriate for your application (refer to section 2.2 *Choosing a master level*)
3. Program access codes within each lock (refer to chapter 4.3 and 4.4)

Only if you intend to use time related functions:

4. Set the clock's date and time, refer to section 3.1.1 below

You may then use the lock module and its following functions:

- Function 1: enable/disable manual/auto Lockout mode
- Function 2: enable/disable manual/auto Passage mode
- Function 3: set User access schedules
- Function 4: set User access period
- Function 5: Dual code access

3.1 Configuring the module




This chapter describes how to adjust various parameters or preferences related to the RetroFit 1000 module operations. These parameters are:

1. Module's clock (date, time, daylight saving)
2. Buzzer (on/off)
3. Anti-tamper delay
4. Unlock time
5. Module RESET

3.1.1 **Adjust clock (date, time, daylight saving)**

✓ The module is compliant with “The Energy Policy Act of 2005” and will adjust the time appropriately if daylight saving mode is enabled. Refer to the North-America_2 setting.

Procédure:

A. Enter your master access code	
B. Depress keys <123> until the buzzer beeps twice	
 <p>C. Enter the time (HH:MM)</p> <p>Ex : (10h35) 1, (12), 3, 5</p>	 <p>D. Enter the date (AA/MM/JJ)</p> <p>Ex : (December 10th 2005) 05 12 10 enter : (12), 5, 1, 2, 1, (12)</p>
 <p>E. Enter a daylight saving time zone</p> <p>(12): Disabled, 1: North-America_1, 2: North-America_2, 3: Cuba, 4: GMT, 5: GMT+1, (51) : GMT+2)</p>	
<p>NOTES:</p> <ul style="list-style-type: none"> ⇒ Buzzer beeps 4 times if command is successful ⇒ If error key light #5 turns ON (red light), restart from step A ⇒ North-America_1 = starts 1st Sunday of April, ends last Sunday of October ⇒ North-America_2 = starts 2nd Sunday of March, ends the 1st Sunday of November 	

Example (setting clock's date & time):

- Assuming your Master access code is 2.4.4.1
- You want to set clock to October 5th 2006, 13h35, and daylight saving to North-America_1

Enter: 2 + 4 + 4 + 1 + <123> + 1 + 3 + 3 + 5 + (12) + (51) + 1 + (12) + (12) + 5 + 1

↓

13:35h

↓

Date
06-10-05

↓

North-America_1

3.1.2 **Adjust buzzer (toggles buzzer ON/OFF)**



Procedure:

- A. Enter your master access code
- B. Depress <134> until the buzzer beeps 4 times

3.1.3 Adjust anti-tamper delay

The anti-tamper delay is the period of time the lock stops temporarily accepting access codes. The lock enters this condition after detecting an intrusion attempt, that is, 4 continuous invalid access codes or an unsuccessful 30 keys sequence and remains this way until the delay times out. Anti-tamper delay is programmed in minutes or seconds (00) and may be different during and after working hours and on weekends. Default delay is 30 seconds at all time. Maximum delay is 30 minutes.

⇒ **Entering a master or Security access code will override the anti-tamper lockout.**

A. Enter your master access code	
B. Depress keys <135> until the buzzer beeps twice	
	C. Enter the period to adjust Press: 1: 6h-18h, 2: 18h-6h, 3: weekend
	D. Enter delay in minutes (MM) OR press (12) + (12) to set delay at 30 seconds (default)
NOTES: ⇒ Buzzer beeps 4 times if command is successful ⇒ If error key light #5 turns ON (red light), restart from step A	

Example (adjust anti-tamper delay):

- Assuming your Master access code is 2,4,4,1
- You want to set anti-tamper delay to 30 seconds during the day (6AM - 6PM)

Enter: 2 + 4 + 4 + 1 + <135> + 1 + (12) + (12)

- You want to set anti-tamper delay to 30 minutes on weekends

Enter: 2 + 4 + 4 + 1 + <135> + 3 + 3 + (12)


- You want to set anti-tamper delay to 30 minutes during the night (6PM – 6AM)

Enter: 2 + 4 + 4 + 1 + <135> + 2 + 3 + (12)

3.1.4 Adjust unlock time

The unlock time is the minimum delay the module waits before relocking the door once a valid access code is entered.

Procedure:

A. Enter your master access code	
B. Depress keys <124> until the buzzer beeps twice	
	C. Enter delay in seconds (SS)
NOTES: <ul style="list-style-type: none"> ⇒ Unlock delay may vary from 4 to 15 seconds. Default is 4 seconds. ⇒ Buzzer beeps 4 times if command is successful ⇒ If error key light #5 turns ON (red light), restart from step A 	

Example (adjust unlock time):

- Assuming your Master access code is 2, 4, 4, 1
- You want to set unlock time to 08 seconds

Enter: 2 + 4 + 4 + 1 + <124> + (12) + (53)

3.1.5 Resetting the module

WARNING

*Resetting the module **ERASES** all access codes and audit data from memory and reinitializes all lock parameters to their factory default settings.*

Procedure:

- A. Remove the module from the lock casing (refer to the installation manual)
- B. On the module, locate the micro-switch on the side of the module (refer to the installation manual). Using a small tool, press once on the RESET switch.
- C. Within 5 seconds, depress key <1> until the buzzer beeps twice, then release. At this point, key light #5 starts flashing.
- D. Within 5 seconds, press "1" once to confirm reset

- ⇒ Once module reset is complete, key light #1 goes from ON to OFF
- ⇒ The MASTER access code resets to its default sequence : (24), 3
- ⇒ Clock is NOT affected by the reset procedure.

CHAPTER

4

Programming access codes

4.1 Programming rules

Masters, Security, User and Service access codes are all codes that will unlock doors. Master access codes (Grand Master, Master, Sub-Master) are used to enter programming sessions for creating sub-level access codes.

This section explains what each member is allowed to do when programming the module:

All masters

- May add, change or delete User access codes
- May set time restrictions to Users (access schedules)
- May add service codes
- May assign functions to special Users
- May set the buzzer sound on/off
- May set the Passage Mode
- May set Lockout modes (master level 1,2 ,3 only)
- May set a Dual code access

Security

- May add service codes

Specially granted Users (if enabled)

- May add service codes
- May set the Passage Mode
- May set Dual code access
- May set time restrictions to Users (access schedules)
- May add, change or delete User access codes

4.2 Access code rules

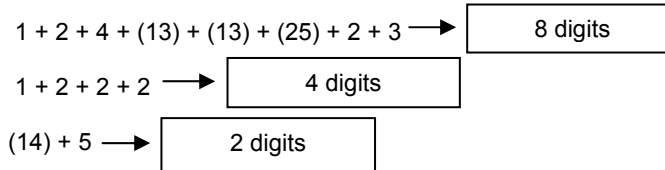
Access codes are comprised of two digits up to a maximum of 8 digits.

Digits can be any single key number (1 to 5) or any combination of two keys or *duos*. A digit can be:

⇒ 1, 2, 3, 4, 5, (12), (13), (14), (15), (23), (24), (25), (34), (35) or (45)

for a total of 15 numbers.

Valid access code examples:



⇒ **The parentheses “()” enclosing numbers mean the keys need to be depressed simultaneously**

⇒ **An access code is authorized as soon as a valid sequence is detected at the keypad:**

- Assuming the access code **1-4-4-2** is already programmed in memory:
 - ⇒ It will not be possible to program another code having the same sequence no matter where it is found in the access code. Ex: codes 3-5-1-4-4-2 or 1-4-4-2-5 are not valid codes if code 1-4-4-2 is already programmed.
 - ⇒ The code 1-4-4-2 entered at the keypad will unlock the door.
 - ⇒ The digits 2-3-1-4-4-2 entered at the keypad will unlock the door since the same 1-4-4-2 sequence is found.
 - ⇒ The digits 1-4-4-2-5-4 entered at the keypad will unlock the door since the same 1-4-4-2 sequence is found.
- This mode of operation allows masters to use access code lengths different from User codes
- It is strongly recommended that master codes be using at least 5 digits, ideally more (up to 8 possible)
- It is recommended that all User codes have the same number of digits
- The following table shows the number of possible combinations for access codes using the same length:

Number of digits	Possible combinations
2	225
3	3375
4	50,625
5	759,375
6	11, 390,625
7	170, 859,375
8	2, 562, 890,625

4.3 Adding master level access codes (upgrading master levels)



Only the Master and Sub-Master are allowed to add a sub-level master access code.

Adding a sub-level access code **will change the master level currently in use**. For instance, if master level 1 is currently in use, adding a Sub-Master will upgrade the system to level 2. If the Sub-Master creates a sub-level access code, this will upgrade the system to level 3 where the previous Sub-Master becomes the Master and the Master is changed to be the Grand-Master.

If the master level access code you are creating already exists, it will simply overwrite it.

Note that adding a sub-level access code does not affect previously programmed User codes.

Procedure:

A. Enter your master access code	
B. Depress keys <12> until the buzzer beeps twice	
	C. Enter the new code (then wait for the beep-beep)
	D. Confirm the new code (then wait to exit the programming session)
NOTES: ⇒ Buzzer beeps 4 times if command is successful ⇒ If error key light #5 turns ON (red light), restart from step A	

Example (adding a sub-level access code):

- Assuming your Master access code is 1,2,3,4,5
- You want to add a Sub-Master access codes (12), (25), 1, 4



Enter: 1 + 2 + 3 + 4 + 5 + <12> + (12) + (25) + 1 + 4 -wait- (12) + (25) + 1 + 4 + -wait-

Note: brackets "< >" mean keys are depressed until the buzzer beeps twice

4.4 Adding User access codes

- Only the owner of a master access code or special User code is allowed to add User access codes.
- This procedure allows programming of multiple User access codes in batch mode.
- After entering and confirming an access code, repeat steps C and D for as long as there are access codes to program (or until maximum code capacity is reached).

Procedure:

A. Enter your master code or special User code	
B. Depress keys <14> until the buzzer beeps twice	
	C. Enter one new access code (then wait for the beep-beep)
	D. Confirm the new code (then wait for key light #1 and repeat from step C OR wait to exit)
NOTES: <ul style="list-style-type: none"> ⇒ Buzzer beeps 4 times if command is successful ⇒ If error key light #5 turns ON (red light), restart from step A (only if you have not finished adding User codes) ⇒ The new entered codes which successfully passed step C and D will be recorded in memory even if key light #5 turns on 	

Example (adding two User access codes):

- Assuming your Master access code is 1,2,3,4,5
- You want to add access codes (12), 5, 5, 1 and 2, 3, 2, 1



Enter: 1 + 2 + 3 + 4 + 5 + <14> + (12) + 5 + 5 + 1 -wait- (12) + 5 + 5 + 1 -wait- 2 + 3 + 2 + 1 -wait- 2 + 3 + 2 + 1 -wait-

4.5 Creating a Security access code

This code shall be handed out to security personnel and shall be programmed within each of the locks.

- The security access code may only be created by the Master (or Grand Master) only
- The security access code is NEVER affected by lockouts

Procedure:

A. Enter your Master access code	
B. Depress keys <13> until the buzzer beeps twice	
	C. Enter a new access code (then wait for the beep-beep)
	D. Confirm the new code (then wait to exit)
NOTES: ⇒ Buzzer beeps 4 times if command is successful ⇒ If error key light #5 turns ON (red light), restart from step A	

Example (adding a Security access code):

- Assuming your Master access code is (24), 2
- You want to add Security access code 1, (25), (45), (45), (35), (15)



Enter: (24) + 2 + <13> + 1 + (25) + (45) + (45) + (35) + (15) -wait- 1 + (25) + (45) + (45) + (35) + (15) -wait-

4.6 Creating a Service access code

A Service code is a temporary code you may wish to give service personnel or a guest for a short period of time:

- The service code may be created by masters or “special” Users
- The service code’s duration may vary from 1 to 24 hours or be valid for a single access
- Once the service code duration ends, the code is automatically deleted from memory
- You may add up to five service codes
- If all 5 service code slots are used, you won’t be able to set another one until you delete one from memory or until a current code expires.

Procedure:

A. Enter you master or special User access code	
B. Depress keys <15> until the buzzer beeps twice	
	C. Enter an access code (then wait for the beep-beep)
	D. Enter a duration (from 01 to 24 hours) or press (12) + (12) if this is a single use code
NOTES: <ul style="list-style-type: none"> ⇒ Buzzer beeps 4 times if command is successful ⇒ If error key light #5 turns ON (red light), restart from step A 	

Example (adding a Service access code that lasts 6 hours):

- Assuming your master or “special User” access code is 1, 2, 3, 4
- You want to add a service access code 1, 4, 5
- You want this code to last 6 hours from now

Enter: 1 + 2 + 3 + 4 + <15> + 1 + 4 + 5 -wait- (12) + (51) -wait-

Example (adding a Service access code for single use)



Enter: 1 + 2 + 3 + 4 + <15> + 1 + 4 + 5 -wait- (12) + (12) -wait-

4.7 Deleting an access code

WARNINGS

- Deleting a master level access code *implies deletion of all its sub-level access codes*. For instance, deleting a Sub-Master access code also deletes **ALL** User access codes from memory.
- A user can not delete its own access code
- You can only delete one code at a time

Procedure:

A. Enter your master or special User access code			
B. Depress keys <45> until the buzzer beeps twice			
	C. Enter the access code to delete (beeps three times if code exists)		D. Confirm the access code to be deleted (then wait to exit)
NOTES: <ul style="list-style-type: none"> ⇒ Buzzer beeps 4 times if command is successful ⇒ If error key light #5 turns ON (red light), restart from step A ⇒ A security code can only be deleted by a Master access code ⇒ A special User can not delete it's own code 			

Example (deleting a User access code):




- Assuming your Master access code is 1,2,3,4,5
- You want to delete User access code 1, 5, 5, 4

Enter: 1 + 2 + 3 + 4 + 5 + <45> + 1 + 5 + 5 + 4 -wait - 1 + 5 + 5 + 4 -wait-

4.8 Changing an access code

- Only the owner of a master or special User access code is allowed to change an access code
- Changing an access code won't affect the code's parameters such as its access schedules or dual code attribute
- The default Master access code is **(45) + (43) + 5 + 4 + 3 + 2 + (23)** (a new Master code shall have at least 5 digits)

Procedure

A. Enter your master or special User code			
B. Depress keys <23> until the buzzer beeps twice			
	C. Enter an existing access code (the lock beeps three times if code exists)		D. Enter a new code (then wait until the buzzer beeps twice)
	E. Confirm the new code (then wait to exit)		
NOTES: <ul style="list-style-type: none"> ⇒ Buzzer beeps 4 times if command is successful ⇒ If error key light #5 turns ON (red light), restart from step A 			

Example (changing the Master access code):

- Assuming you Master access code is 1,2,3,4,5
- You want to change this code for (15), 4, 1, 2

Enter: 1 + 2 + 3 + 4 + 5 + <23> + 1 + 2 + 3 + 4 + 5 + (15) + 4 + 1 + 2 -wait- (15) + 4 + 1 + 2

4.9 Assigning programming rights to Users

By default a User is not allowed to program or use any of the lock's functions.




However, you may use this procedure if you need to have "special" Users to be able to use specific functions of the lock.

The following is a list of functions or programming rights you may want to grant selected Users:

1. Authorization to program a Service code
2. Authorization to activate the passage mode
3. Authorization to set a dual code attribute to an access code
4. Authorization to set access schedules for an access code
5. Authorization to add, change or delete access codes

Be aware that granting special functions to a User enables this one to override any time restrictions that may have been assigned to its own code. Use this function with caution.

Procedure:

A. Enter your master access code	
B. Depress keys <125> until the buzzer beeps twice	
	C. Enter an existing access code for which to set/unset functions
	D. Press 1 to SET OR Press 5 to UNSET functions
	E. Enter one or multiple function numbers (1..5) you wish to SET or UNSET (refer to the list above) (then wait to exit)
NOTES:	
⇒ Buzzer beeps 4 times if command is successful	
⇒ If error key light #5 turns ON (red light), restart from step A	

Example (assigning functions to a User):

- Assuming your Master access code is 1,4,5,(15)
- You want to give the User code 1, 4, 3, 2 the right to activate the passage mode and create a Service code

Enter: 1 + 4 + 5 + (15) + <125> + 1 + 4 + 3 + 2 + 1 + 2 + 1 –wait-

Example (cancel functions to a User):

- Assuming your Master access code is 1,4,5,(15)
- You want to cancel a User all rights
- This User access code is 1, 4, 3, 2

Enter: 1 + 4 + 5 + (15) + <125> + 1 + 4 + 3 + 2 + 5 + 1 + 2 + 3 + 4 + 5 –wait-

4.10 Programming predefined time zones

- The predefined time zones may be used when assigning access schedules to User codes (refer to function #3 ACCESS SCHEDULES, section 2. at page 36)
- Use this function if you need to change the factory default time zones labeled #1 to #5.





The default time zones are:

ZONE	TIME 1	TIME 2	Weekday
1	8AM (08h00)	5PM (17h00)	Monday thru Friday
2	5PM (17h00)	12AM (00h00)	Monday thru Friday
3	7AM (07h00)	9PM (21h00)	Monday thru Friday
4	5PM (17h00)	10PM (22h00)	Thursday + Friday
5	8AM (08h00)	6PM (18h00)	Saturday + Sunday

⇒ If the module is reset (refer to section 3, "Resetting the module") this table will revert to the default parameters

Note: modifying a time zone will affect ALL access code's schedules for which this zone was programmed

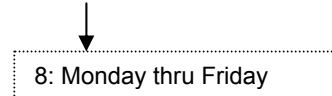
Procedure:

A. Enter your master access code	
B. Depress keys <145> until the buzzer beeps twice	
 <p>C. Enter the zone # (1 to 5) to redefine</p>	 <p>D. Enter TIME 1 (HH:MM) ex : 8AM = 08 :00 (or 12, 53 : 12, 12)</p>
 <p>E. Enter TIME 2 (HH:MM) ex : 8 PM = 20 :00 (or 2, 12 : 12,12)</p>	 <p>F. Enter weekday(s) (1:mon, 2:tue, 3:wed, 4:thu, 5:fri, 6:sat, 7:sun, 8:mon->fri., 9:mon->sun) (then wait to exit)</p>
<p>NOTES:</p> <ul style="list-style-type: none"> ⇒ Buzzer beeps 4 times if command is successful ⇒ If error key light #5 turns ON (red light), restart from step A 	

Example (re-defining time zones)

- Assuming your Master access code is 2,4,4,1
- You want to change zone #1 to 9AM (09h00) to 12PM (12h00) from Monday to Friday

Enter: 2 + 4 + 4 + 1 + <145> + 1 + (12) + (54) + (12) + (12) + 1 + 2 + (12) + (12) + (53) -wait-



CHAPTER

5

Using functions

Some of the following functions are time related and use the internal clock and calendar. It is therefore important to adjust the clock in order to properly use these functions (refer to section 3.1.1 on how to adjust the clock)


① LOCKOUT MODE

- Temporarily inhibits access codes so as to block their access.
- For example, in master level 2, the Master uses this function to block access to the Sub-Master and all Users. In the same way, the Sub-Master uses this function to block all User accesses.

Manual Lockout: access codes are immediately disabled until manually reactivated by the initiator.

→ Activating manual lockout (all codes):




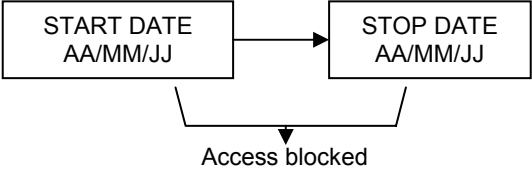
Procedure:

A. Enter your master access code	
B. Depress key <1> until the buzzer beeps twice	
	C. Press 1 to enable lockout
NOTES: ⇒ Buzzer beeps 4 times if command is successful ⇒ If error key light #5 turns ON (red light), restart from step A ⇒ All lower level access codes are now blocked	

→ **Activating automatic/holiday lockout (all codes):**

This function is used to automatically block access to Users on a holiday.

Procedure:

A. Enter your master access code	
B. Depress key <1> until the buzzer beeps twice	
 C. Press 3	 D. Enter lockout start date (AA/MM/JJ)
 E. Enter lockout stop date (AA/MM/JJ)	
NOTES: <ul style="list-style-type: none"> ⇒ Buzzer beeps 4 times if command is successful ⇒ If error key light #5 turns ON (red light), restart from step A ⇒ Lower level codes will be blocked starting at midnight on the START date until midnight on the STOP date 	

Example 1 (setting automatic lockout):

- Assuming your Master access code is 1,4,3,3,2
- You want all access codes to be inhibited from December 24th 2005 (included) to January 2nd 2006 (excluded)

Enter: 1 + 4 + 3 + 3 + 2 + <1> + 3 + (12) + 5 + 1 + 2 + 2 + 4 + (12) + (15) + (12) + 1 + (12) + 2


Reminder: (12) means "0"

Example 2 (setting automatic lockout on a specific date):

- Assuming your Master access code is 1,4,3,3,2
- You want access codes to be inhibited on the 4th of July 2007 ONLY.

Enter: 1 + 4 + 3 + 3 + 2 + <1> + 3 + (12) + (52) + (12) + (52) + (12) + 4 + (12) + (52) + (12) + (52) + (12) + 4

→ Canceling manual or automatic lockouts (all codes)**Procedure:**


A. Enter your master access code	
B. Depress key <1> until the buzzer beeps twice	
	C. Press key 5
NOTES: ⇒ Buzzer beeps 4 times if command is successful ⇒ If error key light #5 turns ON (red light), restart from step A ⇒ All codes are now active	

② PASSAGE MODE

- Use this mode to keep the door unlocked. The door can be opened without the need to enter an access code.
 - There are two passage modes: manual and automatic
- ➔ **Manual passage mode:** the door is kept unlocked until the function is manually canceled. This mode is available by default if no cancellation times are programmed (see next function)

1. Activating manual passage mode:





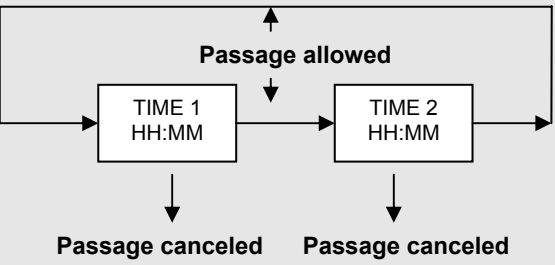
Procedure:

A. Enter your master or special User access code	
B. Depress key <2> until the buzzer beeps twice	
	C. Press 1 to enable
NOTES: <ul style="list-style-type: none"> ⇒ Buzzer beeps 4 times if command is successful ⇒ If error key light #5 turns ON (red light), restart from step A ⇒ The lock will prevent the use of this function if the lockout mode is active 	

➔ **Automatic passage mode:** The door is kept unlocked until one of the cancellation times is reached.

2. Programming cancellation times.

Procedure:

A. Enter your master or special User access code	
B. Depress key <2> until the buzzer beeps twice	
 <p>C. Press 2</p>	 <p>D. Enter cancellation TIME 1 (HH:MM) ex : 5PM = 17 :00 (or 1, 52 : 12, 12)</p>
 <p>E. Enter cancellation TIME 2 (HH:MM) ex : 12 PM = 12 :00 (or 1, 2 : 12,12)</p>	 <p>F. Enter weekday(s) where passage mode is allowed: 1:mon, 2:tue, 3:wed, 4:thu, 5:fri, 6:sat, 7:sun, (53):mon->fri., (54):mon->sun (then wait to exit)</p>
<p>NOTES:</p> <ul style="list-style-type: none"> ➔ Buzzer beeps 4 times if command is successful ➔ If error key light #5 turns ON (red light), restart from step A ➔ When passage mode is manually activated, it will cancel at TIME 1 or TIME 2 	
 <pre> graph TD Start(()) --> T1[TIME 1 HH:MM] T1 --> T2[TIME 2 HH:MM] T2 --> End(()) T1 --> C1[Passage canceled] T2 --> C2[Passage canceled] T1 --> PA[Passage allowed] T2 --> PA PA --> Start </pre>	

Example 1 (setting automatic passage mode “end” time parameters):

- Assuming your Master access code is 1,4,3,3,2
- When manually enabled, passage mode is required to cancel at 5PM (17h00) and 12AM (00h00)
- You want passage mode to be allowed from Monday thru Friday ONLY

Enter: 1 + 4 + 3 + 3 + 2 + <2> + 2 + 1 + (52) + (12) + (12) + (12) + (12) + (12) + (12) + (53) –wait-



Example 2 (setting automatic passage mode “end” time parameter – single time):

- Assuming your Master access code is 1,4,3,3,2
- When manually enabled, passage mode is required to cancel at 5PM (17h00)
- You want passage mode to be allowed from Monday thru Friday ONLY

Enter: 1 + 4 + 3 + 3 + 2 + <2> + 2 + 1 + (52) + (12) + (12) + 1 + (52) + (12) + (12) + (53) –wait-


- **Resuming** passage mode's cancellation times: it is possible to resume the cancellation time parameters if it was previously canceled. This way, you don't need to re-enter those values unless you wish to change them.

Procedure:

A. Enter your master or special User access code	
B. Depress key <2> until the buzzer beeps twice	
	C. Press 2
	(Then wait to exit). TIME #1 et #2 will now revert back to their previous values.
NOTES: <ul style="list-style-type: none"> ⇒ Buzzer beeps 4 times if command is successful ⇒ If error key light #5 turns ON (red light), restart from step A 	

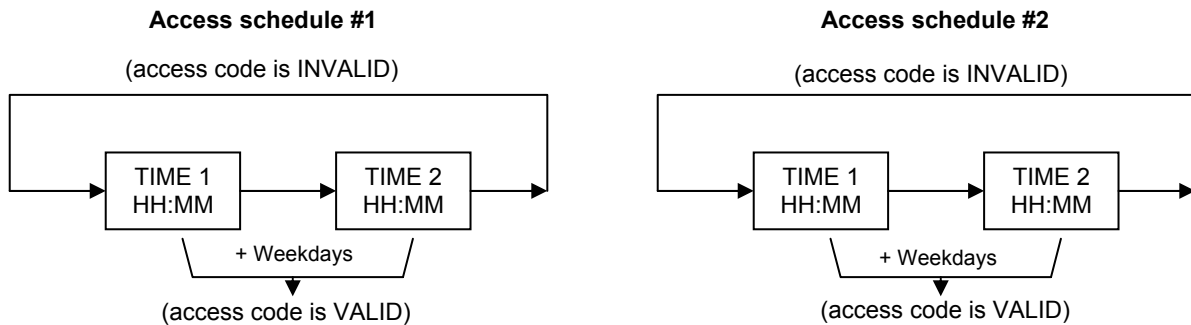
- **Canceling manual/automatic passage mode:**

Procedure:

A. Enter your master or special User code	
B. Depress key <2> until the buzzer beeps twice	
	C. Press 5
NOTES: <ul style="list-style-type: none"> ⇒ Buzzer beeps 4 times if command is successful ⇒ If error key light #5 turns ON (red light), restart from step A 	






③ ACCESS SCHEDULES

- Use this function if you want to make an access code only valid during specified periods of time.
- **NOTE THAT THE ACCESS CODE MUST ALREADY EXIST IN MEMORY** in order to be able to assign it an access schedule. If it is not already done, you will need to program a User access code first (refer to section 4.4 Adding User access codes at page 21) and then assign it an access schedule.
- You may assign up to two different access schedules per User (access code). For example, a User could be assigned a first schedule that would limit its access from 8AM to 5PM from Mondays to Fridays and a second one that would allow this same User accesses on Thursdays and Fridays from 5PM to 9PM.
- An access code becomes valid between TIME 1 and TIME 2 on chosen weekdays.



1. **Assign access schedule #1 OR schedule #2 to an access code(s) (TIME 1, TIME 2, weekdays)**
(See also the next function)

Procedure:

A. Enter your master or special User access code			
B. Depress key <3> until the buzzer beeps twice			
	C. Press (13) to program schedule #1 OR Press (23) to program schedule #2		D. Enter TIME #1 (HH :MM) ex : 8AM = 08 :00 (or 12, 53 : 12, 12)
	E. Enter TIME #2 (HH :MM) ex : 6PM = 18 :00 (or 1, 53 : 12, 12)		F. Enter weekday(s) on which to allow access: 1: mon, 2: tue, 3: wed, 4: thu, 5: fri, (51): sat, (52): sun, (53): mon->fri., (54): mon-sun
	G. Enter one or more existing User code(s) for which to assign this access schedule. When finished, wait to exit. (lock beeps 3 times when code is found)		
NOTES: <ul style="list-style-type: none"> ⇒ Buzzer beeps 4 times if command is successful ⇒ If error key light #5 turns ON (red light) during step A, B, C, D or E, restart from step A ⇒ Key light #5 (red light) will blink normally during step G. 			

1- Example (programming access schedule #1):

- Assuming your Master access code is 2,4,4,1

- You want access codes 2,4,(15) and 1,1,5 to be valid from 9AM (09h00) to 12PM (12h00) from Monday to Friday

Enter: 2 + 4 + 4 + 1 + <3> + (13) + (12) + (54) + (12) + (12) + 1 + 2 + (12) + (12) + (53) + -wait- + 2 + 4 + (15) + 1 + 1 + 5 -wait-

(53): Monday thru Friday

2- Example (programming both access schedules):

- Assuming your Master access code is 2,4,4,1

- You want access codes 2,4,(15) and 1,1,5 to be valid from 9AM (09h00) to 12PM (12h00) from Monday to Friday and from 6PM (18h00) to 9:30PM (21h30) on Thursdays and Fridays

This is a two steps programming:

Firstly, set access schedule #1;

Enter: 2 + 4 + 4 + 1 + <3> + (13) + (12) + (54) + (12) + (12) + 1 + 2 + (12) + (12) + (53) + -wait- + 2 + 4 + (15) + 1 + 1 + 5 -wait-

(53): Monday thru Friday

Secondly, set access schedule #2;

Enter: 2 + 4 + 4 + 1 + <3> + (23) + 1 + (53) + (12) + (12) + 2 + 1 + 3 + (12) + 4 + 5 + -wait- + 2 + 4 + (15) + 1 + 1 + 5 -wait-

Thursday and Friday

2. Assign access schedule #1 OR schedule #2 to an access code(s) (using predefined zones)




- The predefined zones labeled 1 to 5 (refer to section 4.10 « Programming predefined time zones » at page 27) are used to speed-up and facilitate programming when assigning access schedules to Users.
- Once a zone has been assigned to a User, it is only needed to change the zone's TIME values in order to affect all Users for which the zone was assigned.

The RetroFit 1000 is factory programmed with 5 commonly used working zones:

ZONE	TIME 1	TIME 2	Weekday
1	8AM (08h00)	5PM (17h00)	Monday thru Friday
2	5PM (17h00)	12AM (00h00)	Monday thru Friday
3	7AM (07h00)	9PM (21h00)	Monday thru Friday
4	5PM (17h00)	10PM (22h00)	Thursday + Friday
5	8AM (08h00)	6PM (18h00)	Saturday + Sunday

**** THESE ZONES CAN BE REDEFINED IF NEEDED. Refer to section 4.10.**

Procedure:

A. Enter your master or special User access code	
B. Depress key <3> until the buzzer beeps twice	
	<p>C. Press keys (14) to program schedule #1</p> <p style="text-align: center;">OR</p> <p>Press keys (24) to program schedule #2</p>
	<p>D. Enter the zone # (1 to 5) to assign</p>
	<p>E. Enter one or more existing User code(s) for which to assign this access schedule. When finished, wait to exit.</p> <p>(lock beeps 3 times when code is found)</p>
<p>NOTES:</p> <ul style="list-style-type: none"> ⇒ Buzzer beeps 4 times if command is successful ⇒ If error key light #5 turns ON (red light), restart from step A 	

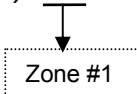
Example (programming both access schedules using pre-defined zones):

- Assuming your Master access code is 2,4,4,1
- You want access code 2,4,(15),(15) to be valid from 8AM (08h00) to 5PM (17h00) from Monday to Friday and from 5PM (17h00) to 10PM (22h00) on Thursdays and Fridays

This is a two steps programming:

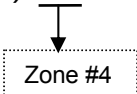
Firstly, set access schedule #1;

Enter: 2 + 4 + 4 + 1 + <3> + **(14)** + 1 + 2 + 4 + (15) + (15) –wait-



Secondly, set access schedule #2;



Enter: 2 + 4 + 4 + 1 + <3> + **(24)** + 4 + 2 + 4 + (15) + (15) –wait-



➔ **Un-assign access schedule #1 OR schedule #2**

This procedure un-assigns either one of the access schedules from one or more access codes

Procedure:

A. Enter your master or special User access code	
B. Depress key <3> until the buzzer beeps twice	
	<p>C. Depress keys (15) to cancel schedule #1</p> <p style="text-align: center;">OR</p> <p>Depress keys (25) to cancel schedule #2</p>
	<p>D. Enter existing access code(s) for which to cancel this schedule. When finished, wait to exit</p> <p>(lock beeps 3 times when code is found)</p>
<p>NOTES:</p> <ul style="list-style-type: none"> ⇒ Buzzer beeps 4 times if command is successful ⇒ If error key light #5 turns ON (red light), restart from step A 	

Example (un-assigning access schedule #2):



- Assuming your Master access code is 2,4,4,1
- You want to un-assign schedule #1 from access code 2,4,(15),(15)

Enter: 2 + 4 + 4 + 1 + <3> + (25) + 2 + 4 + (15) + (15) + -wait-

➔ **Un-assign ALL access schedules**

This procedure un-assigns all access schedules from one or more access codes

Procedure:

A. Enter you master or special User access code	
B. Depress key <3> until the buzzer beeps twice	
	<p>C. Press 5</p>
	<p>D. Enter existing access code(s) for which to cancel this schedule. When finished, wait to exit</p> <p>(lock beeps 3 times when code is found)</p>
<p>NOTES:</p> <ul style="list-style-type: none"> ⇒ Buzzer beeps 4 times if command is successful ⇒ If error key light #5 turns ON (red light), restart from step A 	

Example (un-assigning all access schedules):

- Assuming your Master access code is 2,4,4,1
- You want to remove any time restrictions from access code 2,4,(15),(15)





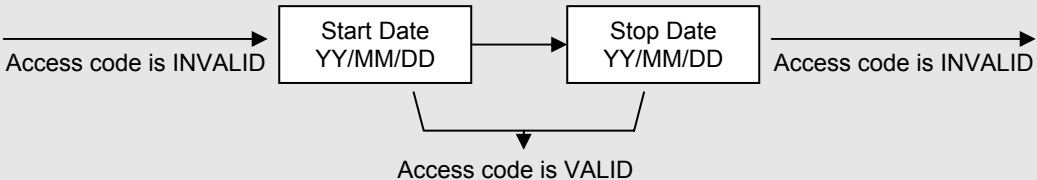
Enter: 2 + 4 + 4 + 1 + <3> + 5 + 2 + 4 + (15) + (15) + -wait-

④ ACCESS PERIOD

- Use this function if you need to make an access code valid for a fixed period of days. The code will be valid from a starting date to an ending date.
- **NOTE THAT THE ACCESS CODE MUST ALREADY EXIST IN MEMORY** in order to be able to assign it an access schedule. If it is not already done, you will need to program a User access code first (refer to section 4.4 Adding User access codes at page 21) and then assign it an access schedule.
- Only User access codes may be assigned an access period.

➔ Programming START and STOP dates

Procedure:

A. Enter your master or special User access code	
B. Depress key <4> until the lock beeps twice	
 C. Press 1	 D. Enter the starting date for the access code (AA/MM/JJ) ex : June 23 rd 2007 = 07,06,23 — enter: (12), (52), (12), (51), 2, 3 (the lock beeps twice after each valid entry)
 E. Enter the ending date for the access code (AA/MM/JJ) ex : July 15 th 2007 = 07,07,15 — enter: (12), (52), (12), (52), 1, 5	 F. Enter existing access code(s) for which to set the access period. When finished, wait to exit. (lock beeps 3 times when code is found)
NOTES: <ul style="list-style-type: none"> ➔ Buzzer beeps 4 times if command is successful ➔ If error key light #5 turns ON (red light), restart from step A ➔ Selected user codes will be valid starting at midnight on the starting date until midnight on the ending date ➔ Selected code(s) will automatically be deleted from memory at the ending date ➔ This function can be used in conjunction with time/access schedules assigned to the same access code(s). 	
	



Example (programming date restrictions):

- Assuming your Master access code is 2,4,4,1
- You want access code 1,1,(15),4 to be valid from September 1st 2007 to September 1st 2008 excluded.

Enter: 2 + 4 + 4 + 1 + <4> + 1 + (12) + (52) + (12) + (54) + (12) + 1 + (12) + (53) + (12) + (54) + (12) + 1 + 1 + 1 + (15) + 4

Note: access code 1, 1, (15), 4 would then become valid on September 1st 2007 and turn invalid (deleted from memory) on September 1st 2008 and thereafter.

→ Un-assign an access period from a User code**Procedure:**


A. Enter you master or special User code	
B. Depress key <4> until the buzzer beeps twice	
	C. Press 5
	D. Enter existing access code(s) for which to set the access period. When finished, wait to exit. (lock beeps 3 times when code is found)
NOTES: ⇒ Buzzer beeps 4 times if command is successful ⇒ If error key light #5 turns ON (red light), restart from step A	

5 DUAL-CODE ACCESS

- This function is used to set/unset a “dual-code” attribute to/from an access code. This means that the access code becomes valid only when combined with another access code.
- You can set as many dual-code attributes as there are Users access codes programmed.

➔ Set or Unset the dual-code attribute to or from a User access code

Procedure:

A. Enter you master or special User code	
B. Depress key <5> until the buzzer beeps twice	
	C. Enter a User access code for which to set or unset a dual-code attribute
NOTES: ⇒ Buzzer beeps 4 times if command is successful ⇒ If error key light #5 turns ON (red light), restart from step A	

Example (setting a dual code attribute):

- Assuming your Master access code is 2,4,4,1
- You want access code 1,1,(15),4 and 1,4,3,1 to be set the dual code attribute

⇒ You may only set the attribute one access code at a time.

For the first code:

Enter: 2 + 4 + 4 + 1 + <5> + 1 + 1 + (15) + 4

For the second code, repeat steps above:

Enter: 2 + 4 + 4 + 1 + <5> + 1 + 4 + 3 + 1

CHAPTER

6

Display Tools

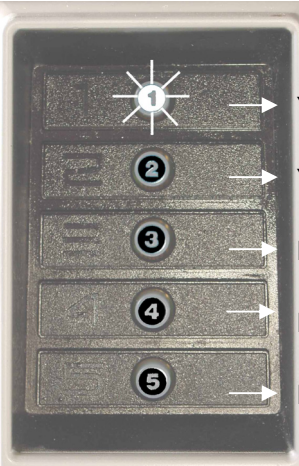
The RetroFit 1000 module offers two ways of displaying information to the user. First, the keypad's embedded lights are used to display batteries status as well as date and time information related to the module's internal clock. Additionally, the module may be linked to a computer for accessing the lock's audit trails, parameters, recorded access codes and other information which may then be displayed on a computer screen*.

*Note: the lock module needs to be removed from its case to get access to the link connector.

6.1 Keypad display

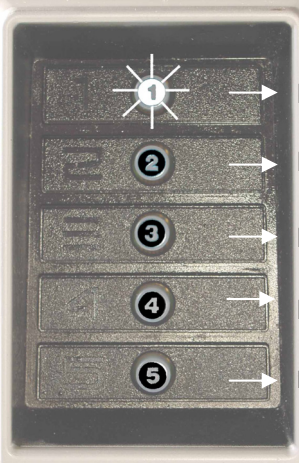
6.1.1 Display date

Procedure:

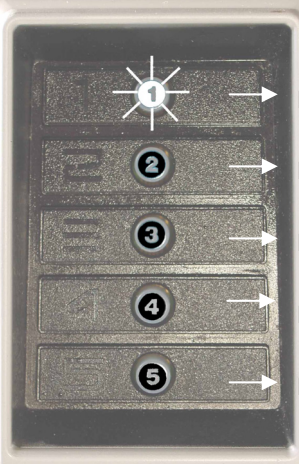
A. Enter your master or special User access code											
B. Depress keys <234> until the buzzer beeps twice											
The following light code is described as: (Y ₁ Y ₂ / M /D ₁ D ₂)											
	<p>EXAMPLE: <u>April 25th 2005</u></p> <table><tr><td>YEAR₁</td><td>0 (blinks quickly to display 0)</td></tr><tr><td>YEAR₂</td><td>5 (flashes 5 times for the year)</td></tr><tr><td>MONTH</td><td>4 (flashes 4 times for the month of April)</td></tr><tr><td>DAY₁</td><td>2 (flashes twice for the day x10)</td></tr><tr><td>DAY₂</td><td>5 (flashes 5 times for the day x1)</td></tr></table>	YEAR ₁	0 (blinks quickly to display 0)	YEAR ₂	5 (flashes 5 times for the year)	MONTH	4 (flashes 4 times for the month of April)	DAY ₁	2 (flashes twice for the day x10)	DAY ₂	5 (flashes 5 times for the day x1)
YEAR ₁	0 (blinks quickly to display 0)										
YEAR ₂	5 (flashes 5 times for the year)										
MONTH	4 (flashes 4 times for the month of April)										
DAY ₁	2 (flashes twice for the day x10)										
DAY ₂	5 (flashes 5 times for the day x1)										
NOTES:	<p>⇒ Count the number of times each light flashes to find out the year (YY), month (M) and day (DD)</p> <p>⇒ When the light quickly blinks, count it as a ZERO</p>										

6.1.2 Display time of day

Procedure:

A. Enter your master access code	
B. Depress keys <235> until the buzzer beeps twice	
The following light code is described as: (H₁H₂ : M₁M₂)	
	<p>EXAMPLE: 10h29</p> <p>1 (flashes once)</p> <p>0 (blinks quickly to display 0)</p> <p>2 (flashes twice for the minutes x10)</p> <p>9 (flashes 9 times for the minutes x1)</p> <p>NOT USED (seconds are not displayed)</p>
	HOUR₁
	HOUR₂
	MINUTES₁
	MINUTES₂
<p>NOTES:</p> <ul style="list-style-type: none"> ⇒ At this point, the keypad's lights start flashing to display time of day (24hrs mode) ⇒ Count the number of times each light flashes to find out the hours (HH) and minutes (MM) (seconds are not displayed) ⇒ When the light quickly blinks, count it as a ZERO 	

6.1.3 Display battery status

A. Enter your master access code													
B. Depress keys <1234> until the buzzer beeps twice													
The following light code is described as:													
	<table border="0"> <thead> <tr> <th colspan="2" style="text-align: center;"><u>BATTERY STATUS</u></th> </tr> </thead> <tbody> <tr> <td>IF key light #1 flashes →</td> <td style="text-align: center;">FULL POWER</td> </tr> <tr> <td>IF key light #2 flashes →</td> <td style="text-align: center;">GOOD</td> </tr> <tr> <td>IF key light #3 flashes →</td> <td style="text-align: center;">WEAK</td> </tr> <tr> <td>IF key light #4 flashes →</td> <td style="text-align: center;">REPLACE</td> </tr> <tr> <td>IF key light #5 flashes →</td> <td style="text-align: center;">CRITICAL</td> </tr> </tbody> </table>	<u>BATTERY STATUS</u>		IF key light #1 flashes →	FULL POWER	IF key light #2 flashes →	GOOD	IF key light #3 flashes →	WEAK	IF key light #4 flashes →	REPLACE	IF key light #5 flashes →	CRITICAL
<u>BATTERY STATUS</u>													
IF key light #1 flashes →	FULL POWER												
IF key light #2 flashes →	GOOD												
IF key light #3 flashes →	WEAK												
IF key light #4 flashes →	REPLACE												
IF key light #5 flashes →	CRITICAL												
NOTES:													
⇒ When using lithium batteries as in model RetroFit 1000-3L or RetroFit 1000-1, it is best to replace the batteries as soon as they display a WEAK state.													

6.2 PC LINK

The RetroFit 1000 module may be linked to computer via the RetroLink** cable.

Once the module is connected to the computer, the following procedure applies.

A. Enter your Master access code	
B. Depress keys <245> until the buzzer beeps twice	
NOTES:	
⇒ Wait for the display to complete, then select a function key (1,3, or 5)	
⇒ Refer to the RetroLink user's manual for more information	

****This product must be ordered separately. Refer to the product's documentation for installation procedures and configuration.**

CHAPTER

7

Troubleshooting

7.1 Module Installation and testing

Symptom: nothing happens after connecting the batteries (no lights, no sound)

Suggestions:

- ⇒ batteries are dead or polarity is wrong. Make sure batteries are properly installed
- ⇒ check the battery holder cable and make sure it is connected

Symptom: After clutch linkage arm is put in place and door is locked, clutch won't engage when turning the knob

Suggestions:

- ⇒ make sure the clutch has enough lubrication otherwise this will apply too much pressure on the locking mechanism and damage the module or other lock parts

WARNING

*We **STRONGLY** recommend that you check the clutch status BEFORE installing the RetroFit module. A malfunctioning clutch (defective or poorly lubricated) could damage the unit or other lock parts.*

7.2 While programming access codes

Symptom: unable to enter programming modes

Suggestions:

- ⇒ you must enter a programming mode within 4 seconds after entering your master access code.
- ⇒ keep the key(s) depressed for at least 3 seconds to activate a programming session
- ⇒ when asked to press two keys like (14), you must press both keys simultaneously, NOT one after the other

Symptom: unable to add access codes**Suggestions:**

- ⇒ you may not be in program mode. Refer above to “**unable to enter programming modes**”
- ⇒ only the Grand Master/Master/Sub-Master or “special” User can add access codes
- ⇒ the access code or sequence you’re trying to add already exists in memory
ex. if code 4,1,1,1 exists, you won’t be able to add code 3,2,4,1,1,1 or code 4,1,1,1,5
- ⇒ code confirmation in step 2 is wrong. The code you want to add needs to be entered twice without mistakes
- ⇒ enter codes **ONLY** when key light #1 or #2 starts flashing. You need to wait for key light #2 to flash before confirming your code
- ⇒ access codes have reached maximum memory capacity (41 User codes)
- ⇒ you wait more than 4 seconds between each digit you enter

7.3 While entering access codes**Symptom: unable to unlock the door****Suggestions:**

- ⇒ your code is either wrong, not programmed into memory or was deleted by a Master
- ⇒ you may have a time schedule or date restriction assigned to your code. If so, your code will only work if within range. (Note: if batteries were replaced, make sure clock is set to the current time)
- ⇒ lock has been placed in lockout mode by one of the masters
- ⇒ lock is in **tamper lockout mode** due to too many wrong previous attempts. Wait for tamper delay to expire or ask any masters or security people to override.
- ⇒ if you need to enter a duo number such as (15), make sure both keys are depressed together
- ⇒ A programming session or terminal display session may have been initiated. Wait 1 minute (or press 5 twice) and retry your code
- ⇒ if no light(s) are displayed after entering a code, batteries may be dead
- ⇒ your code may be a “service code” which is a temporary code that lasts from 0 (single use) up to 24 hours max. after the time it was created.

Symptom: code I enter is wrong but door unlocks anyways?**Suggestions:**

- ⇒ the lock maybe in passage mode which means that no code is needed. Door is kept unlocked.
- ⇒ the module unlocks when a valid code sequence is found. So if your code is 3,4,5, entering the code sequence 1,2,**3,4,5** will also unlock the door since the sequence 3,4,5 was found. **THIS IS NORMAL.** (refer to chapter 19: Access code rules)

LOCKS GENERAL CONFIGURATION**Supervisors & Security**

LEVEL	NAME	ACCESS CODE
Grand Master (level 3 only)		
Master		
Sub-Master		
Security		

Pre-programmed time zones

ZONES	Factory settings	User programmed
#1	8h00 – 17h00 Monday thru Friday	
#2	17h00 – 00h00(midnight) Monday thru Friday	
#3	7h00 – 21h00 Monday thru Friday	
#4	17h00 – 22h00 Thursday + Friday	
#5	8h00 – 18h00 Saturday + Sunday	

PER LOCK CONFIGURATION

SERIAL NUMBER: _____

LOCATION: _____

Users

Names	Access code	Privileges	Access schedule	Dual code
				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>

SERIAL NUMBER: _____

LOCATION: _____

Names	Access code	Privileges	Access schedule	Dual code
				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>

Limited warranty statement

PRODUCTS: RetroFit 1000-1, RetroFit 1000-3, 1000-BX modules

DURATION OF LIMITED WARRANTY: one year

Smartlock systems inc. (Smartlock) warrants to you, the end-user customer, that Smartlock hardware and accessories will be free from defects in materials and workmanship after the date of purchase, for the period specified above. If Smartlock receives notice of such defects during the warranty period, Smartlock will, at its option, either repair or replace products which prove to be defective. Replacement products may be either new or equivalent in performance to new. Smartlock products may contain remanufactured parts equivalent to new in performance or may have been subject to incidental use. Warranty does not apply to defects resulting from (a) improper or inadequate maintenance, (b) parts not supplied by Smartlock for the products specified above, (c) unauthorized modification or misuse, (d) clutch defects or malfunction of the receiving lockset or from any other parts originating from it, (e) fire, theft, war, riot, hostility, acts of God such as hurricanes, floods etc.,

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OUR ONLY LIABILITY, WHETHER IN TORT OR IN CONTRACT, UNDER THIS WARRANTY IS TO REPAIR OR REPLACE PRODUCTS WHICH ARE RETURNED TO SMARTLOCK, SHIPPING CHARGES PREPAID TO THE ADDRESS SHOWN BELOW.

Proof of purchase date will be required for warranty claims; so, please retain bill of sale. In the event warranty service is required, contact Smartlock at the number or address below.

Please complete and return the registration card within thirty days for warranty coverage.

Smartlock systems inc.

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