MANUAL

Remote Programmer XM3

Conditions

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Table of contents

1 Introduction 8
1.1 Important Notice 8
1.2 Proximity 8
1.3 XM3 Stand-alone features 10
1.4 XM3 Single Door 10
1.5 XM3 Tag types 11
2 Remote Programmer section 12
2.1 The Remote Programmer 12
2.2 Operating the Remote Programmer 13
2.3 Operational level and Program number overview 14
2.4 XM3 LED Indicators 18
2.5 XM3 Sound Indicator 18
2.6 XM3 Sleep modes 19
2.7 Tag Level Overview 20
3 Sleep mode 21
3.1.1 0 * - Show current XM3 level 21
3.1.2 Set new level prior to entering Sleep mode 21
3.2 1 * - Access 22
3.3 2 * - Add tags by number 23
3.4 3 * - (De)Activate Night time mode 24
3.5 4 * - Add tags by presentation 25
3.6 5 * - Void tags by presentation 26
3.7 6 * - Set internal real time clock 27
3.8 7 * - Add 24 hours tags (Special Users) 28
3.9 8 * - Add Night Time only tags 29
3.10 9 * - Voiding tags by number 30
4 User Options 31
4.1.1 Protect option 31
4.1.2 Read Indication option 31
4.1.3 1 0 * - Display User options 32
4.1.4 Set User options 33
4.2 1 1 * - Set Open Time-out 34

4.3 1 2 * - Set Close Time-out 35
4.4 1 3 * - Program Night time Master tag 36
4.5 1 4 * - Program Add Master tag 37
4.6 1 5 * - Program Void Master tag 38
4.7 1 6 * - Copy a Remote Programmer 39
4.8 1 7 * - Program Overall Time-out 40
4.9 1 8 * - Set PIN Keypad related codes 41
4.9.1 1 8 * 0 * - Set PIN Code Change code 41
4.9.2 1 8 * 1 * - Set PIN Access code 42
4.9.3 1 8 * 2 * - Set Alarm Code 42
4.10 1 9 * - Set User level Access code 44
5 Installer Options 45
5.1.1 Pivate option 45
5.1.2 Public option 46
5.1.3 Egress option 46
5.1.4 2 0 * - Display Installer options 47
5.1.5 2 0 * n * - Set Installer options 48
5.2 2 3 * - Set Lock type 49
5.2.1 Set Lock type Normally Open 49
5.2.2 Set Lock type Normally Closed 49
5.2.3 Set Lock type Coded Signal 50
5.3 2 4 * - Set Installer level Access code 51
5.4 2 5 * - Alarm options 52
5.4.1 Alarm tone 52
5.4.2 Redirect Tamper alarm output 52
5.4.3 Tamper alarm 52
5.4.4 Display Alarm options 53
5.4.5 2 5 * n * - Set Alarm options 54
5.5 2 6 * - Set File System configuration 55
5.5.1 2 6 * n * - Set File System configuration 56
2 7 * - RS-485 Interface 57
5.5.2 Switch to RS-485 interface 57
5.6 2 8 * - Set XM3 Address 58
6 PIN Keypad 59
6.1 3 0 * - Add a PIN Keypad 59

6.2 3 1 * - PIN Keypad options 60
6.2.1 Alarm Notification mode 60
6.2.2 Enable PIN code 60
6.2.3 Use PIN Keypad as User Programmer 60
6.2.4 PIN at night only 60
6.2.5 Display PIN Keypad options 61
6.2.6 3 1 * n * - Set Pin Keypad options 62
6.2.7 Defining a PIN code 63
6.2.8 Changing a PIN code 64
7 Event Logging 65
7.1 3 3 * - Enable/Disable Event Logging 65
7.2 Event Log Options 66
7.2.1 Security 66
7.2.2 Configuration 66
7.2.3 Status 66
7.2.4 3 4 * - Display Event Log options 67
7.2.5 3 4 * n * - Set Event Log Options 68
7.3 3 5 * - Erase Event Log 69
8 Anti-Pass back 70
8.1.1 4 8 * n * - Set Anti-Pass back mode 70
8.2 4 9 n * - Set Anti-Pass back Time 71
8.3 5 8 * - Re-enable Users 71
9 Time Zones 72
9.1 5 3 * - Set Day-Night scheme 73
9.1.1 5 3 * 0 * - Set Night-to-Day marker 74
9.1.2 5 3 * 1 * - Set Day-to-Night marker 74
9.2 5 4 * - Display Time zones Week scheme 75
9.2.1 5 4 * n * - Set Time zones Week scheme 76
10 Lock/Unlock 77
10.1 5 5 * - Set Lock/Unlock scheme 78
10.1.1 5 5 * 0 * - Set Lock-to-Unlock marker 79
10.1.2 5 5 * 1 * - Set Unlock-to-Lock marker 79
10.2 5 6 * - Display Lock/Unlock Week scheme 80
10.2.1 5 6 * n * - Set Lock/Unlock Week scheme 81
10.3 5 7 * - Add Unlock Master tag 82

11 Miscellaneous functions..... 83
11.1 9 3 * - Show Operational level 83
11.2 9 4 * - Show Remote Programmer level 84
11.3 9 7 * - XM3 Reset 85
11.4 9 9 * - Erase memory..... 86

1 Introduction

1.1 Important Notice

This manual is for use of authorized Cross Point OEM's only. It is intended to serve as an example user manual and as a guide to the functions of the XM3. Authorized Cross Point OEM clients may freely copy and edit the text and graphics contained in this document for including in their own documentation.

This manual describes all available procedures for the XM3. For specific markets, where the OEM client may not need all available options, it is recommended that those parts of the text which deal with unneeded options or operations be omitted, provided they are not made accessible to the end user or installer.

References to the "user" should be interpreted as "the user of the OEM's end product". Where reference is made to the XM3, the OEM should insert the product name under which the end product is marketed. Other XM3 specific names like I/O1, I/O2, I/O3 and I/O4 may be changed to the names or numbers of the input and output ports used in the OEM's end product.

In the interest of improvement, specifications of the XM3 may vary slightly due to updates being made. Detailed specifications of updates will be made available, to be incorporated in the OEM's manuals when necessary.

This document is subject to changes without prior notice. Cross Point cannot be held liable for the use of the provided information. In case of doubt please contact your supplier.

1.2 Proximity

The XM3 applies proximity detection techniques to sense the presence of a unique RFID tag, as authorization to allow automatic opening or unlocking of a door, gate or other access.

Proximity detection has the advantage of not requiring physical contact between ID reader and ID-carrier. The tag functions without use of a battery. The ID Reader scans the ID-carrier by means of a Long Wave radio frequency transmission. If within range, the tag is activated and powered by this signal and in return transmits its specific ID number. This technique ensures easy to use, highly reliable, vandal proof access control.

The standard tags are available as cards, conforming to the ISO standard, or as small key tags which can be attached to key rings. The ISO card can optionally be equipped with a magnetic strip for dual ID applications.

XM3 Stand-alone functionality:

This manual describes the full functionality of the Remote Programmer in combination with anXM3 stand-alone reader. The XM3 On-line is described in the XM3 Quick Guide.

The XM3 provides the basis for Stand-alone use. Although technologically sophisticated, it is compact, quick and simple to use and flexible in operation..

The tags used with the XM3 have a laser-engraved number on the outside. Allowing up to billions of combinations, this ID number is unique for each tag.

When the XM3 is installed, it first needs to be programmed. This is done at installer level. The anti-tamper led at the front is then disabled and all specific settings can be done. At user level the anti-tamper is active. The (end) user can decide to 'protect' the installation against unauthorized access by installer

All tags must have their ID numbers *added* to the XM3, meaning that they are read and inserted into the internal memory of the XM3 before they can be used. Once added, the tag number will be held in memory until it is *voided* (erased).

Memory management of tag numbers may be performed by means of:

1. the *XM3 Manage PC software* (see the "XM3 Manage User Manual" for further details).
2. so-called *Masters* (standard tags that have been "promoted" to perform certain management functions).
3. by using a *Remote Programmer* (a separate self-contained programming device with a built-in tag, capable of more advanced management functions).

The internal memory of the XM3 can hold up to 5000 tag numbers in its most simple configuration.

The maximum number of tag-ID's that can be stored in the XM3's memory is dependent on the chosen file system configuration.
This total must include at least three Masters (typical one Program Master, One Add Master and one Void Master) and possibly one or two Remote Programmer(s) for advanced functions.

There is no maximum to the number of Masters and/or Remote Programmers, other than the maximum capacity.

1.3 XM3 Stand-alone features

The XM3 Stand-alone has the following features:

- RS-485 Network Support
- Wiegand Interface
- Magstripe Interface
- Event Logging
- Keypad options (PIN code, Access code, Alarm code)
- User names (max 24 characters per name)
- Time Zones
- Unlock/Unlock
- Time based Anti pass back
- Support for remote programmers
- Support for master cards

1.4 XM3 Single Door

The XM3 can also be supplied as XM3 Single Door.

This XM3 Single Door contains most of the features mentioned above but with the following limitations:

- Network address is fixed at 255
- No networking with multiple readers; one reader only
- Reads only 9-digit Cross Point card types
- No Event Logging
- No XM3 Manage Pro features

These limitations also affect some Remote Programmer functions. A remark is placed in the function chapters for which these limitations apply.

1.5 XM3 Tag types

Table 1 shows the various tag types the XM3 can detect.

XM3 versions	13 digits	9 digits
EM only	EM 4001 and EM 4102	Cross Point
EM + HID	EM 4001 and EM 4102 HID Standard 26 bit (H10302) HID Standard 34 bit (H10306) HID Standard 37 bit (H10302/H10304) HID Corporate 1000	Cross Point
EM + Mifare	EM4001 and EM 4102 Mifare Standard	Cross Point

Table 1

Table 2 shows the various XM3 tag levels associated with the tag types.

Tag level	Tag type
9	EM Marin H4201/H4001 (no facility code)
8	Mifare Standard (no facility code)
7	Undefined
6	Undefined
5	HID Standard 37 bit H10304
4	HID Standard 37 bit H10302
3	HID Corporate 1000 (no facility code)
2	HID Standard 34 bit H10306
1	HID Standard 26 bit H10302
0	Cross Point H4201

Table 2

2 Remote Programmer section

2.1 The Remote Programmer

A Remote Programmer allows a wider range of programming steps to be performed on an XM3 than Master tags do. The general technique for using the Remote Programmer is similar to Program Masters, in that way too they are recognized by the XM3 when held within reading range of the XM3.

In fact, a Remote Programmer may be regarded as a Master that has a more extensive repertoire and is equipped with a numeric keyboard.

When presented to the XM3, a unique code (also engraved as a number on the outside) is transmitted, in a similar fashion as with normal tags or Master tags. If the code is unknown to the XM3, the Remote Programmer is ignored.

This offers security against unauthorized attempts to obtain access or to perform memory management operations. When a valid programmer is presented to the *XM3*, it will switch itself to Program mode. All LEDs will turn off, except for LED number 7, the ‘Program’ LED.

Figure 1 shows the remote Programmer.

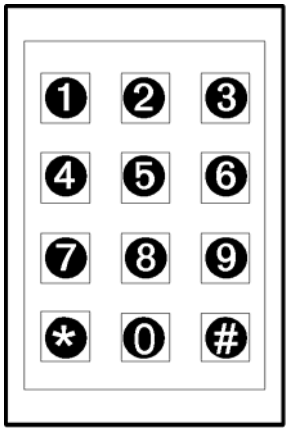


Figure 1

2.2 Operating the Remote Programmer

The Remote Programmer is operated within reading range of the XM3, by typing one or two digit numbers on the Remote Programmer keyboard, using the Enter key * for punctuation and the Backspace key # for correcting typing errors.

With option 10*4* on, LED 1 (yellow) is used to indicate that the Remote Programmer is within reading range as is the case with a normal tag.

The Remote Programmer should be presented and held in a stable position, where all LEDs on the XM3 are visible, for example next to the reader.

While the XM3 is in Program mode, it will sound a short beep at each numeric key press. Pressing the Enter key will cause the XM3 to execute the chosen function, as determined by preceding numeric key presses, and to display the resulting status with its LEDs.

In some cases where operation or programming caused an error, the system can be bypassed, i.e. power off the system, hold the programmer (known or unknown) in the field while powering on. The XM3 will go in Program mode. Make sure that when doing this the cover of the XM3 has been removed.

A complete remote programming step is for example:

1. Activate Program Mode by placing and keeping the Remote Programmer within reading range of the XM3.
2. Type the program numbers on the keyboard. Possible leading zero's can be omitted.
3. LED(s) light up to show the chosen function.
4. The chosen program is executed. A program may involve several steps, each with key presses, LED readouts and/or presenting of tags.
5. Once the Remote Programmer function is completed, the XM3 usually returns to normal operation.

If several different functions must be performed consecutively, the user can leave the Remote Programmer within range and switch the XM3 back to Program mode by pressing the Enter or Backpsace key. Alternatively, the Remote Programmer can be moved out of reading range and then back into reading range to return to Program mode.

2.3 Operational level and Program number overview

For security reasons the XM3 has two operating modes:

1. **Installer level**

   Full control over all program numbers (except a few user level program numbers) allowing the installer to fully configure the XM3 during installation.

2. **User level**

   Limited access to program numbers allowing the end-user to program several user related settings after installation.

A Remote Programmer can be declared as either an Installer programmer or a User programmer.

An Installer programmer has full control if the XM3 is in Installer mode and limited control over User settings when the XM3 is in User mode.

A User programmer has full control over User related settings if the XM3 is in User mode and has no control if the XM3 is in Installer mode.

Table 3 gives for every program number the actions that are allowed for each type of remote programmer at each operational level. Refer to the table of contents to find the page where the program numbers are explained in detail.

Program #	Short description	Installer programmer @ Installer Level	Installer programmer @ User Level	User programmer @ User Level
0 * 0 *	Set User level Sleep mode	Yes	Yes	Yes
0 * 1 *	Set Installer level Sleep mode	Yes	Yes	No
1 *	Access	Yes	No	Yes
2 *	Add tags by number	Yes	No	Yes
3 *	Toggle Night time mode	Yes	Yes	Yes

4 *	Add tags by presentation	Yes	No	Yes
5 *	Void tags by presentation	Yes	Yes	Yes
6 *	Set clock, date & time	Yes	No	Yes
7 *	Add special user tags	Yes	No	Yes
8 *	Add Night time only tags	Yes	No	Yes
9 *	Void tags by number	Yes	Yes	Yes
1 0 *	Set various User options	Yes	Yes	Yes
1 1 *	Set Open time	Yes	Yes	Yes
1 2 *	Set Close time	Yes	Yes	Yes
1 3 *	Add Night time master	Yes	No	Yes
1 4 *	Add Add Master	Yes	No	Yes
1 5 *	Add Void Master	Yes	Yes	Yes
1 6 *	Copy Remote Programmer	Yes	Yes	Yes
1 7 *	Set Inactivity time-out	Yes	Yes	Yes
1 8 *	Set PIN Keypad related codes	Yes	No	Yes
1 9 *	Set User level Access code	Yes	No	Yes
2 0 *	Set various Installer options	Yes	No	No

2 2 *	Set RS-485 poll time	Yes	No	No
2 3 *	Set Lock type	Yes	No	No
2 4 *	Set Installer level Access code	Yes	No	No
2 5 *	Set various Tamper related Installer options	Yes	No	No
2 6 *	Set File System	Yes	No	No
2 7 *	Switch to RS-485 mode	Yes	No	No
2 8 *	Set XM3 address	Yes	No	No
3 0 *	Add a Pin Keypad	Yes	No	No
3 1 *	Set various Pin Keypad options	Yes	No	No
3 3 *	Set Event Log mode	Yes	No	No
3 4 *	Set Event Log options	Yes	No	No
3 5 *	Erase all event in Event Log	Yes	No	No
4 8 *	Set Anti-Passback mode	Yes	No	No
4 9 *	Set Anti-Passback timer	Yes	No	No
5 3 *	Set Time Zone day/night markers	Yes	Yes	Yes
5 4 *	Set Time Zone week scheme	Yes	Yes	Yes
5 5 *	Set Lock/Unlock mode markers	Yes	Yes	Yes

5 6 *	Set Lock/Unlock week scheme	Yes	Yes	Yes
5 7 *	Add Unlock master	Yes	No	Yes
5 8 *	Re-enable users in Anti-passback mode	Yes	Yes	Yes
9 0 *	Switch Software Configuration	Yes	Yes	Yes
9 3 *	Show Operational level	Yes	Yes	Yes
9 4 *	Show Remote Programmer level	Yes	Yes	Yes
9 7 *	XM3 Reset	Yes	Yes	Yes
9 9 *	Erase all tags from level ‘nn’ downwards	Yes	Yes	Yes

Table 3

2.4 XM3 LED Indicators

The XM3 is provided with seven LEDs, which serve as status indicators.

Table 4 shows the LEDs and their function.

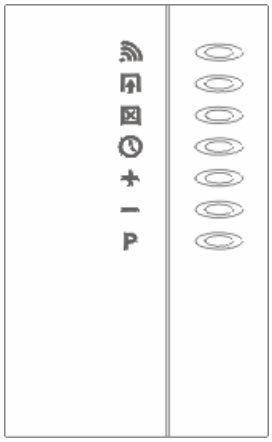
XM3	LEDs	Function
	LED 1 (yellow) LED 2 (green) LED 3 (red) LED 4 (red) LED 5 (red) LED 6 (red) LED 7 (red)	Read indicator Access and Unlock mode Closed mode Night time mode Add mode Void mode Program mode

Table 4

2.5 XM3 Sound Indicator

In addition to the LED display, the XM3 provides feedback by means of sounds.

Table 5 shows an overview of the various sounds and their function.

Sound	Function
Short beep	A master tag or Remote Programmer is read
Long beep	A tag is read
4 short beeps	In case of error
Modulated	In case of (tamper) alarm

Table 5

2.6 XM3 Sleep modes

As indicated before, the XM3 can be set to two different operational levels, Installer level and User level.

The XM3 can also be set to sleep mode in these two levels (sometimes by factory default. See Table 6 and Table 7 for instructions on how to wake the XM3 up from the various sleep modes.

Installer level Sleep mode	LEDs status
A Remote Programmer must be presented to wake the XM3 up. This Remote Programmer (if not yet known to the XM3) will be declared a Installer Programmer. After presenting the Remote Programmer the XM3 will switch to Access mode.	

Table 6

User level Sleep mode	LEDs status
A Remote Programmer or tag must be presented to wake the XM3 up. The Remote Programmer (if not yet known to the XM3) will be declared a User Programmer. The tag (if not yet known to the XM3) will be declared as a Program Master. After presenting the Remote Programmer or the tag the XM3 will switch to Access mode.	

Table 7

2.7 Tag Level Overview

The XM3 distinguishes 12 different tag levels, with level 11 being the highest and level 0 the lowest level.

Tag levels are used to assign specific functionality to a tag.

Table 8 shows the various tag levels.

Tag level	Tag type
11	Installer Programmer
10	User Programmer, Program Master
9	Void Master
8	Add Master
7	Night time Master
6	PIN keypad
5	Lock/Unlock Master
4	Undefined
3	Undefined
2	Night time only tags
1	24 hours tags (special users)
0	Day time only tags (normal users)

Table 8

3 Sleep mode

To provide for using a single Master or Remote Programmer at the same level on different XM3 units, the XM3 must be specially prepared before shipment.

When such a unit is powered up, the first tag or Programmer presented will be set to the level the XM3 was set to before shipment, obtaining a superior status to tags and Programmers that are added later. See chapter 2.6 for more details on the Sleep modes.

3.1.1 0 * - Show current XM3 level

- Present the Remote Programmer
- Press 0 *
- The XM3 LEDs show the current XM3 level (see chapter 2.6 for LED level explanation)
- Press * to resume normal operation

3.1.2 Set new level prior to entering Sleep mode

- Present the Remote Programmer
- Type 0 * 0 * to enter **User level Sleep mode**,

  or 0 * 1 * to enter **Installer level Sleep mode**.
- The XM3 LEDs show the current XM3 level (see chapter 2.6 for LED level explanation)
- Switch power off (must be executed before a wake-up procedure can be started)

3.2 1 * - Access

Any valid Remote Programmer can obtain access; there is no need for a separate user tag.

Step	Action	Result
1	Present Remote Programmer	Program mode entered
2	1 *	Relay is activated. After the Open time period has passed the Relay will be deactivated. The XM3 resumes normal operation.

3.3 2 * - Add tags by number

In standard Access mode, the XM3 will not grant access to a tag unless its ID number is present in memory. A tag can be added to memory by a Master tag or a Remote Programmer, provided the tag is available for presentation.

If the tag is not available, e.g. because the person carrying it is not present, it can still be added by entering its *Add level* and number with a legitimate Remote Programmer, as described below.

Step	Action	Result
1	Present Remote Programmer	Program mode entered
2	Activate “Add”-mode 2 *	“Add”-mode is entered
3	Set tag level n *	(see page 20 for tag levels)
4	Set tag type n *	(see page 11 for tag types)
5	Set facility code (optional) n n *	(only required for HID tags)
6	Enter tag number n - - - - - - n *	
7	Repeat step 6 for each tag which needs to be added.	
8	Close “Add”-mode *	XM3 resumes normal operation

3.4 3 * - (De)Activate Night time mode

The Night time mode is a special mode in which the normal tags are denied access.

The Night time triggers output I/O4, intended for external control, e.g. to switch on an external alarm system or to control the mains for lighting or for other electrical devices. Night time mode can be switched on and off by any Remote Programmer and/or via an external control through I/O2.

In Night time mode, a User level Remote Programmer can be used to obtain access, while switching the XM3 to Access mode, just like a Night time Master.

Activate Night time mode using any Remote Programmer:

Step	Action	Result
1	Present Remote Programmer	Program mode entered
2	Activate “Night time”-mode 3 *	I/O4 activated

Deactivate Night time mode using an Installer Programmer:

Step	Action	Result
1	Present Remote Programmer	Program mode entered
2	Deactivate “Night time”-mode 3 *	I/O4 deactivated XM3 resumes normal operation

Deactivate Night time mode using a User Programmer:

Step	Action	Result
1	Present Remote Programmer	Program mode entered
2	Close “Night time”-mode 3 *	I/O4 deactivated Relay activated XM3 resumes normal operation

3.5 4 * - Add tags by presentation

To be granted access by the XM3, tags have to be added first.

With the Remote Programmer new tags can be added when they are presented. Tags added in this way will be defined as Daytime only tags (normal users).

Step	Action	Result
1	Present Remote Programmer	Program mode entered
2	Activate “Add”-mode 4 *	Add mode is entered
3	Present the tags which need to be added one by one	
4	Close “Add”-mode *	XM3 resumes normal operation

3.6 5 * - Void tags by presentation

To deny old tags or programmers access, they must be voided from memory.

After this step, which clears the memory space they occupied, they will be regarded as unknown by the XM3.

Step	Action	Result
1	Present Remote Programmer	Program mode entered
2	Activate “Void”-mode 5 *	Void mode is entered
3	Present the tags which need to be voided one by one	
4	Close “Void”-mode *	XM3 resumes normal operation

3.7 6 * - Set internal real time clock

The XM3 is supporting the option to set the date and time value for its internal clock using a remote programmer.

For the internal clock the Gregorian calendar notation is used. The time must be entered as 4-digit decimal numbers representing a 24 hour time stamp in the 'hhmm' format, e.g. 2359 = 23:59.

Step	Action	Result
1	Present Remote Programmer	Program mode entered
2	Activate "Set Clock"-mode 6 *	Set Clock mode is entered
3	Set Year A.D. n n n n	(Value 2000…2099)
4	Set Month of the year n n	(Value 1…12)
5	Set Day of the month n n	(Value 1…31)
6	Set Hours since midnight n n	(Value 1…23)
7	Set Minutes after hour n n	(Value 1…59)
8	Set Seconds after minute n n	(Value 1…59)
9	Close Set Clock mode *	XM3 resumes normal operation

3.8 7 * - Add 24 hours tags (Special Users)

The XM3 provides the possibility of adding specific tags, referred to as Special User tags, which are granted access both in Access mode and in Night time mode.

These Special User tags can be added directly without setting Night time mode first.

Step	Action	Result
1	Present Remote Programmer	Program mode entered
2	Activate “Add 24h. tags”-mode 7 *	“Add 24h. tags”-mode is entered
3	Present the Special User tags which need to be added one by one	
4	Close “Add 24h. tags”-mode *	XM3 resumes normal operation

3.9 8 * - Add Night Time only tags

Sometimes it may be necessary to grant a group of users access at times when another group is to be denied access and vice versa. For example, security personnel or cleaning staff may have access only outside normal office hours and during holidays when the XM3 would be set to Night time mode.

In such cases, the Night time status functions as a discriminative (time) zoning system.

Step	Action	Result
1	Present Remote Programmer	Program mode entered
2	Activate “Add Night Time only tags”-mode 8 *	“Add Night Time only tags”-mode is entered
3	Present the Night Time only tags which need to be added one by one	
4	Close “Add Night Time only tags”-mode *	XM3 resumes normal operation

3.10 9 * - Voiding tags by number

To use the Remote Programmer to void tags or Programmers because they are for instance lost, stolen or so severely damaged that they cannot be used, the specific ID number must be known.

For this reason it is important to keep records of all added tags, Masters and Remote Programmers.

Step	Action	Result
1	Present Remote Programmer	Program mode entered
2	Activate “Void”-mode 9 *	“Void”-mode is entered
3	Set tag type n *	(see page 11 for tag types)
4	Set facility code (optional) n n *	(only required for HID tags)
5	Enter tag number n - - - - - - n *	
6	Repeat step 5 for each tag which needs to be voided.	
7	Close “Void”-mode *	XM3 resumes normal operation

4 User Options

In the “User Options”-mode the following User related options can be set:

- Protect option
- Read Indication option

4.1.1 Protect option

If this option is selected, a remote Installer Programmer cannot set the reader in Program Mode. In this way it is prevented that an Installer can access the system. Any other Programmers in memory, even if they have higher levels, are prevented from entering Program mode.

By default the Protect option is off.

‘Protect’ can be bypassed only when the Programmer is presented in the RF-field while re-powering the system. Programmers added at higher levels are intended for backup and maintenance purposes only, and will not be able to obtain access. The User Programmer cannot erase these higher-level Programmers from memory.

4.1.2 Read Indication option

If this option is on, LED 1 will go on when a tag or Programmer is read or identified.

By default the Read Indication is on.

4.1.3 1 0 * - Display User options

The activated user options are displayed on the XM3 LED's.

When a combination of LED's light up this means that the combination of the user options is activated.

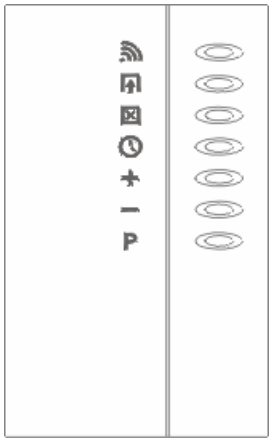
XM3	LEDs	Activated User option
	LED 1 LED 2 - ON LED 3 LED 4 - ON LED 5 LED 6 LED 7	Protect option Read Indicator on LED 1

Table 9

Follow the next procedure to display the activated user options:

Step	Action	Result
1	Present Remote Programmer	Program mode entered
2	Activate "User Options"-mode 1 0 *	"User Options"-mode is entered See Table 9 for LED explanation
3	Close "User Options"-mode *	XM3 resumes normal operation

4.1.4 Set User options

The User options can be used in any combination.

Individual ‘on’ values of the options are:

Option	Value
Protect	1
Read Indication	4

When the options are to be combined, the individual values must be added. For example, when setting both Protect and Read indication, enter 5, (1 + 4).

Step	Action	Result
1	Present Remote Programmer	Program mode entered
2	Activate “User Options”-mode 1 0 *	“User Options”-mode is entered
3	Set required User options n *	(Type the sum of the required options) During 1 second the selected options are displayed on the LED’s (see Table 9 for LED explanation) XM3 resumes normal operation

4.2 1 1 * - Set Open Time-out

Whenever access is granted, the relay of the door lock can be activated during a certain number of seconds, called the Open Time-out.

For testing purposes 4 seconds for a normal door and 20 seconds for a gate are recommended.

Format : **seconds**
Min. value : **1**
Max. value : **255**
Default value : **3**

Step	Action	Result
1	Present Remote Programmer	Program mode entered
2	Activate “Open Time-out”-mode 1 1 *	“Open Time-out”-mode is entered
3	Set Open Time-out n n n *	XM3 resumes normal operation

4.3 1 2 * - Set Close Time-out

The XM3 has a special timer that is intended to check whether the gate or door has been closed within a specific time period.
A period of 4 seconds for a normal door, and 20 seconds for a gate are recommended.

By default the Close Time-out is set to 0, which means the Close Time-out option is disabled.

Any other value will activate the Close Time-out option and requires I/O1 to be connected to ground through a door contact (switch or magnetic).

Format : **seconds**
Min. value : **0**
Max. value : **255**
Default value : **0 (= disabled)**

Step	Action	Result
1	Present Remote Programmer	Program mode entered
2	Activate “Close Time-out”-mode 1 2 *	“Close Time-out”-mode is entered
3	Set Close Time-out n n n *	XM3 resumes normal operation

4.4 1 3 * - Program Night time Master tag

The XM3 has a special mode in which normal user tags cannot obtain access. This mode is called the Night time mode.

This mode can be switched on and off by a Night time Master tag, or alternatively with a Remote Programmer.

Step	Action	Result
1	Present Remote Programmer	Program mode entered
2	Activate “Night time Master Add”-mode 1 3 *	“Night time Master Add”-mode is entered
3	Present new Night time Master tag	XM3 resumes normal operation

4.5 1 4 * - Program Add Master tag

The XM3 allows user tags to be added after presentation of an Add Master.

This can also be achieved with a Remote Programmer (see page 25).

It can be useful to have more than one tag privileged to perform this function. For instance, a particular person, or a specific group of persons, authorized to work in certain rooms or areas where XM3 units are applied might carry a separate Master, which is not valid within other rooms or areas.

Step	Action	Result
1	Present Remote Programmer	Program mode entered
2	Activate “Add Master Add”-mode 1 4 *	“Add Master Add”-mode is entered
3	Present new Add Master tag	XM3 resumes normal operation

4.6 1 5 * - Program Void Master tag

The XM3 allows user tags to be voided from memory by applying a Void Master.

The same can be achieved with a Remote Programmer (see page 26).

It can be useful to have more than one tag privileged to perform this function. For instance, a particular person, or a specific group of persons, authorized to work in certain rooms or areas where XM3 units are applied might carry a separate Master, which is not valid within other rooms or areas.

Step	Action	Result
1	Present Remote Programmer	Program mode entered
2	Activate “Void Master Add”-mode 1 5 *	“Void Master Add”-mode is entered
3	Present new Void Master tag	XM3 resumes normal operation

4.7 1 6 * - Copy a Remote Programmer

Through this procedure a new Remote Programmer can be added to memory at the same level as the original programmer.

By entering the “Copy Programmer”-mode using the original Remote Programmer, a new Remote Programmer can be added by presentation.

Step	Action	Result
1	Present the original Remote Programmer	Program mode entered
2	Activate “Copy Programmer”-mode 1 6 *	“Copy Programmer”-mode is entered
3	Present new Remote Programmer	XM3 resumes normal operation
4	Repeat the procedure starting from step 1 if multiple Remote Programmers need to be added or copied.	

4.8 1 7 * - Program Overall Time-out

In Program mode, the XM3 has a timer which is used to count the number of seconds since the last key-press on the Remote Programmer.

If the count exceeds a pre-set value, the XM3 generates an alarm and resumes normal operation.

Format : **seconds**
Min. value : **5**
Max. value : **255**
Default value : **30**

Step	Action	Result
1	Present the original Remote Programmer	Program mode entered
2	Activate “Overall Time-out”-mode 1 7 *	“Overall Time-out”-mode is entered
3	Set Overall Time-out n n n *	XM3 resumes normal operation
4	Repeat the procedure starting from step 1 if multiple Remote Programmers need to be added or copied.	

4.9 1 8 * - Set PIN Keypad related codes

When a PIN Keypad is used in combination with an XM3, the following codes can be programmed:

- PIN Code Change code
- PIN Access code
- Alarm code

4.9.1 1 8 * 0 * - Set PIN Code Change code

A PIN Code Change code can has to be used by a user to change his personal PIN code on the PIN keypad.

For security reasons the user needs to know the PIN Code Change code to be able to change his/her personal PIN code.

Step	Action	Result
1	Present the Remote Programmer	Program mode entered
2	Activate “Pin Code Change code”-mode 1 8 * 0 *	“Pin Code Change code”-mode is entered
3	Set Pin Code Change code n n n n *	XM3 resumes normal operation

4.9.2 1 8 * 1 * - Set PIN Access code

A special PIN code can be programmed to grant user access without using a tag.

To get access, the user has to enter this Access code on the PIN keypad.

Step	Action	Result
1	Present the Remote Programmer	Program mode entered
2	Activate “Pin Access code”-mode 1 8 * 1 *	“Pin Access code”-mode is entered
3	Set Pin Access code n n n n *	XM3 resumes normal operation

4.9.3 1 8 * 2 * - Set Alarm Code

A special Alarm Code can be programmed that enables a user to activate a silent alarm.

Step	Action	Result
1	Present the Remote Programmer	Program mode entered
2	Activate “Alarm Code”-mode 1 8 * 2 *	“Alarm Code”-mode is entered
3	Set Pin Access code n n n n *	XM3 resumes normal operation

The silent alarm can be activated by presenting any valid user tag and then typing the * followed by the Alarm code.

Step	Action	Result
1	Present User tag	XM3 will prompt for Pin Code
2	Enter Alarm Code *nnnn	Silent alarm is activated: LED2 will keep blinking during the Inactivity Timer period I/O3 is activated
3		After the Inactivity Timer has ended, the XM3 will resume normal operation

The silent alarm can be deactivated by presenting any user tag and then typing the * followed by the Alarm code.

Step	Action	Result
1	Present User tag	XM3 will prompt for Pin Code
2	Enter Alarm Code *nnnn	Silent alarm is activated: I/O3 is deactivated
3		XM3 resumes normal operation

4.10 1 9 * - Set User level Access code

To log on to the XM3 via RS485 (for example through XM3 Manage) at user level a password needs to be specified. This password is defined as the User level Access code.

The Remote Programmer can be used to change the User level Access code when the end-user has forgotten the User level Access code and therefore can not access the XM3 through the software anymore.

Format : **digit**
Min. value : **0**
Max. value : **999999999**
Default value : **123456789**

Step	Action	Result
1	Present the Remote Programmer	Program mode entered
2	Activate “Set User level Access code”-mode 1 9 *	“Set User level Access code”-mode is entered
3	Set User level Access code n - - - - - - - n *	XM3 resumes normal operation

5 Installer Options

In the “User Options”-mode the following User related options can be set:

- Private option
- Public option
- Egress option

5.1.1 Pivate option

Switches the XM3 into a special operation mode in which it will grant access to only one user tag at a time after which it will go into ‘Lock’ status.

Until the ‘Lock” status is switched off, no other the tags are accepted.

Lock status is similar to Night time mode and uses the same LED; I/O4 is also activated. However, the Lock status is not memorized in EPROM, so after a power failure or a deliberate power-off the XM3 always resets to the latest status.

By connecting I/O4 to an external relay circuit, an external device can be activated: for instance a light indicating ‘Lock’ status.

The Lock can be switched off as follows:

a) Push the egress button when activated.

b) Present the same user tag again.

For safety reasons, and in case of emergency, access can still be obtained as follows:

a) Present a Night time Master.

b) Turn the power off and on and present any user tag.

c) Remote Programmers: only the Access option remains active.

Applications:

Small (safe) deposits, mailboxes, lavatories, showers, rooms in hospitals or clinics, control switches or computer equipment etc.

5.1.2 Public option

Disables the validity check for the presence in XM3 memory of the numbers of the presented user tags, thus allowing any tag access, regardless whether it is in memory or not.

The functionality of Remote Programmers and Master Tags will remain unchanged.

The Public function can only be used during access mode, not in Night time mode.

Applications:

Large (safe) deposits, parking lots and front doors of large hotels, public institutions or companies etc.

5.1.3 Egress option

Allows the connection of a push button mounted inside a separate room. This push button can be used to grant passage when exiting.

When set, this option will disable the external Night time control which uses the same I/O2 input.

The method of access is controlled in a similar way as normal access i.e. using Open Time-out and Close Time-out, starting from the moment when the button was released.

Egress is low active i.e. access is granted when I/O2 is connected to ground potential for a short while.

5.1.4 2 0 * - Display Installer options

The activated Installer options are displayed on the XM3 LED's.

When a combination of LED's light up this means that the combination of the user options is activated.

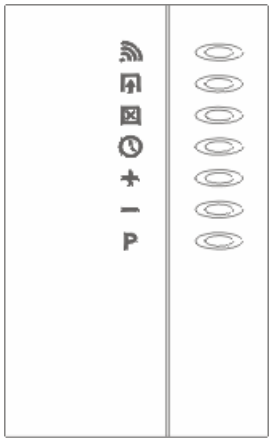
XM3	LEDs	Activated Installer option
	LED 1 LED 2 - ON LED 3 - ON LED 4 - ON LED 5 LED 6 LED 7	 Private option Public option Egress ption

Table 10

Follow the next procedure to display the activated Installer options:

Step	Action	Result
1	Present Remote Programmer	Program mode entered
2	Activate "User Options"-mode 2 0 *	"Installer Options"-mode is entered See Table 9 for LED explanation
3	Close "Installer Options"-mode *	XM3 resumes normal operation

5.1.5 2 0 * n * - Set Installer options

The Installer options can be used in any combination.

Individual 'on' values of the options are:

Option	Value
Private	1
Public	2
Egress	4

When the options are to be combined, the individual values must be added. For example, when setting both Private and Egress options, enter 5, (1 + 4).

Step	Action	Result
1	Present Remote Programmer	Program mode entered
2	Activate "Installer Options"-mode 2 0 *	"Installer Options"-mode is entered
3	Set required Installer options n *	(Type the sum of the required options) During 1 second the selected options are displayed on the LEDs (see Table 9 for LED explanation) XM3 resumes normal operation

5.2 2 3 * - Set Lock type

The internal XM3 relay (open collector) can be set in three different ways:

- Normally open
- Normally closed
- Coded signal

These settings can only be programmed with an Installer programmer at Installer level.

The settings normally open and normally closed are used when a lock is directly connected to the XM3.

The coded signal is used to trigger an external relay (for example an external relay on a Connection Unit (Cross Point article: XMCU3(A)).
The external relay offers higher security.

5.2.1 Set Lock type Normally Open

Step	Action	Result
1	Present Remote Programmer	Program mode entered
2	Set Lock type Normally Open 2 3 * 0 *	XM3 resumes normal operation

5.2.2 Set Lock type Normally Closed

Step	Action	Result
1	Present Remote Programmer	Program mode entered
2	Set Lock type Normally Closed 2 3 * 1 *	XM3 resumes normal operation

5.2.3 Set Lock type Coded Signal

Step	Action	Result
1	Present Remote Programmer	Program mode entered
2	Set Lock type Coded Signal 2 3 * 2 *	XM3 resumes normal operation

5.3 2 4 * - Set Installer level Access code

To log on to the XM3 via RS485 (for example through XM3 Manage) at Installer level a password needs to be specified. This password is defined as the Installer level Access code.

The Remote Programmer can be used to change the Installer level Access code when the end-user has forgotten the Installer level Access code and therefore can not access the XM3 through the software anymore.

Format : **digit**
Min. value : **0**
Max. value : **999999999**
Default value : **123456789**

Step	Action	Result
1	Present the Remote Programmer	Program mode entered
2	Activate “Set Installer level Access code”-mode 2 4 *	“Set Installer level Access code”-mode is entered
3	Set Installer level Access code n - - - - - - - n *	XM3 resumes normal operation

5.4 2 5 * - Alarm options

At Installer level the following alarm options are available:

5.4.1 Alarm tone

The alarm tone can be set to continuous (default) or pulsing.

5.4.2 Redirect Tamper alarm output

This option can be used to separate the tamper alarm and the forced entry alarm.

Default they are both available on I/O3. With this option set, the tamper alarm is redirected to I/O4.

5.4.3 Tamper alarm

By default the tamper off option is selected, meaning that the tamper alarm is not used.

If the Tamper alarm needs to be used it can be enabled.

5.4.4 Display Alarm options

The activated Alarm options are displayed on the XM3 LED's.

When a combination of LED's light up this means that the combination of the user options is activated.

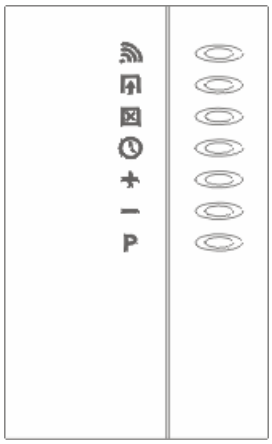
XM3	LEDs	Activated Installer option
	LED 1 LED 2 LED 3 LED 4 - ON LED 5 - ON LED 6 - ON LED 7 - ON	 Alarm tone option Redirect Tamper alarm option Tamper alarm enabled option Tamper alarm disabled option

Table 11

Follow the next procedure to display the activated Installer options:

Step	Action	Result
1	Present Remote Programmer	Program mode entered
2	Activate "Alarm Options"-mode 2 5 *	"Alarm Options"-mode is entered See Table 11 for LED explanation
3	Close "Alarm Options"-mode *	XM3 resumes normal operation

5.4.5 2 5 * n * - Set Alarm options

The Alarm options can be used in any combination.

Individual 'on' values of the options are:

Option	Value
Alarm tone	4
Tamper alarm redirect	8
Tamper alarm on	16
Tamper alarm off	32

When the options are to be combined, the individual values must be added. For example, when setting both Tamper alarm redirect and Tamper alarm on options, enter 24, (8 + 16).

Step	Action	Result
1	Present Remote Programmer	Program mode entered
2	Activate "Alarm Options"-mode 2 5 *	"Alarm Options"-mode is entered
3	Set required Alarm options n *	(Type the sum of the required options) During 1 second the selected options are displayed on the LEDs (see Table 11 for LED explanation) XM3 resumes normal operation

5.5 2 6 * - Set File System configuration

The XM3 offers the possibility to choose from various different file system configurations.

This makes it possible for the installer to set-up a configuration according to the customers wish.

For every XM3 option there is a file in the file system.

Table 12 shows an overview of the available File System configurations and their options.

File System #	Users	PIN codes	Names	Events
0	5000	0	0	0
1	3700	3700	0	0
2	3200	0	0	1000
3	2400	2400	0	1000
4	1300	0	1300	0
5	1200	1200	1200	0
6	850	0	850	1000
7	800	800	800	1000
8	1000	0	0	2300
9	1000	1000	0	2100
10	1000	0	1000	700
11	1000	1000	1000	500
12	250	0	0	2800
13	250	250	0	2750
14	250	0	250	2350
15	250	250	250	2300

Table 12

5.5.1 2 6 * n * - Set File System configuration

This function will set a new File System configuration.

Important:
Changing the file system will result in a loss of all users and events currently stored in the XM3.

Step	Action	Result
1	Present Remote Programmer	Program mode entered
2	Activate “Set File System”-mode 2 6 *	“File System”-mode is entered
3	Set required File System configuration n n *	(See Table 12) XM3 resumes normal operation

Note: This function can not be used for an XM3 Single Door!

2 7 * - RS-485 Interface

The XM3 can also be used as an on-line reader in combination with a third party controller. The XM3 will act as a reader only, which means that it will only forward the presented user tag ID through its I/O's to the controller.

The internal memory of the XM3 is not used anymore. The controller stores all user related information and will decide whether the presented user tag gains access or not.

The available XM3 on-line interfaces are:

- RS-485
- Magstripe
- Wiegand

5.5.2 Switch to RS-485 interface

The procedure below describes how to switch a stand-alone XM3 to RS-485 interface.

Step	Action	Result
1	Present Remote Programmer	Program mode entered
2	Switch to "RS-485"-mode 2 7 * 1 *	"RS-485"-mode is entered XM3 switches to on-line mode

5.6 2 8 * - Set XM3 Address

When used in a network, the stand-alone XM3 units must have a unique network address.

This address can be changed using an Installer programmer at Installer level.

Format : **digit**
Min. value : **1**
Max. value : **255**
Default value : **see XM3 label**

Step	Action	Result
1	Present Remote Programmer	Program mode entered
2	Activate “Set Address”-mode 2 8 *	“Set Address”-mode is entered
3	Set new XM3 Address n n n *	
4	Perform a power supply reset to activate the new setting	XM3 resumes normal operation

Note: This function can not be used for an XM3 Single Door!

6 PIN Keypad

A PIN keypad can be added to the XM3 for use with the PIN code option.

6.1 3 0 * - Add a PIN Keypad

Step	Action	Result
1	Present Remote Programmer	Program mode entered
2	Activate “Add PIN Keypad”-mode 3 0 *	“Add PIN Keypad”-mode is entered
3	Present new PIN Keypad to XM3	
4	Confirm new PIN Keypad by pressing any key on the PIN Keypad n	XM3 resumes normal operation

6.2 3 1 * - PIN Keypad options

The following PIN Keypad options can be set:

6.2.1 Alarm Notification mode

The PIN Keypad sends an intermittent ID to the XM3 every 5 seconds, to confirm its presence.

When the PIN Keypad is taken out of the XM3 read range for more than 15 seconds, the XM3 will generate an alarm and I/O3 will be activated.

If an external alarm device is connected to I/O3, a (security) person can be triggered.

When the removed PIN Keypad is placed back within the XM3 read range, the alarm will stop and I/O3 will be deactivated.

This option is only active when the XM3 is set to User Level.

6.2.2 Enable PIN code

After the PIN Keypad has been added to the XM3 memory, the PIN code option has to be enabled, forcing all users to type a PIN code after presenting their tags.

6.2.3 Use PIN Keypad as User Programmer

The PIN Keypad can also be used as a User Programmer.

In this mode, the PIN Keypad has the same functionality as a User Programmer, allowing user program modes to be performed (see Table 3 on page **Fout! Bladwijzer niet gedefinieerd.**).

After activating this mode, a Program Master tag needs to be presented first to allow use of the PIN Keypad User Programmer functionality.
Without a Program Master tag the PIN Keypad can not be used as a User Programmer.

6.2.4 PIN at night only

The XM3 supports an option that makes it possible to have access with a tag and PIN code only during the Night time mode. This is built in as an extra security during the Nigth Lock mode.

6.2.5 Display PIN Keypad options

The activated PIN Keypad options are displayed on the XM3 LED's.

When a combination of LED's light up this means that the combination of the options is activated.

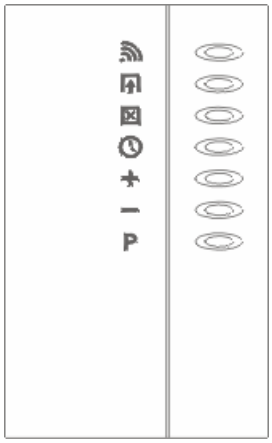
XM3	LEDs	Activated Installer option
	LED 1 LED 2 - ON LED 3 - ON LED 4 - ON LED 5 - ON LED 6 LED 7	Alarm Notification mode Enable PIN code PIN Keypad as User Prog. PIN at night only

Table 13

Follow the next procedure to display the activated PIN Keypad options:

Step	Action	Result
1	Present Remote Programmer	Program mode entered
2	Activate "PIN Keypad Options"-mode 3 1 *	"PIN Keypad Options"-mode is entered See Table 13 for LED explanation
3	Close "PIN Keypad Options"-mode *	XM3 resumes normal operation

6.2.6 3 1 * n * - Set Pin Keypad options

The PIN Keypad options can be used in any combination.

Individual 'on' values of the options are:

Option	Value
None	0
Alarm Notification Mode	1
Enable PIN code	2
Use PIN Keypad as User Programmer	4
PIN at night only	8

When the options are to be combined, the individual values must be added. For example, when setting both "Alarm Notification mode" and "Enable PIN code" options, enter 3 (1 + 2).

Step	Action	Result
1	Present Remote Programmer	Program mode entered
2	Activate "PIN Keypad Options"-mode 3 1 *	"PIN Keypad Options"-mode is entered
3	Set required PIN Keypad Options n *	(Type the sum of the required options) During 1 second the selected options are displayed on the XM3 LEDs (see Table 13 for LED explanation) XM3 resumes normal operation

6.2.7 Defining a PIN code

After enabling the PIN code option, users must define their PIN code the first time their tag is presented to the XM3.

After presenting the user tag to the XM3 for the first time, the user will be prompted to define his/her PIN code.

The PIN code must consist of 4 digits and can only be entered through the PIN Keypad (not by using a Remote Programmer).

Step	Action	Result
1	Present User tag	The user is prompted to define a PIN code LED 2 is blinking LED 3, 4 & 7 are ON
2	Define PIN code n n n n	The user is prompted to confirm the PIN code LED 2 is blinking LED 3, 4, 5 & 7 are ON
3	Confirm the PIN code by re-typing it n n n n	XM3 resumes normal operation

6.2.8 Changing a PIN code

A user defined PIN code can be changed by making use of the PIN code Change code (see page 41 on how to set the PIN code Change code).

A PIN code can only be changed if the old PIN code is known, otherwise the user has to be voided completely from the XM3's memory and added again to be able to define a new PIN code.

Note: Before entering the Pin code Change code, press the * first.

Step	Action	Result
1	Present User tag which PIN code needs to be changed	LED 2 is blinking LED 3 is ON
2	Enter PIN code Change code *nnnn	LED 2 is blinking LED 3 & 7 are ON
3	Enter the old PIN code nnnn	LED 2 is blinking LED 3, 4 & 7 are ON
4	Enter a new PIN code nnnn	LED 2 is blinking LED 3, 4, 5 & 7 are ON
5	Confirm the new PIN code by re-typing it nnnn	XM3 resumes normal operation

7 Event Logging

The XM3 supports event logging through the “first in – first out (FIFO) principle.

The number of stored events depends on the chosen File System (see page 55).

Event Logging can be enabled or disabled.

Note: Events can only be retrieved and viewed by connecting the XM3 to a PC that runs the XM3 Manage software.

7.1 3 3 * - Enable/Disable Event Logging

Option	Value
Event logging disabled	0
Event logging enabled	1

Step	Action	Result
1	Present Remote Programmer	Program mode entered
2	Activate “Event Logging”-mode 3 3 *	“Event Logging”-mode is entered
3	Enable/disable Event Logging n *	XM3 resumes normal operation

Note: This function can not be used for an XM3 Single Door!

7.2 Event Log Options

The XM3 supports event logging of the following types:

7.2.1 Security

Security related events, like

- Access to a specific user was granted/denied
- Tamper alarm was activated/deactivated
- A user logged on via the user interface XM3 Manage

7.2.2 Configuration

Configuration related events, like

- A system area parameter was changed
- A user was added to/voided from the XM3 database
- A user defined/changed his/her PIN code

7.2.3 Status

Status related events, like

- System startup (opening of the event log)
- The XM3 detected a non-fatal error and continued normal operation
- The Xm3 detected a fatal operation and aborted normal operation

7.2.4 3 4 * - Display Event Log options

The activated Event Log options are displayed on the XM3 LEDs.

When a combination of LEDs light up this means that the combination of the options is activated.

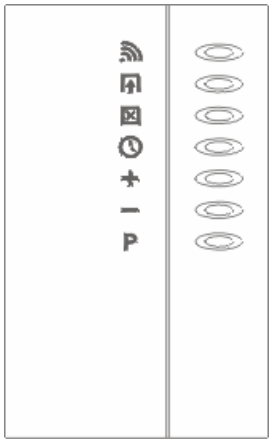
XM3	LEDs	Activated Installer option
	LED 1 LED 2 - ON LED 3 - ON LED 4 - ON LED 5 LED 6 LED 7	 Security related events Configuration related events Status related events

Table 14

Follow the next procedure to display the activated Event Log options:

Step	Action	Result
1	Present Remote Programmer	Program mode entered
2	Activate “Event Log Options”-mode 3 4 *	“Event Log Options”-mode is entered See Table 14 for LED explanation
3	Close “Event Log Options”-mode *	XM3 resumes normal operation

Note: This function can not be used for an XM3 Single Door!

7.2.5 3 4 * n * - Set Event Log Options

The Event Log options can be used in any combination.

Individual 'on' values of the options are:

Option	Value
None	0
Security	1
Configuration	2
Status	4
Destructive read (after reading the events through a RS 485 connection)	8

When the options are to be combined, the individual values must be added.

For example, when enabling both Security and Configuration events, enter 3 (1 + 2).

Step	Action	Result
1	Present Remote Programmer	Program mode entered
2	Activate "Event Log Options"-mode 3 4 *	"Event Log Options"-mode is entered
3	Set required Event Log options n n *	(Type the sum of the required options) During 1 second the selected options are displayed on the LEDs (see Table 14 for LED explanation) XM3 resumes normal operation

Note: This function can not be used for an XM3 Single Door!

7.3 3 5 * - Erase Event Log

All events can be manually erased by using the Remote Programmer.

Step	Action	Result
1	Present Remote Programmer	Program mode entered
2	Erase all events 3 5 *	XM3 resumes normal operation

Note: This function can not be used for an XM3 Single Door!

8 Anti-Pass back

The anti-pass back feature provides an extra safety feature.

After a user gained access by presenting his/her tag, the XM3 will temporarily disable this users' tag for a certain amount of time.
This makes it impossible for this user to gain access again with his/her tag during this period of time.

In this way the user can not pass back his/her tag to another person, preventing this other person from gaining access.

After the anti-pass back time has elapsed, the user can gain access again by presenting his/her tag.

8.1.1 4 8 * n * - Set Anti-Pass back mode

When the Anti-Pass back feature is disabled, a user can gain access at any time he/she presents his/her card without restrictions.

When the Anti-Pass back feature is enabled, after access is granted, the users' tag is temporarily disabled for a set period of time.

Option	Value
Anti-Pass back Disabled	0
Anti-Pass back Enabled	1

Step	Action	Result
1	Present Remote Programmer	Program mode entered
2	Activate "Set Anti-Pass back"-mode 4 8 *	"Anti-Pass back"-mode is entered
3	Enable/Disable Anti-Pass back n *	XM3 resumes normal operation

8.2 4 9 n * - Set Anti-Pass back Time

The Anti-Pass back Time is the period of time a user tag will be disabled when the Anti-Pass back feature is enabled.

Format : **seconds**
Min. value : **1**
Max. value : **255**
Default value : **0**

Step	Action	Result
1	Present Remote Programmer	Program mode entered
2	Activate “Anti-Pass back Time”-mode 4 9 *	“Anti-Pass back Time”-mode is entered
3	Set Anti-Pass back time n *	XM3 resumes normal operation

8.3 5 8 * - Re-enable Users

This function enables all users that are currently disabled as a result of the Anti-pass back feature.

Step	Action	Result
1	Present Remote Programmer	Program mode entered
2	Re-enable users 5 8 *	XM3 resumes normal operation

9 Time Zones

The XM3 supports 2 time zones, called day-time and night-time; to enable time based access control schemes to single users or groups of users.

The time zones can be set in time-frames of 24 hours.

Each time zone has:

- An active period, during which access shall be granted to a group of users
- An inactive period, during which access is not granted to the same group of users

The time zones can cannot have an overlap in time.

When the time zones are set, they can be used for every day of the week or a combination of days.

When the day-night scheme for a weekday is disabled, the XM3 will remain in the night-time zone for the complete 24 hours of that day.
For instance: when the time zones are disabled for Saturday and Sunday, the Xm3 will go into night-time zone on Friday night and will switch to day-time zone on Monday morning.

The XM3 will switch to night-time mode when the XM3 clock reaches the day-to-night marker.
When the XM3 clock reaches the night-to-day marker, the XM3 will switch to day-time mode.

LED 4 on the XM3 indicates the night-time mode. When ON, night-time mode is active.

The Night time master can be used to overrule the XM3 time zone that was activated by the time markers. When the Night time master was used to overrule the active time zone, the XM3 will return to its normal time zone scheme when the XM3 clock reaches the next time marker.

The time zone options only apply for the following tag types:

- Day-time only tags
- Night-time only tags

9.1 5 3 * - Set Day-Night scheme

Set the day-night scheme for XM3 clock based time zone switching.

Option	Value
Night-to-day marker	0
Day-to-night marker	1

Time markers must be entered as 4-digit decimal numbers representing a 24 hour time stamp in 'hhmm' format, e.g. 2359 = 23:59h.

Format : **hours**
Min. value : **00**
Max. value : **24**
Default value : **00**

Format : **minutes**
Min. value : **00**
Max. value : **60**
Default value : **00**

The time markers indicate the first minute during which access in the respective time zone is possible. Setting the night-to-day marker to 08:00h and the day-to-night marker to 17:00h means that day-time access is possible from 08:00h until 16:59h and night time access is possible from 17:00h to 07.59h.

Setting both time markers to 00:00h disables the XM3 clock based time zone switching (default setting).

9.1.1 5 3 * 0 * - Set Night-to-Day marker

Step	Action	Result
1	Present Remote Programmer	Program mode entered
2	Activate “Night-to-Day marker”-mode 5 3 * 0 *	“Night-to-Day marker”-mode is entered
3	Set Night-to-Day marker n n n n *	(set ‘hhmm’ time value) XM3 resumes normal operation

9.1.2 5 3 * 1 * - Set Day-to-Night marker

Step	Action	Result
1	Present Remote Programmer	Program mode entered
2	Activate “Day-to-Night marker”-mode 5 3 * 1 *	“Day-to-Night marker”-mode is entered
3	Set Day-to-Night marker n n n n *	(set ‘hhmm’ time value) XM3 resumes normal operation

9.2 5 4 * - Display Time zones Week scheme

The activated Week scheme is displayed on the XM3 LEDs.

When a combination of LEDs light up this means that the combination of weekdays is activated.

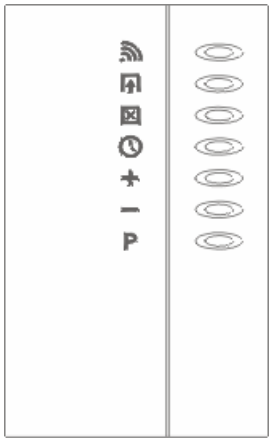
XM3	LEDs	Activated weekday
	LED 1 - ON LED 2 - ON LED 3 - ON LED 4 - ON LED 5 - ON LED 6 - ON LED 7 - ON	Sunday Monday Tuesday Wednesday Thursday Friday Saturday

Table 15

Follow the next procedure to display the activated Week scheme:

Step	Action	Result
1	Present Remote Programmer	Program mode entered
2	Activate “Week scheme”-mode 5 4 *	“Week scheme”-mode is entered See Table 15 for LED explanation
3	Close “Week scheme”-mode *	XM3 resumes normal operation

9.2.1 5 4 * n * - Set Time zones Week scheme

Enable/disable the day-night scheme for each of the seven days of a week.

This is a toggle option, which means if the weekday is already activated, performing this action will deactivate the selected weekday setting and vice versa.

Default value : **All weekdays**

Option	Value
Sunday	0
Monday	1
Tuesday	2
Wednesday	3
Thursday	4
Friday	5
Saturday	6

Step	Action	Result
1	Present Remote Programmer	Program mode entered
2	Activate “Week scheme”-mode 5 4 *	“Week scheme”-mode is entered
3	Set weekday n *	(select value from table above)
4	Repeat step 3 for each preferred weekday	
5	Terminate “Week scheme”-mode 9 *	XM3 resumes normal operation

10 Lock/Unlock

This function is used to set a Lock/Unlock scheme for XM3 clock based time zone switching, which makes it possible to give access during a specified period of time without the need to present a tag.

For instance: the door of a building is open during office hours. After office hours the users that want to enter the building need to present their tag to gain access.

XM3 behavior in Unlock mode:

- LED 2 (green) will be continuously lit.
- All valid Remote Programmers and Master tags will keep their functionality.
- The PIN Keypad does not function.
- When a User tag is presented, LED 1 (yellow) will light up but will not affect the XM3 in any way.
- Night-time mode will always overrule the Lock/Unlock setting.
- A Lock/Unlock Master tag will always overrule the XM3 clock based Lock/Unlock setting.
- The options Private, Public, Egress and Anti-passback have no effect on the XM3.

10.1 5 5 * - Set Lock/Unlock scheme

Set the lock-unlock scheme for XM3 clock based lock-unlock switching.

Option	Value
Lock-to-unlock time marker	0
Unlock-to-lock time marker	1

Time markers must be entered as 4-digit decimal numbers representing a 24 hour time stamp in 'hhmm' format, e.g. 2359 = 23:59h.

Format : **hours**
Min. value : **00**
Max. value : **24**
Default value : **00**

Format : **minutes**
Min. value : **00**
Max. value : **60**
Default value : **00**

The time markers indicate the first minute during which access in the respective time zone is possible. Setting the lock-to-unlock marker to 08:00h and the unlock-to-lock marker to 17:00h means that then Unlock feature is active from 08:00h until 16:59h and the Lock feature from 17:00h to 07.59h.

Setting both time markers to 00:00h disables the XM3 clock based time zone switching (default setting).

10.1.1 5 5 * 0 * - Set Lock-to-Unlock marker

Step	Action	Result
1	Present Remote Programmer	Program mode entered
2	Activate “Lock-to-Unlock marker”-mode 5 5 * 0 *	“Lock-to-Unlock marker”-mode is entered
3	Set Lock-to-Unlock marker n n n n *	(set ‘hhmm’ time value) XM3 resumes normal operation

10.1.2 5 5 * 1 * - Set Unlock-to-Lock marker

Step	Action	Result
1	Present Remote Programmer	Program mode entered
2	Activate “Unlock-to-Lock marker”-mode 5 5 * 1 *	“Unlock-to-Lock marker”-mode is entered
3	Set Unlock-to-Lock marker n n n n *	(set ‘hhmm’ time value) XM3 resumes normal operation

10.2 5 6 * - Display Lock/Unlock Week scheme

The activated Week scheme is displayed on the XM3 LEDs.

When a combination of LEDs light up this means that the combination of weekdays is activated.

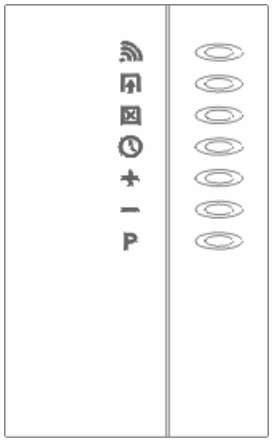
XM3	LEDs	Activated weekday
	LED 1 - ON LED 2 - ON LED 3 - ON LED 4 - ON LED 5 - ON LED 6 - ON LED 7 - ON	Sunday Monday Tuesday Wednesday Thursday Friday Saturday

Table 16

Follow the next procedure to display the activated Week scheme:

Step	Action	Result
1	Present Remote Programmer	Program mode entered
2	Activate “Week scheme”-mode 5 6 *	“Week scheme”-mode is entered See Table 16 for LED explanation
3	Close “Week scheme”-mode *	XM3 resumes normal operation

10.2.1 5 6 * n * - Set Lock/Unlock Week scheme

Enable/disable the Lock/Unlock scheme for each of the seven days of a week.

This is a toggle option, which means if the weekday is already activated, performing this action will deactivate the selected weekday setting and vice versa.

Default value : **All weekdays**

Option	Value
Sunday	0
Monday	1
Tuesday	2
Wednesday	3
Thursday	4
Friday	5
Saturday	6

Step	Action	Result
1	Present Remote Programmer	Program mode entered
2	Activate “Week scheme”-mode 5 6 *	“Week scheme”-mode is entered
3	Set weekday n *	(select value from table above)
4	Repeat step 3 for each preferred weekday	
5	Terminate “Week scheme”-mode 9 *	XM3 resumes normal operation

10.3 5 7 * - Add Unlock Master tag

By following this procedure an Unlock Master tag can be defined.

By presenting this tag the Lock/Unlock feature will be enabled/disabled.

Step	Action	Result
1	Present Remote Programmer	Program mode entered
2	Activate “Add Unlock Master”-mode 5 7 *	“Add Unlock Master”-mode is entered
3	Present new tag(s) that will be declared Unlock Master tags n *	
4	Present Remote Programmer and terminate “Add Unlock Master”-mode *	XM3 resumes normal operation

11 Miscellaneous functions

11.1 9 3 * - Show Operational level

This function determines at which Operational level the XM3 is currently operating.

The activated Operational level is displayed on the XM3 LEDs.

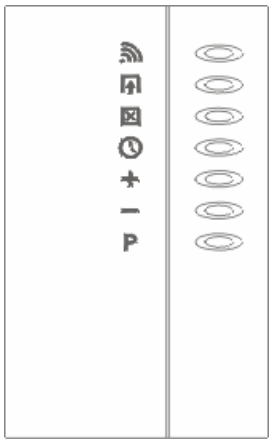
XM3	LEDs	Operational level
	LED 1 LED 2 - ON LED 3 - ON LED 4 LED 5 LED 6 LED 7	User level Installer level

Table 17

Step	Action	Result
1	Present Remote Programmer	Program mode entered
2	Activate “Show Operational level”-mode 9 3 *	“Show Operational level”-mode is entered See Table 17 for LED explanation
3	Close “Operational level”-mode *	XM3 resumes normal operation

11.2 9 4 * - Show Remote Programmer level

This function reads the level at which the presented Remote Programmer was added to the XM3 memory.

The Remote Programmer level is displayed on the XM3 LEDs.

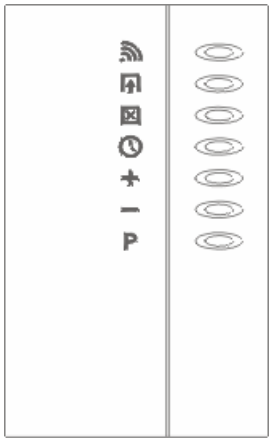
XM3	LEDs	Remote Programmer level
	LED 1 LED 2 - ON LED 3 - ON LED 4 LED 5 LED 6 LED 7	User programmer Installer programmer

Table 18

Step	Action	Result
1	Present Remote Programmer	Program mode entered
2	Activate “Show Remote Programmer level”-mode 9 4 *	“Show Remote Programmer level”-mode is entered See Table 18 for LED explanation
3	Close “Remote Programmer level”-mode *	XM3 resumes normal operation

11.3 9 7 * - XM3 Reset

This function will perform a reset of the XM3.

Information present in the memory of the XM3 will **not** be lost and parameter settings will **not** be restored to default values.

Temporary settings will be restored to previous settings.

Step	Action	Result
1	Present Remote Programmer	Program mode entered
2	Perform a reset 9 7 *	The XM3 will reset itself XM3 resumes normal operation

11.4 9 9 * - Erase memory

This function makes it possible to void entire groups of tags and Remote Programmers from the XM3 memory.

To determine which group(s) must be erased a so-called ‘erase level’ must be entered. All tags and Remote Programmers at or below this level will be erased.

See Table 8 for an overview of the tag levels.

Step	Action	Result
1	Present Remote Programmer	Program mode entered
2	Activate “Erase memory”-mode 9 9 *	“Erase memory”-mode is entered
3	Enter tag level n n *	
4	Close “Erase memory”-mode *	XM3 resumes normal operation