

# OTS ADVANCE



## USER MANUAL

VERSION 4.2.0



INTELLIGENT LOCKING SYSTEMS

*ENG*



# OTS ADVANCE



## USER MANUAL

VERSION 4.2.0



INTELLIGENT LOCKING SYSTEMS

This document is just informative and does not constitute a contract.

The information may have undergone changes that have not been added to this document yet, therefore, if you have any doubts, please contact Ojmar to receive up-to-date information.

© Ojmar, S. A.

# CONTENTS

<b>0. GENERAL DESCRIPTION .....</b>	<b>9</b>
<b>0.1 GENERAL DESCRIPTION.....</b>	<b>9</b>
<b>0.2 SYMBOLS USED IN THE USER MANUAL.....</b>	<b>9</b>
<b>0.3 GENERAL WARNINGS.....</b>	<b>9</b>
0.3.1 Regulatory information USA.....	10
0.3.2 Class B device notice.....	10
0.3.3 RF exposure safety .....	11
<b>0.4 TECHNICAL SUPPORT .....</b>	<b>11</b>
<b>1. OTS LOCKS .....</b>	<b>12</b>
<b>1.1 GENERAL DESCRIPTION.....</b>	<b>12</b>
<b>1.2 MEASUREMENTS AND FEATURES .....</b>	<b>12</b>
1.2.1 Technical Drawings .....	13
<b>1.3 OTS ADVANCE LOCK FOR METAL DOORS.....</b>	<b>15</b>
1.3.1 Mounting the Safety Shield .....	15
1.3.2 Shield Measurements .....	16
<b>1.4 OPENING AND CLOSURE.....</b>	<b>17</b>
1.4.1 Closure.....	17
1.4.2 Opening.....	17
<b>1.5 LOCK TYPES.....</b>	<b>17</b>
1.5.1 Dedicated Lock.....	18
1.5.2 Free lock .....	18
<b>1.6 KEY TYPES .....</b>	<b>18</b>
1.6.1 Dedicated Key.....	18
1.6.2 Free Key.....	18
1.6.3 Multifunction Key.....	19
1.6.4 Master Key.....	19
1.6.5 Service Key .....	19
1.6.6 Master Subgroup Key .....	20
1.6.7 Cancellation Key .....	20
1.6.8 Set-up Key .....	20
1.6.9 Event Collection Key.....	21
1.6.10 Automatic Opening Key .....	21

1.6.11	Time Change Key .....	22
1.6.12	Time Set Key.....	23
1.6.13	Reset Key .....	23
1.6.14	Test Key.....	24
1.7	DESCRIPTION OF FLASHING LEDS .....	25
1.8	SOFTWARE CODES .....	27
1.9	REPLACEMENT OF THE LOCK BATTERY.....	28
<b>2. PORTABLE PROGRAMMER .....</b>		<b>31</b>
2.1	GENERAL DESCRIPTION.....	31
2.2	OJMAR NFC MODEL PROGRAMMER .....	31
2.2.1	Main Screen.....	34
2.2.2	Operations with Keys.....	35
2.2.3	Operations with Locks.....	36
2.2.4	Configuration.....	38
2.3	DESKTOP READER .....	39
2.4	INSTALLING WINDOWS DRIVERS FOR THE DESKTOP READER.....	40
2.5	WINDOWS CONTROLLER INSTALLATION FOR OJMAR NFC PROGRAMMER .....	42
<b>3. INFOTERMINAL.....</b>		<b>45</b>
3.1	INFOTERMINAL.....	45
3.1.1	Bracket Features .....	45
3.1.2	Infoterminal Features .....	46
3.1.3	Installation.....	47
3.2	USE OF THE INFOTERMINAL .....	49
3.3	INFOTERMINAL CONFIGURATION.....	52
<b>4. OTS MANAGEMENT SOFTWARE.....</b>		<b>57</b>
4.1	PC SOFTWARE .....	57
4.2	SOFTWARE INSTALLATION .....	58
4.3	LICENCE ACTIVATION.....	58
4.4	ACCESSING THE APPLICATION, CONFIGURATION, START-UP AND GENERAL OPTIONS .....	58
4.5	SUBGROUPS .....	60
4.6	LOCKS .....	62
4.6.1	Add Lock .....	65
4.6.2	Edit / Delete Lock.....	66
4.7	OPERATORS.....	67

4.7.1	Add New Operator .....	69
<b>4.8</b>	<b>EVENTS.....</b>	<b>72</b>
4.8.1	Read Events .....	73
<b>4.9</b>	<b>USERS .....</b>	<b>74</b>
4.9.1	Add User .....	76
<b>4.10</b>	<b>TIME ZONES.....</b>	<b>77</b>
4.10.1	Add Time Zone .....	79
<b>4.11</b>	<b>SET-UP KEYS .....</b>	<b>80</b>
<b>4.12</b>	<b>RECORD USER KEYS .....</b>	<b>82</b>
4.12.1	Write Free Key.....	84
4.12.2	Write Dedicated Key .....	85
4.12.3	Write Multifunction Keys .....	86
<b>4.13</b>	<b>CANCELLATION KEYS.....</b>	<b>87</b>
<b>4.14</b>	<b>MAINTENANCE KEYS.....</b>	<b>88</b>
4.14.1	Events Key .....	89
4.14.2	Master subgroups Key .....	90
<b>4.15</b>	<b>PROGRAMMER TYPE .....</b>	<b>91</b>
<b>4.16</b>	<b>PC-PROGRAMMER .....</b>	<b>91</b>
<b>4.17</b>	<b>ESTABLISH COMMUNICATIONS WITH THE PROGRAMMER.....</b>	<b>93</b>
<b>5. FAQs.....</b>	<b>.....</b>	<b>94</b>
<b>5.1</b>	<b>FAQS.....</b>	<b>94</b>





# 0. GENERAL DESCRIPTION

## 0.1 GENERAL DESCRIPTION

OTS Advance is an electronic lock system for use mainly in sports, school and leisure facilities. The full system is made up of the following components:

- OTS Advance Lock (See Section 1).
- Key kit (See Section 1.6).
- Portable programmer (See Section 2).
- Infoterminal (See Section 3).
- Management software (See Section 4).

## 0.2 SYMBOLS USED IN THE USER MANUAL

- NOTE: The notes are used to highlight information that is of particular importance or related interest that must be remembered.
- EXAMPLE: The examples are used to show a case study that may provide users with a better understanding of the explanation.
- WARNING: The warning boxes highlight the importance of the information described.

## 0.3 GENERAL WARNINGS

Please follow the rules below to ensure the correct working order of our product in your facility:

- WARNING: The product purchased must be installed and used according to the technical operating conditions described in the corresponding manual.
- WARNING: Where not specifically indicated, customers are responsible for the appropriate installation or use of the application.
- WARNING: On receiving the material, please inspect the packaging and the material for any signs of damage. Also check that the shipment is complete (accessories, documents, etc.).
- WARNING: If the packaging has been damaged during transport or you suspect that it may have been damaged or that it could be faulty, the material must not be used. Please contact us in this case.
- WARNING: Our products must be installed and handled by authorised personnel. More specifically, the electrical connections must be made by qualified specialists.

- **WARNING:** It is forbidden to make any replacements or remove the protective covers.
- **WARNING:** Do not attempt to repair any material in the event of a fault or damage and then re-start it. You must contact us in these cases.
- **WARNING:** No responsibility will be accepted for damage caused as a result of misuse.
- **WARNING:** In accordance with Royal Decree 106/2008, dated 1 February 2016, before leaving the devices in their pick-up installations, the batteries must be removed and left separately for their appropriate handling.



### 0.3.1 Regulatory information USA

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

### 0.3.2 Class B device notice

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

### 0.3.3 RF exposure safety

In case of portable

- SAR not required

This device complies with the FCC RF exposure limits and has been evaluated in compliance with portable exposure condition.

- Distance

To comply with the measured SAR value/SAR testing exclusion, the equipment must be installed and operated with a minimum distance of 0,5Cm (0,20 Inch) of the human body.

## 0.4 TECHNICAL SUPPORT

Should you wish to make any enquiries on our products, please contact the Ojmar technical department:

- Telephone: +34 943 748 484
- Fax: +34 943 748 490
- Website: [www.ojmar.com](http://www.ojmar.com)

# 1. OTS LOCKS

## 1.1 GENERAL DESCRIPTION

Ojmar OTS locks use RFID technology. This technology consists in interaction between a transmitter (key) and a receiver (lock). This system replaces the traditional mechanical key and cylinder.

Our locks meet all anchorage and measurement standards and, therefore, can replace old lock systems without having to modify cabinets or lockers.

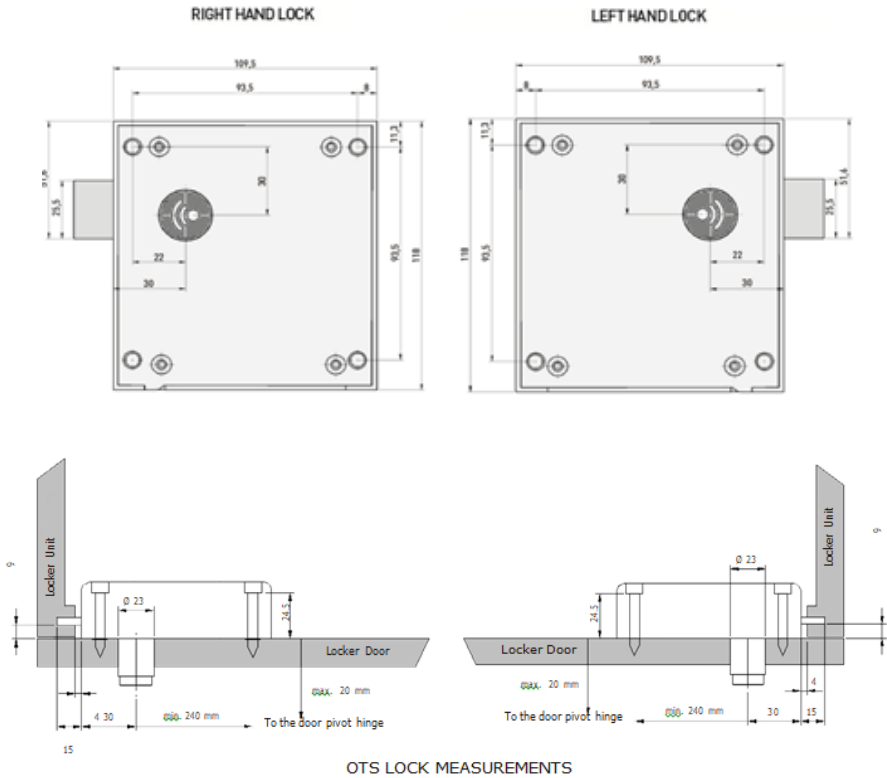


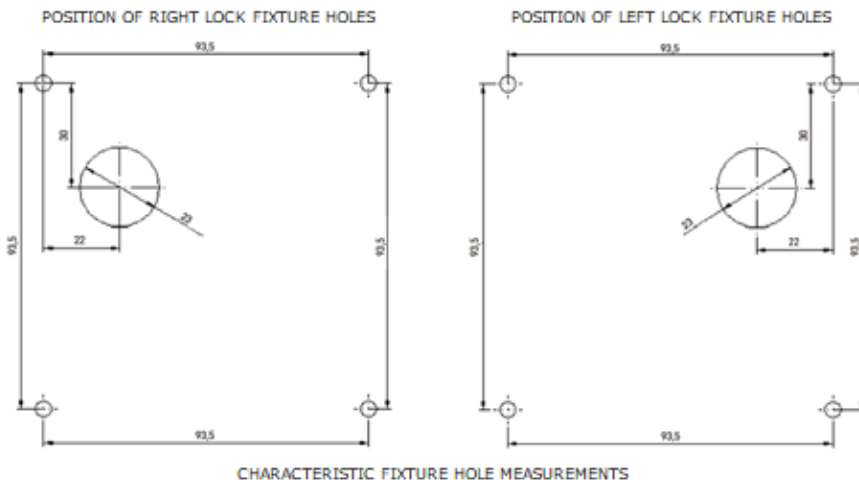
## 1.2 MEASUREMENTS AND FEATURES

The OTS proximity lock includes a fully autonomous power supply system and therefore does not require any type of wiring. Powered by 4 standard AA alkaline batteries, it has an approximate autonomy of 3 years.

## 1.2.1 Technical Drawings

The measurements and locations of the mounting points are shown in the figures below:





MAIN FEATURES	Technology	Mifare Classic, Mifare Desfire EV1 2K, 4K 8K, Ultralight, compatible with Ultralight C and Technogym
		Programmable in dedicated or free mode
		Integrated time/clock control function
		Low battery detection and warning
		Buzzer and red, green and yellow LED
		Master and service key
		NFC communications between programmer and lock
	Integration with other systems	
TECHNICAL SPECIFICATIONS	Power supply	4 x 1.5v AA Alkaline batteries
	Functional temperature range	-10° to +42° (without condensation)
	Autonomy	Approximately 3 years
	Approximate weight	375g
	Availability	Right and left
MECHANICAL REQUIREMENTS		96 hours in a salt spray test chamber
	Cam resistance	1000 N
	Protection against solid and liquid bodies	IP55
	Protection against mechanical impact	IK09

APPROXIMATE MEASUREMENTS	Exterior	119.5 x 35 x 118 mm
OPTIONAL ACCESSORIES	NFC portable programmer	
	PC software	
	Desktop card reader	

### 1.3 OTS ADVANCE LOCK FOR METAL DOORS

Due to the interferences between the metal and the RFID communications, a "shield" must be installed in the metal door of the locker for the lock to work properly.



- NOTE: To ensure correct operation of the various supports available on the market (keys, bracelets and keyfobs), these must be send to Ojmar for validation.

#### 1.3.1 Mounting the Safety Shield

1. Clean the surface of the door and make sure it is completely dry (1).
- NOTE: Install the lock before mounting the shield.
2. Remove the adhesive paper from the shield.



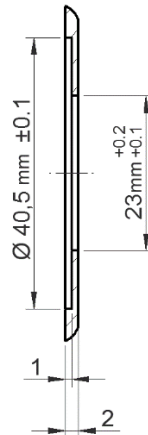
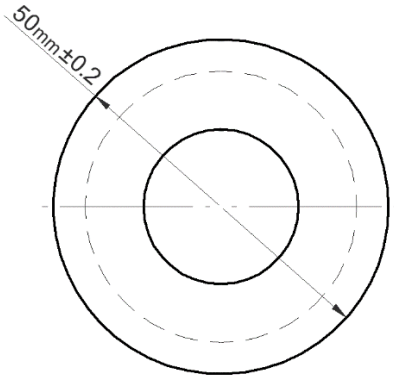
3. Place the shield on the door, making sure that the lock knob coincides with the hole in the shield.



4. Press the shield against the door so that it adheres properly.



### 1.3.2 Shield Measurements



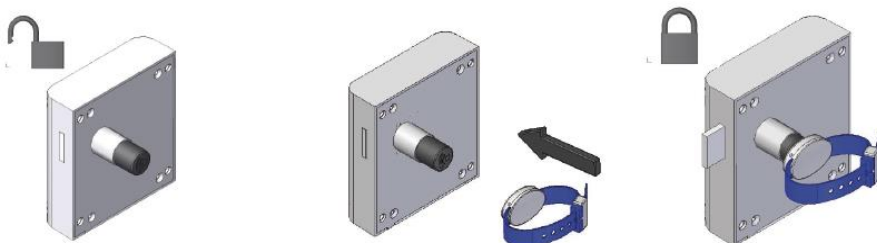


## 1.4 OPENING AND CLOSURE

The lock opening and closure process is as follows:

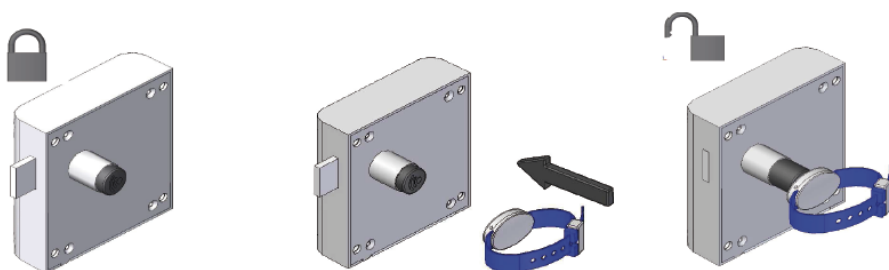
### 1.4.1 Closure

1. Bring the key towards the knob of the open lock and press the knob it inwards.
2. Press the knob in fully. The lock is then automatically closed, with the fixed part protruding by 6mm.



### 1.4.2 Opening

1. Bring the key towards the knob of the lock and press it inwards.
2. If the key matches the lock (and has no restriction applied: Out-of-hours access assigned, etc.) it will automatically unlock. The knob will move outwards fully.



## 1.5 LOCK TYPES

OTS locks can be configured in two different ways:

- Free.
- Dedicated.

These locks are programmed using the keys previously programmed with the Ojmar Management Software (See Section 4) or using the Ojmar NFC Portable Programmer (See Section 2.2).

- NOTE: The Ojmar NFC programmer can read events for the locks and initialise only the locks defined in Section 4.8.
- NOTE: If you have not purchased the Management software module or the Ojmar NFC programmer, please ask us about programming them.

### 1.5.1 Dedicated Lock

The “dedicated” operating mode allows for a certain member number to be assigned to a lock.

- EXAMPLE: A lock is reserved for a gym member and only he/she may use it.

Only the dedicated keys associated to the lock will have access to it.

As many keys as required can be created for each dedicated lock and they may all have access at the same time.

- EXAMPLE: A member with two dedicated keys may close a lock with one key and open the same lock with the other key.

### 1.5.2 Free lock

The “Free” operating mode allows for access to the lock by any programmed key of this type.

This works as follows:

- A free key allows for any free lock that is not in use at the time to be opened and closed.
- As soon as the lock is in use, the key cannot be used in any other free lock until the first one has been freed.

## 1.6 KEY TYPES

There are a total of 15 types of different keys.

### 1.6.1 Dedicated Key

It can be used only in dedicated locks that have been programmed with the same number as the key. It can be configured to use up to 6 locks of the same type.

### 1.6.2 Free Key

This can be used in any free lock that is not in use. It can be configured to use up to 3 locks of the same type.

- EXAMPLE: A member with one key programmed for 3 locks can use up to 3 lockers at the same time.
- NOTE: It can work under time zones (See Section 4.10).

### 1.6.3 Multifunction Key

These can be configured to use up to 3 dedicated locks and up to 3 free unoccupied locks.

- NOTE: It can work under time zones (See Section 4.10).

### 1.6.4 Master Key

**This is used to open any type of lock. It is used to open the lock. Under no circumstance can it close it.**

- NOTE: Once the lock is open, its memory is deleted and is becomes free for another user.
- NOTE: Just one master key (in keyring format) is supplied for each facility. Should you require an extra master key, please contact Ojmar.
- NOTE: For use exclusively by authorised personnel of the facility.



### 1.6.5 Service Key

This is used to open and close any type of lock. This key does not modify the lock. When closed, it will remain in use by the key previously assigned to it.

- NOTE: When an occupied lock is opened, its memory is not modified. It can only be continued to be used by the user card it has closed.
- NOTE: If a free lock is closed with the service key, it can only be opened again with the service or master key
- NOTE: If a dedicated lock is closed with the service key, it can be opened with the assigned dedicated user card.
- NOTE: Just one service key (in keyring format) is supplied for each facility. Should you require an extra



service key, please contact Ojmar.

- NOTE: For use exclusively by authorised personnel of the facility.

### 1.6.6 Master Subgroup Key

This is used to open and close any type of lock of a subgroup (See Section 4.5 for further information on subgroups).

If the lock is:

- In use: It can open and close it without deleting any stored key data (like a service key).
- Free: It can close it, leaving it in use (all free locks in a subgroup can be used).
- NOTE: It can work under time zones (See Section 4.10).
- NOTE: For use exclusively by authorised personnel of the facility.

### 1.6.7 Cancellation Key

This key can cancel another key, preventing it from opening or closing any lock. It must be previously programmed. To do so:

- Save the key number to be blocked in the cancellation key.
- Use the cancellation key in all locks where use of the blocked key is not to be permitted.
- NOTE: This key can be used in any lock type.
- NOTE: For use exclusively by authorised personnel of the facility.

### 1.6.8 Set-up Key

This initialises previously unused locks with the same type of set-up key. The following can be assigned:

- Lock number.
- Operating type.



A set-up key can initialise several successive locks, assigning them consecutive numbers.

- NOTE: It is highly recommended for the lock to be set to the correct time (see Section 1.6.12 and Section 4.11, Point (3)).
- NOTE: To perform this action, a key must be created for each lock type (one for free locks and another for dedicated locks).
- NOTE: For use exclusively by authorised personnel of the facility.

### 1.6.9 Event Collection Key

This key collects the events (Used keys, access times, etc.) stored in the locks. See Section 4.8 to extract and consult the information stored on the key.



- NOTE: It is highly recommended for the lock to be set to the correct time (see Section 1.6.12 and Section 4.11, Point (3)).
- NOTE: This key can be used on free and dedicated locks.
- NOTE: For use exclusively by authorised personnel of the facility.

### 1.6.10 Automatic Opening Key

This key transmits one hour of automatic opening to the lock. All locks programmed for automatic opening will be freed at the specified time. There is also the possibility of choosing automatic opening after a certain number of hours. In this case, the locks will be set up as free after the selected time after the closure.

In order to create a key of this type you must:

- Program the key (See Section 4.11).

- Use it on all of the required locks.
- NOTE: The knob will remain closed during automatic opening. Press the knob to release it (no key is required).
- NOTE: For use exclusively by authorised personnel of the facility.

### 1.6.11 Time Change Key

This key transmits the summer/winter time change to the lock. To do so, you must:

- Program the key (See Section 4.11).
- Use it on all of the required locks.
- NOTE: For use exclusively by authorised personnel of the facility.

## 1.6.12 Time Set Key

This key records the time and date on the lock's clock. To do so, you must:

- Program the key (See Section 4.11).
- Use it on all locks, remembering that for every block of 15 locks another minute is added to the next block.
- NOTE: The time recorded on the key will be the time defined by the computer at that particular moment.
- NOTE: The key should be reprogrammed using the OTS Management Software every 20 or 30 locks.
- NOTE: For use exclusively by authorised personnel of the facility.

## 1.6.13 Reset Key

This key deletes all of the information from the lock and resets it to its factory configuration. Therefore, a set-up key must be used to restart it.

- NOTE: Just one deletion key is supplied for each facility. Should you require an extra deletion key, please contact Ojmar.
- NOTE: For use exclusively by authorised personnel of the facility.



## 1.6.14 Test Key

This key tests the correct mechanical working order of a lock when it is factory configured.

- NOTE: This key only opens and closes locks. Nothing is configured on them. It only works when the lock is not initialised or configured. They are often exclusively used by installation fitters to check that the locks open and close correctly. They are of no subsequent use.

- NOTE: Just one test key is supplied for each facility. Should you require an extra test key, please contact Ojmar.

- NOTE: For use exclusively by authorised personnel of the facility.





## 1.7 DESCRIPTION OF FLASHING LEDs

The OTS lock includes an LED on the knob. This LED lights up whenever an action is performed on it.

The colour codes are indicated in the following table:

GREEN LED	RED LED	YELLOW LED	DURATION	DURATION (TIME)	DESCRIPTION
	1 flash		Very short	100 ms	Key reading error.
	1 flash		Long	1 sec	Communications error.
	1 flash		Long	1 sec	Key checksum error.
	1 flash		Long	1 sec	Set-up key used up.
	1 flash		Long	1 sec	Incorrect key in unused lock.
	1 flash		Long	1 sec	Incorrect installation no.
	1 flash		Long	1 sec	Incorrect key in dedicated or free lock.
	2 flashes		Medium	400 ms	Error on using or releasing free key.
	2 flashes		Medium (400 ms=2/5s)	400 ms	Key not correctly recorded when initialising with keys.
	10 flashes		Short (200 ms=1/5s)	200 ms	The key is cancelled.
	1 flash		Short (200 ms)	Every 2 seconds	Occupied lock warning
	3 flashes (First)	3 flashes	Medium (400 ms=2/5s)	400 ms	EEPROM deprogramming at the start of a cycle.
	3 flashes	3 flashes (First)	Very Short (100 ms=1/10s)	100 ms	Mechanical error.
		3 flashes	Medium (400 ms=2/5s)	400 ms	Low battery detection. Replace

GREEN LED	RED LED	YELLOW LED	DURATION	DURATION (TIME)	DESCRIPTION
					batteries.
		3 flashes	Very Long	2 sec	Battery used up. Replace batteries. Lock cannot be used until battery replacement.
2 flashes		1 flash (First)	Short	200 ms	Cancellation key passed correctly over lock.
2 flashes		5 flashes (First)	Regular	400 ms	Correct initialisation with keys.
2 flashes		1 flash (First and long)	Regular	400 ms	Key deleted OK.
3 flashes			Regular	400 ms	Communication with PP OK.
10 flashes			Short	200 ms	Get events from lock to key.
1 flash			Very long	2 sec	Date and time recorded correctly on lock.
1 flash			Very long	2 sec	Winter/summer time changes recorded correctly on lock.

## 1.8 SOFTWARE CODES

Each action taken on a lock has a description. This information will be recorded on the event keys (See Section 4.14.1) when used together with the locks.

The full list of codes is given below.

DESCRIPTION	DESCRIPTION
Client opening	Test from programmer
Client closure	Master subgroup key opening
Occupant key	Cancellation key
Master key opening	Initialisation from programmer
Key rejected: Different installation number	Initialisation from key
Low battery detection	Opening from programmer
Key rejected: Checksum incorrect	Date and time updated from programmer
Time change key	Invalid date and time
Key rejected: Key not valid or not defined	Time set key
Key rejected: Key in use	Service key opening
Automatic opening key	Mechanical fault
Events read from programmer	Key rejected: Key cancelled on blacklist
Events read from key	Master subgroup key closure
No event recorded	Hour back
Automatic opening	Service key closure
Hour on	Key rejected: Outside time zone
Update programmer	Memory deleted with key

## 1.9 REPLACEMENT OF THE LOCK BATTERY



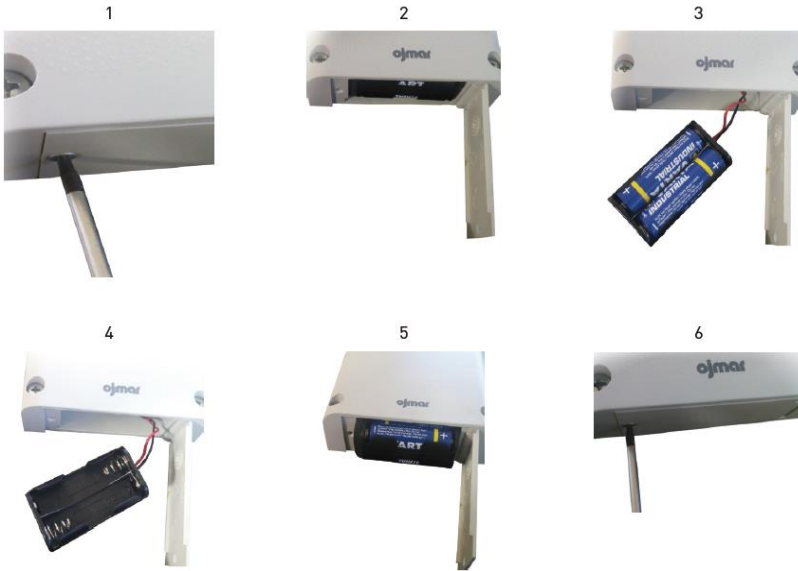
Caution. Risk of explosion in the event of replacing the battery with an incorrect type. Dispose of used batteries according to the instructions.

Ojmar locks automatically detect low battery levels. When this occurs, the yellow LED flashes 3 times for each opening or closure cycle performed.

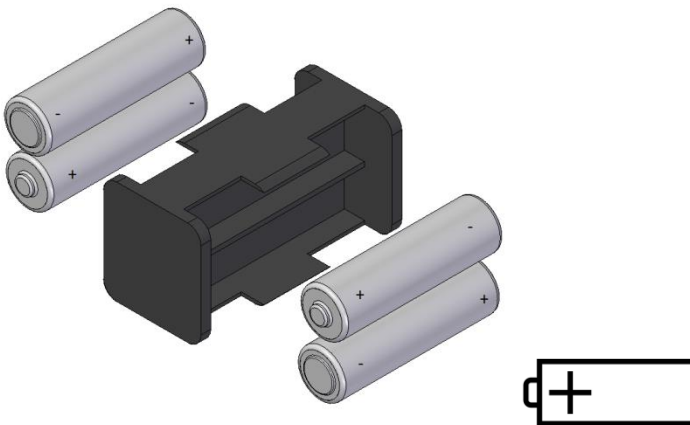
Up to 9 opening and closure cycles are possible as of the time when the low battery is detected. On the tenth cycle, the lock can only be opened (never closed). This prevents the lock battery from being used up and the lock from being blocked.

Follow the steps below to replace the batteries:

1. Remove the torx screw.
  2. Open the battery cover.
  3. Remove the battery holder.
  4. Replace the four AA batteries (two on each side of the support).
  5. Insert the battery holder.
- NOTE: The cover should fit easily. To do so, first insert the wire and then the battery holder.
6. Fit the cover and tighten the torx screw.



- NOTE: The batteries should be replaced within every 3 years.
- NOTE: The batteries should be replaced within a maximum of 2 minutes so that the lock does not lose its configuration.



Caution: Risk of explosion if battery is replaced with a battery of the wrong kind. Dispose of batteries in accordance with the instructions.



## 2. PORTABLE PROGRAMMER

### 2.1 GENERAL DESCRIPTION

The portable programmers allow for the keys supplied by Ojmar to be read and recorded.



**OJMAR NFC PROGRAMMER**



**DESKTOP READER**

We have two programmers, each with different features. Both models are connected to the PC via a USB port. The features are indicated below:

### 2.2 OJMAR NFC MODEL PROGRAMMER

The Ojmar NFC programmer can function autonomously or using the OTS Management Software (See Section 4). When functioning autonomously, it can record free keys (See Section 1.5.2) and when functioning using the Management Software it can:

- Read information from keys.
  - Write set-up, user, cancellation and maintenance keys.
  - Test locks.
  - Read events from locks.
  - Initialise locks previously configured using the Software.
  - Update the lock Firmware.
- NOTE: Whenever an operation is performed between the NFC programmer and the lock, the programmer updates the time of the lock.



FRONT VIEW



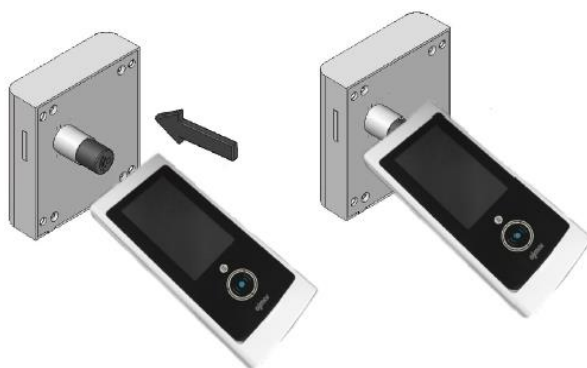
RIGHT-HAND SIDE VIEW



FRONT VIEW

1. Touch screen.
  2. Key reading zone: The keys must be placed in this zone so they can be read/recorded by the programmer.
  3. Screen On/Off.
    - On: Press the button quickly (a beep will be heard).
    - Off: Keep the button pressed down for 4 seconds.
  4. PC Connection: USB socket used to connect the programmer to the Computer to download data collected by it.
- NOTE: A USB cable is supplied with the programmer.
5. Jack Connection.
  6. NFC Reader: Allows for the programmer to connect to the lock. To do so:
    - Bring the programmer reader towards the knob of the lock and press it inwards.





## FEATURES

MAIN FEATURES	Operations in autonomous mode or with SW	
	Autonomous mode	Write user cards/Read all types of OTS cards: Mifare Classic 1k/4k (4B or 7B), Mifare Desfire EV1 2K, 4K, 8K, Mifare Ultralight, compatible with Ultralight C and Technogym
		Perform a test to check the configuration of the lock and the status of the batteries
	User mode with SW	Write/Read all types of OTS cards: Mifare Classic 1k/4k (4B or 7B), Mifare Desfire EV1 2K, 4K, 8K, Mifare Ultralight, compatible with Ultralight C and Technogym
		Perform a test to check the configuration of the lock and the status of the batteries
		Load the required configuration in the lock
		Update the configuration in the lock
		Download the events to have occurred in the lock
		Synchronisation with the PC time
		Update lock firmware via NFC
TECHNICAL SPECIFICATIONS	Power supply	Batteries rechargeable by USB ( 5,000 mAh)
		Mains charging: Use 5v -1A charger
	Functional temperature range	-10° to +50° (without condensation)
	Approximate weight	380g

APPROXIMATE MEASUREMENTS	External (length x width x height)	202 x 89 x 39 mm
--------------------------	------------------------------------	------------------

## 2.2.1 Main Screen

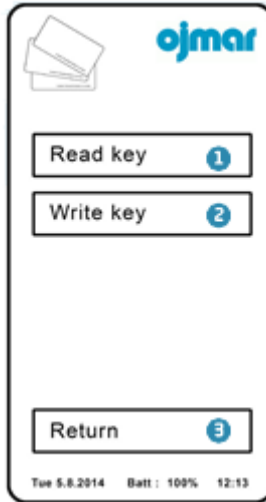
The main screen of the Ojmar NFC programmer displays the following information:



1. Operations with keys: See Section 2.2.2.
2. Operations with locks: See Section 2.2.3.
3. Configuration: See Section 2.2.4.
4. Date and time: Displays the date and time of the programmer. This information will be used when recording the locks and keys.
  - NOTE: The date and time are configured automatically when the programmer is connected to the PC and synchronised with the OTS Management Software via the events window (See Section 4.8).
5. Battery level: Displays the programmer battery level.
  - NOTE: Do not switch the programmer off during charging

## 2.2.2 Operations with Keys

This screen displays the following buttons:



1. Read key: Reads the information associated to the key. The following screen is displayed when this button is pressed:



By placing the key over the key reading zone of the programmer, the information associated to it is displayed.

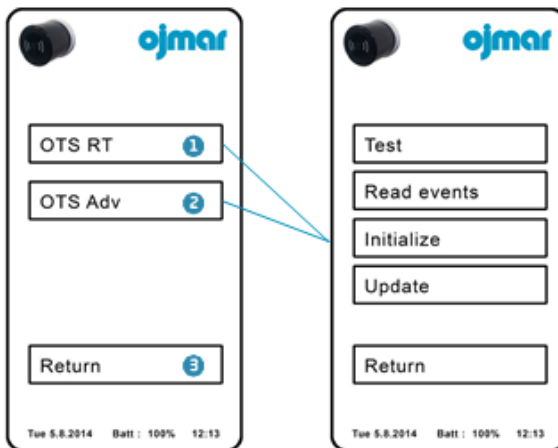
- EXAMPLE: In this case, a service key has been read and the reading is correct.



2. Write key: Records the configuration recorded in the programmer on the key. A "Free" type key is recorded by default for 1 lock and within Subgroup 0
3. Back: Returns to the main menu.

### 2.2.3 Operations with Locks

This screen displays the following buttons:

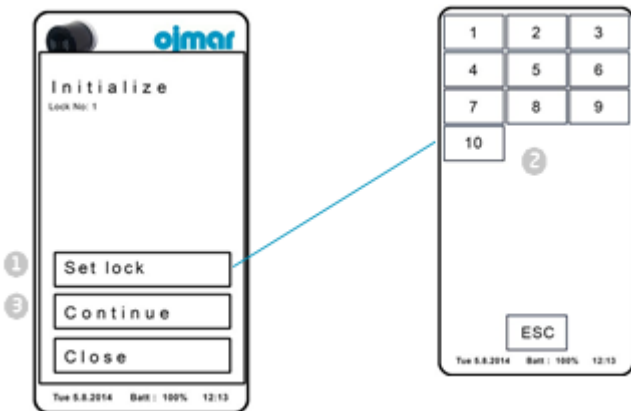


1. and (2): Displays the following submenu for OTS type locks (RT and Advance):

- Test: Performs a test on the lock and displays the results on the screen.
- NOTE: The test must be performed in line with Step 6 of Section 2.2 of this manual.
  - Read events: Reads the events recorded on the lock. These events may be subsequently viewed from the Events screen of the OTS Management Software (See Section 4.8.1).
  - Initialise: This menu option allows for locks to be initialised.
- NOTE: The locks must be previously loaded in the programmer (See Point (5) of Section 4.6).

To do so:

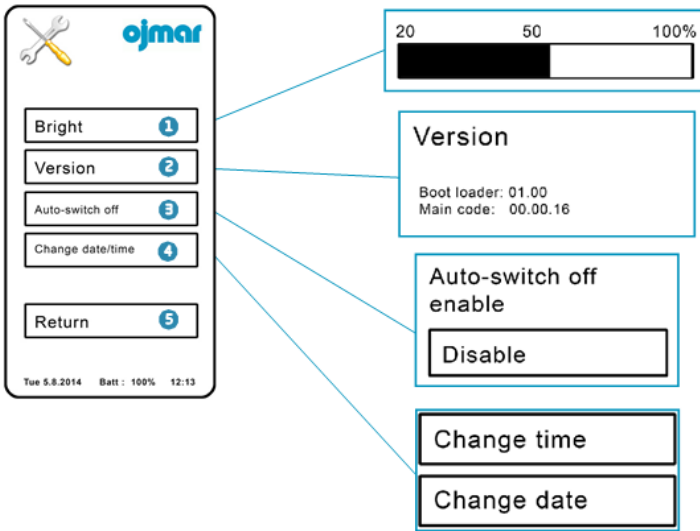
1. Press "Set lded".
2. Select a lock previously loaded in the NFC programmer.
3. Press "Continue" and connect the programmer to the lock as indicated in Step (6) of Section 2.2.



- Update: This option allows for the lock memory to be updated when a property has been modified. To do so:
  1. Load the locks to be modified into the Ojmar NFC programmer (See Point 5 of Section 4.6).
  2. Update the locks in line with Step 6 of Section 2.2.
- 3. Back: Returns to the main menu.

## 2.2.4 Configuration

This screen displays the following buttons:



1. Brightness: Allows for the level of brightness of the screen to be adjusted.
2. Version: Displays the version number of the software installed in the programmer.
3. Auto-off: On pressing this button, the programmer screen will switch off automatically after approximately 2 minutes of inactivity.
4. Change the date/time: This is used to change the date and time of the programmer.
5. Back: Returns to the main menu.

## 2.3 DESKTOP READER

The desktop reader allows reading and recording keys using the Ojmar OTS Management Software.



- NOTE: The desktop reader cannot be directly connected to the locks. It must be connected to the computer via the USB port and the OTS Management Software used to programme the keys.

### FEATURES

MAIN FEATURES	Operations with PC only	
	Write/Read all types of OTS cards: Mifare Classic 1k/4k (4B or 7B), Mifare Desfire EV1 2K, 4K, 8K, Mifare Ultralight, compatible with Ultralight C and Technogym	
TECHNICAL SPECIFICATIONS	Power supply	Powered by PC via USB
	Functional temperature range	-10° to +50° (without condensation)
	Approximate weight	83g
APPROXIMATE MEASUREMENTS	External (length x width x height)	116 x 67 x 14 mm

## 2.4 INSTALLING WINDOWS DRIVERS FOR THE DESKTOP READER

The controllers supplied are compatible with the following operating systems:

- Windows XP (32 and 64 bit).
  - Windows Vista (32 and 64 bit).
  - Windows 7 (32 and 64 bit).
- NOTE: All screens shown below correspond to Windows 7. If you have another Operating System, these may be slightly different.

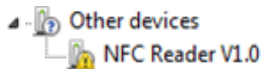
1. Connect the programmer to the USB port on your PC.
2. Windows will detect the programmer and will display the following messages:



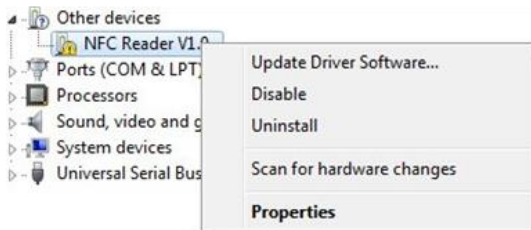
3. Windows cannot automatically install the Windows controller. It must be installed manually.
4. To do so, access the Windows "Device manager". This option is located in the "Control Panel".



5. Locate the following error on the list:



6. Right-click on the conflicting device and select "Update driver software":



7. Select "Browse my computer for driver software".



How do you want to search for driver software?

- ➔ Search automatically for updated driver software  
Windows will search your computer and the Internet for the latest driver software for your device, unless you've disabled this feature in your device installation settings.
- ➔ Browse my computer for driver software  
Locate and install driver software manually.

8. Click on "Browse" and locate the "CnReader Drivers" folder on the CD supplied by Ojmar.

Browse for driver software on your computer

Search for driver software in this location:

D:\Drivers\Drivers cnreader

Browse...

Include subfolders

- ➔ Let me pick from a list of device drivers on my computer  
This list will show installed driver software compatible with the device, and all driver software in the same category as the device.

Next

Cancel

9. Confirm controller installation by clicking on the "Install" button.

Would you like to install this device software?

Name: Cvintec  
Publisher: C\VinTec Global Co., Limited

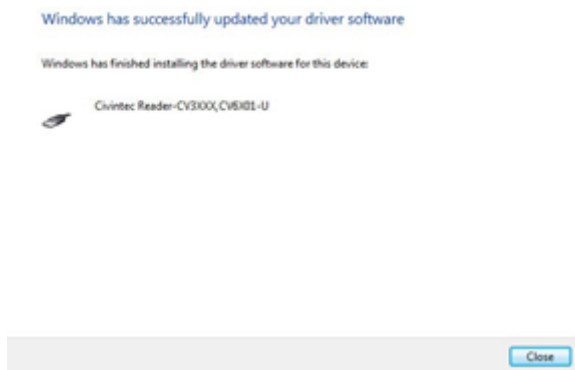
Always trust software from "C\VinTec Global Co., Limited".

Install

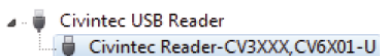
Don't Install

 You should only install driver software from publishers you trust. [How can I decide which device software is safe to install?](#)

10. The following screen will be displayed if the installation is correct.



- NOTE: If the following image is displayed in the Device manager, this means that the controller has been installed correctly.



## 2.5 WINDOWS CONTROLLER INSTALLATION FOR OJMAR NFC PROGRAMMER

The controllers supplied are compatible with the following operating systems:

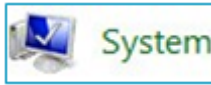
- Windows 2000.
- Windows XP (32 and 64 bit).
- Windows Vista (32 and 64 bit).
- Windows 7 (32 and 64 bit).

• NOTE: All screens shown below correspond to Windows 7. If you have another Operating System, these may be slightly different.

• NOTE: Install the controller before connecting the programmer to the PC.

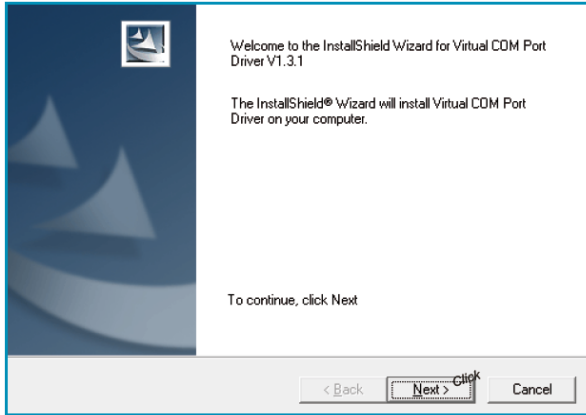
1. Locate the "Drivers NFC" folder on the CD supplied by Ojmar.
2. There are two files in this folder. One for 32-bit Operating Systems [VCP\_V1.3.1\_Setup] and another for 64-bit [VCP\_V1.3.1\_Setup\_x64]. Double click on the file corresponding to your operating system.

• NOTE: Click on the Windows "System" icon to find out whether your Operating System is 32 or 64.bit. This option is located in the "Control Panel".



Among all of the options displayed, there is one called "System type". This will indicate "32-bit operating system" or "64-bit operating system".

3. The installation program will then begin. Click on "Next".

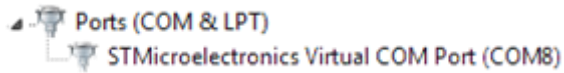


4. Once installation is complete, click on "Finish".
5. The following screen will be displayed if the installation is correct.



6. Connect the programmer to the USB port on your PC.

- NOTE: If the following image is displayed in the Device manager, this means that the controller has been installed correctly.



# 3. INFOTERMINAL

## 3.1 INFOTERMINAL

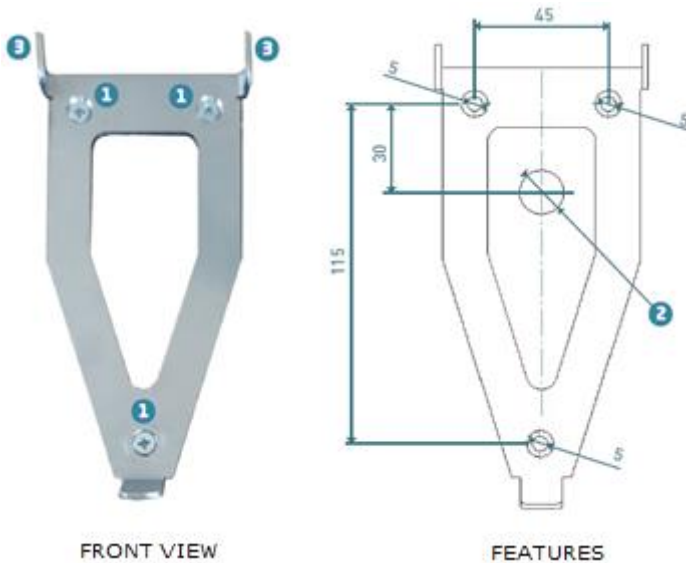
The Ojmar Infoterminal provides users information about the locker number or numbers assigned or occupied by a key. It is wall mounted to give users easy access to key information.

The Infoterminal unit includes:

- One bracket.
- One Infoterminal.

### 3.1.1 Bracket Features

The measurements (in mm) and locations of the mounting points are shown in the figures below:



1. Holes: These are used to mount the bracket on the wall with screws.
  2. Cable lead-through hole: This is the hole that the power cable passes through to the Infoterminal.
- **WARNING:** It must be at least 15 mm in diameter.

3. Plates: These are used to connect the Infoterminal to the bracket.

- NOTE: All bracket measurements are shown in millimetres.

### 3.1.2 Infoterminal Features

- The features of the Infoterminal are indicated below:



FRONT VIEW



REAR VIEW




LOWER VIEW

1. Touch screen.
2. Key reading zone: The keys must be placed in this zone so that they can be read by the Infoterminal.
3. Power connector: The power cable must be connected to this connector.
4. Mounting points: The support plates (see previous page) must fit into these mounting points.
5. Screw hole: Hole for the screw adjusting the Infoterminal on the bracket.

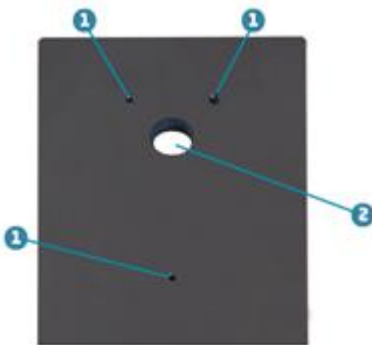
- NOTE: A power cable is supplied with the Infoterminal.

## FEATURES

MAIN FEATURES	Power supply	Power supply 12 V, 420 mA 
	Impact resistance	IK07
	Water resistance	IP45
	Operating temperature range	-15°C / 50°C
	Approximate weight	400 g
	Approximate measurements	194 x 96 x 33
	Reading of media	Mifare Classic 4B 1K Mifare Classic 4B 4K Mifare Classic 7B 1K Mifare Classic 7B 4K Desfire Ultralight Ultralight C
	Certificates and safety standards	EC Approval

### 3.1.3 Installation

1. To install the Infoterminal, drill 4 holes in the wall - 3 to mount the Infoterminal and one to pass through the mains cable (see Section 3.1.1). Install the bracket once the holes have been drilled.

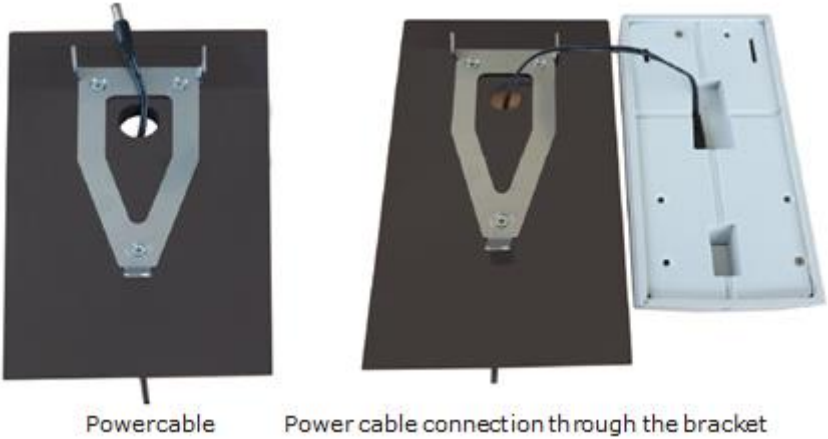


Bracket base (simulates the wall)

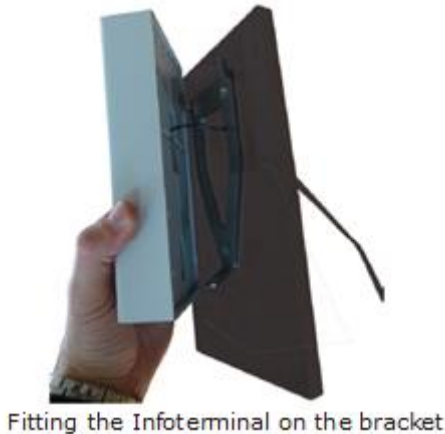


Bracket, once mounted on the wall

1. Infoterminal mounting holes.
2. Hole to pass the power cable (minimum 15 mm in diameter).
2. Once the bracket is in place, pass the power cable through the central hole and connect it to the rear of the Infoterminal.



3. Once the power cable is connected to the Infoterminal, fit it on the bracket. To do so, slide it in from above, inserting the upper plates of the bracket into the grooves on the Infoterminal.





4. Lastly, adjust the Infoterminal by tightening the screw located at the bottom of it.



Final adjustment of the Infoterminal

## 3.2 USE OF THE INFOTERMINAL

The Infoterminal starts up and the main screen is displayed once it has been connected to the mains:



Main Infoterminal screen

The Infoterminal recognises free, dedicated and multi-function keys of the facility as valid and any other type of key or a key from another facility as invalid:

a. If the key is free and is not occupying a locker, the following message is displayed when it is placed in front of the Infoterminal sensor:



Free key message

b. The following message is displayed if the key does not belong to the facility or is not a user key:



Invalid key message

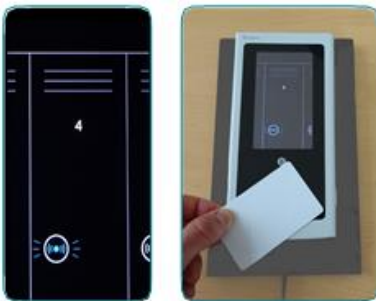
c. The Infoterminal will display the associated locker numbers if the key is dedicated, multi-function or free and occupying a locker.

- NOTE: The Infoterminal can display up to 4 locker numbers.
  - The following image is displayed if the key has expired.



Expired key message

- Expiry (See Point (4) "Date/Time" in Section 3.3) can be displayed/hidden.



Expiry not displayed



Expiry displayed

### 3.3 INFOTERMINAL CONFIGURATION

The Infoterminal has a configuration menu that includes different possibilities. Simply press on any corner of the screen in the following order to access it:



Access to the main menu

After clicking on the 3 corners of the Infoterminal, a screen appears requesting the access code to enter the main menu provided by Ojmar.

- NOTE: Should any problem arise, please contact Ojmar.



Access code to the main menu

Once the code has been entered, the main screen of the configuration menu is accessed:



Main screen of the configuration menu

The following parameters can be edited through the main menu:

### 1 Language:

If language is selected, the Infoterminal displays a screen with the different languages available. These are:

- English.
- Spanish.
- French.
- German.



Change language

## 2 Brightness:

If brightness is selected, the Infoterminal displays a screen where its brightness can be changed.



Change brightness

## 3 Auto-off:

If auto-off is selected, the Infoterminal displays a screen where its disconnection time after a certain period of inactivity can be changed.



Change off time after inactivity

#### 4 Date/Time:

If date/time is selected, the Infoterminal displays a screen where it is possible to:

- Change the date.
- Change the time.
- Enable and disable the display of date and time [1] and key expiry [2].



Main date/time menu screen



Date change screen



Time change screen





# 4. OTS MANAGEMENT SOFTWARE

## 4.1 PC SOFTWARE

MAIN FEATURES	Management of all types of Ojmar electronic locks
	Control of up to 64,000 locks
	SW extendible to new lock types through a new licence
	Available in several languages: Spanish, English, French and German
	Over 100 time zones available
	Independent management of different zones or areas of the facility
	Management of time periods to limit the use of user cards
	Password-protected operators
	Creation and management of impossible to copy free user keys
	Member card personalisation
	Card and user databases exportable to Excel®
	Help manual for installation adjustment
	Synchronised with the PC time
MINIMUM SYSTEM REQUIREMENTS	Operating systems: Windows 2000, Vista, XP or Windows 7 (32 and 64 bits)
	Processor: Pentium II or later
	Free RAM: 78 MB
	Available hard-drive space: 60MB
	Adobe AIR & Adobe Reader installed
	CD ROM reader
	1 serial or USB port
	NET Framework 2.0
FACILITY CONTROL TOOLS	Lock event reading
	Programmed card database
	Created lock databases

## 4.2 SOFTWARE INSTALLATION

- The installation of the SW is detailed in the manual “Ojmar database environment set up” that is inside the folder “Set-up Manual” of the installation folder.

## 4.3 LICENCE ACTIVATION

The licence screen will be displayed on accessing the application for the first time. The licence must be activated in order to be able to use the Software. To do so, follow the steps below:

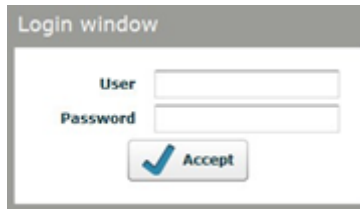
1. Click on the following icon:



2. Locate the file "License\_XXXX" in the "License" folder of the CD and click on OK.

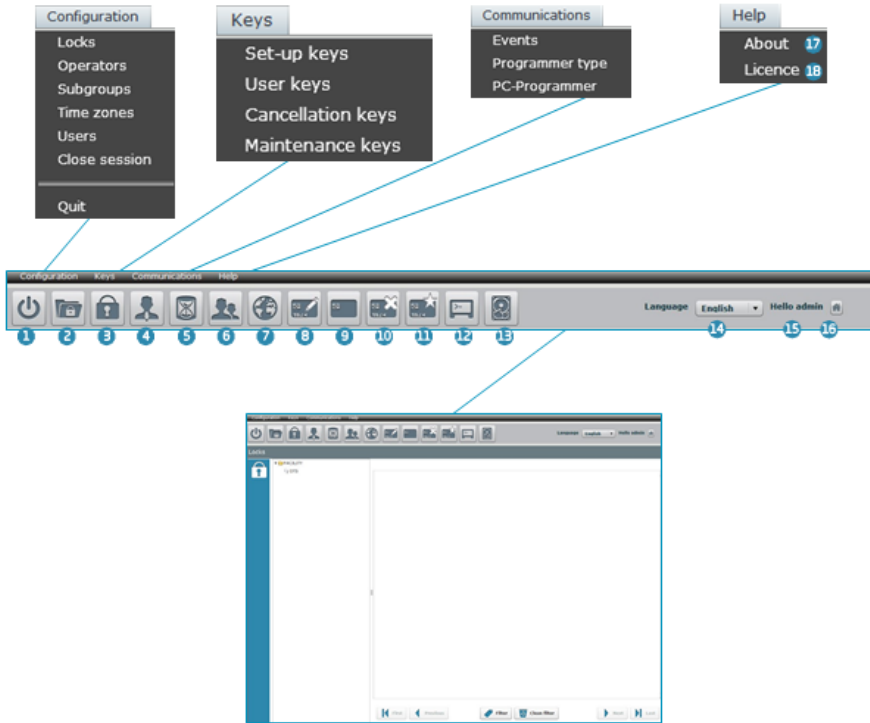
## 4.4 ACCESSING THE APPLICATION, CONFIGURATION, START-UP AND GENERAL OPTIONS

A user name and password are requested on accessing the application.



The "Licence" folder of the installation CD contains a file called "default user" that includes an operator name and password. This operator is the Administrator, and therefore has permission to perform any action in the program (See Section 4.7 for further details on Operators and permissions).

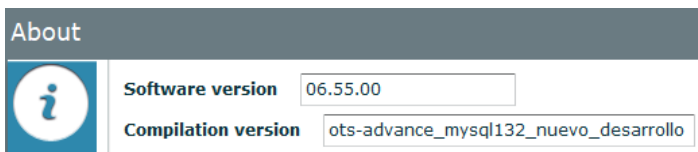
Once inside the application, the following main screen is displayed:



• NOTE: The main screen displays the locks screen by default (3). See Section 4.6.

1. Quit: Closes the session and the application.
2. Subgroups: (See Section 4.5)
3. Locks: (See Section 4.6)
4. Operators: (See Section 4.7)
5. Events (with NFC Programmer only): (See Section 4.8)
6. Users: (See Section 4.9)
7. Time Zones: (See Section 4.10)
8. Set-up Keys: (See Section 4.11)
9. User Keys: (See Section 4.12)
10. Cancellation Keys: (See Section 4.13)

11. Maintenance Keys: (See Section 4.14)
12. Programmer Type: (See Section 4.15)
13. PC-Programmer (with NFC Programmer only): (See Section 4.16)
14. Language: One of the following languages can be selected:
  - Spanish.
  - English.
  - German.
  - French.
15. User: Displays the user name used to access the application.
16. Close session: Closes the session started and displays the access window again.
17. About: Displays the Management Software version installed.



18. Licence: Allows for the existing licence to be updated to a new one, unlocking the program features associated to that licence. To do so, click on the following icon and locate the file.



## 4.5 SUBGROUPS

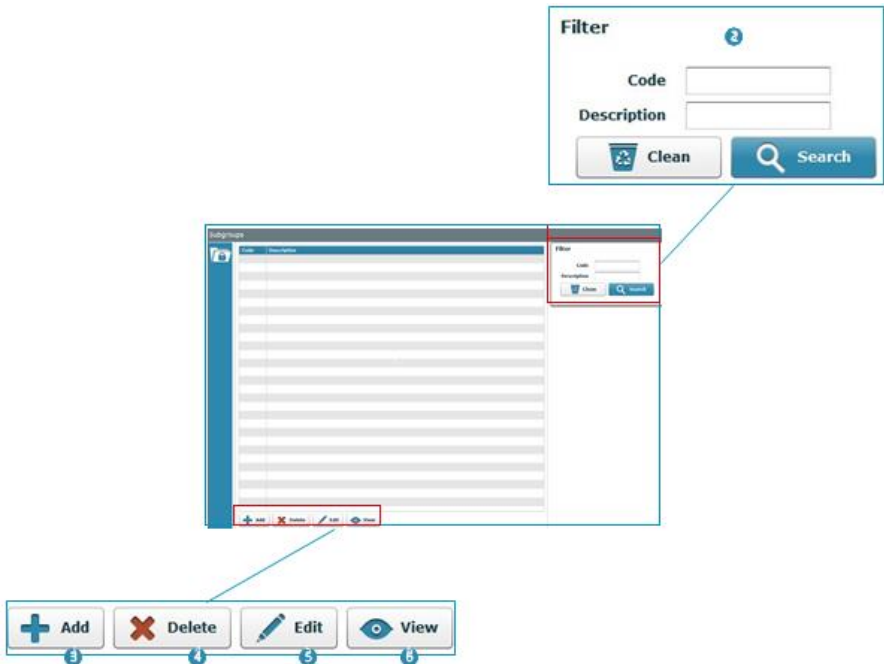
Subgroups are created in the application to be able to group a set of locks together. This means that locks found in different areas of the facility can be sorted into one site.

- EXAMPLE: All of the boys' changing room locks are grouped into a subgroup called "boys" and all of the girls' into one called "girls".
- NOTE: At least one subgroup of locks must be created (a maximum of 16 subgroups).
- NOTE: If more than one Subgroup is used, the keys should be physically different (e.g. Green keys for the morning subgroup and blue keys for the afternoon subgroup).

Access this screen via the "Configuration / Subgroups" menu or by clicking on the following button on the main screen:



The main Subgroup screen displays the following information:

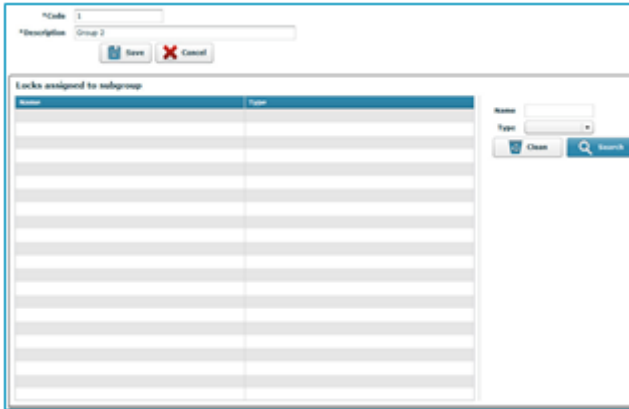


1. List of the subgroups created: This list displays the code and name of the groups created.
2. Filter: This allows for the results of the window (1) to be filtered, displaying only the criteria ticked in the fields described here.
3. Add: Adds a new subgroup to the list. Add a name to the description field and click on "Save".

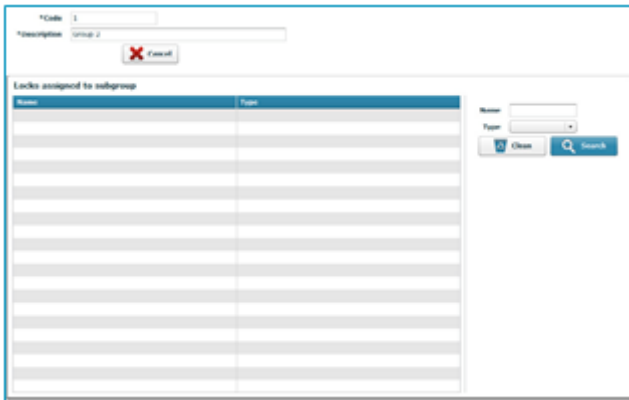


• NOTE: The program will automatically fill in the "Code" field.

4. Delete: Deletes a previously created subgroup from the list. To do so, select it and click on this button.
  - NOTE: On deleting a subgroup, the lock belonging to that subgroup are automatically deleted.
5. Edit: This allows for the name of the subgroup to be edited and for the locks (name and type) associated to it to be seen. To do so, select a subgroup from the list and click on this button.



6. View: This allows for the locks (name and type) associated to the subgroup to be viewed. To do so, select a subgroup from the list and click on this button.



## 4.6 LOCKS

This window displays all existing locks.

- NOTE: The "Locks" window is displayed by default when the application starts.

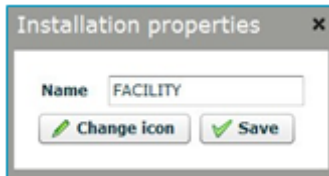
Access this screen via the "Configuration / Locks" menu or by clicking on the following button on the main screen:



The main Locks screen displays the following information:



1. Name of the facility: The application allows for the name and icon of the facility where the set of locks are located to be changed. To do so, double click on it.

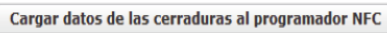



- NOTE: The icon must include one of the following formats: swf, gif, jpg or png.
2. Lock type: A facility may have different types of lock. In this case, the locks are of the OTS type.

- Locks window: This displays the locks that have been created (lock type and number).



- Browse by locks: This enables you to move around the list of locks and apply a filter to simplify the search.
  - Load programmer data: The locks on which events are to be read or initialised must be loaded to the memory of the Ojmar NFC programmer.
- NOTE: The Ojmar NFC programmer can include a total of 32 events.

To do so, click on this button , select the locks to be loaded and click on the  button.

The lock information is then saved to the programmer, allowing for direct communications with the locks.

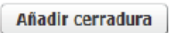



- NOTE: If an attempt is made to load a large number of locks, the operation may take several minutes.
- NOTE: This process must be performed when:
  - A lock is to be initialised from the programmer.
  - A property of the lock has been modified from the Software.



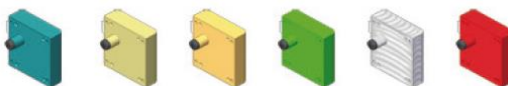
- The list of cancelled keys is to be updated from the programmer.

## 4.6.1 Add Lock

To add one or several new locks, click on the following icon on the main screen  or double click on the  OTS icon. The following screen will be displayed:



1. Lock name: The name of the lock is formed by the name assigned here + a number.
- EXAMPLE: If you create a lock with the name "Lock" and the number "10" is assigned to it, the lock will be called "Lock10".
2. First Lock: Indicates the first lock number to be created.
3. Last Lock: Indicates the last lock number to be created.
4. Lock type: You must indicate whether the lock is Free (See Section 1.5.2) or Dedicated (See Section 1.5.1).
5. Subgroup: Indicates the subgroup to be assigned to the lock (See Section 4.5).
6. Change icon: Allows for the lock icon to be changed. The "Icons" folder on the installation CD includes a total of 6 different icons.



- NOTE: The icon can be changed when the lock is created or after they have been created.

- EXAMPLE: In this case, 10 locks are created (from 1 to 10) that will be called Lock (Lock1, Lock2, Lock3, etc.), which will be free and will belong to the "Group 2" subgroup.

The 'Add OTS lock' dialog box contains the following fields and controls:

- \*Name:** Text input field containing 'Lock'.
- \*First lock:** Text input field containing '1'.
- \*Last lock:** Text input field containing '10'.
- \*Type:** Radio button group with 'Free' selected (checked) and 'Dedicated' unselected.
- \*Subgroup:** Dropdown menu showing '1 Group 2'.
- Buttons:** 'Change icon' (with a pencil icon) and 'Save' (with a floppy disk icon).

#### 4.6.2 Edit / Delete Lock

Double click on the corresponding lock icon to edit the properties of a lock:



The 'Edit OTS lock' dialog box contains the following fields and controls:

- \*Name:** Text input field containing 'Lock1'.
- \*First lock:** Text input field containing '1'.
- \*Type:** Radio button group with 'Free' selected (checked) and 'Dedicated' unselected.
- \*Subgroup:** Dropdown menu showing '0 Group 1'.
- Buttons:** 'Change icon' (with a pencil icon), 'Delete' (with a red X icon), and 'Save' (with a floppy disk icon).

The following information can be modified:

- Name of the lock.
- Number of the lock.
- NOTE: No number already used by another lock can be used.
- Lock type (Free, Dedicated).
- Subgroup.
- Icon.

- Delete lock: Click on the  button to delete a lock.

- NOTE: To delete more than one lock:

1 - Click on the first lock.



2 - Press the "Shift" key on the keyboard.



3 - Click on the last lock to delete (they will be selected).



4 - Press the "Del" key on the keyboard.

## 4.7 OPERATORS

Operators are application users who, depending on the permissions assigned, will be able to perform certain actions.

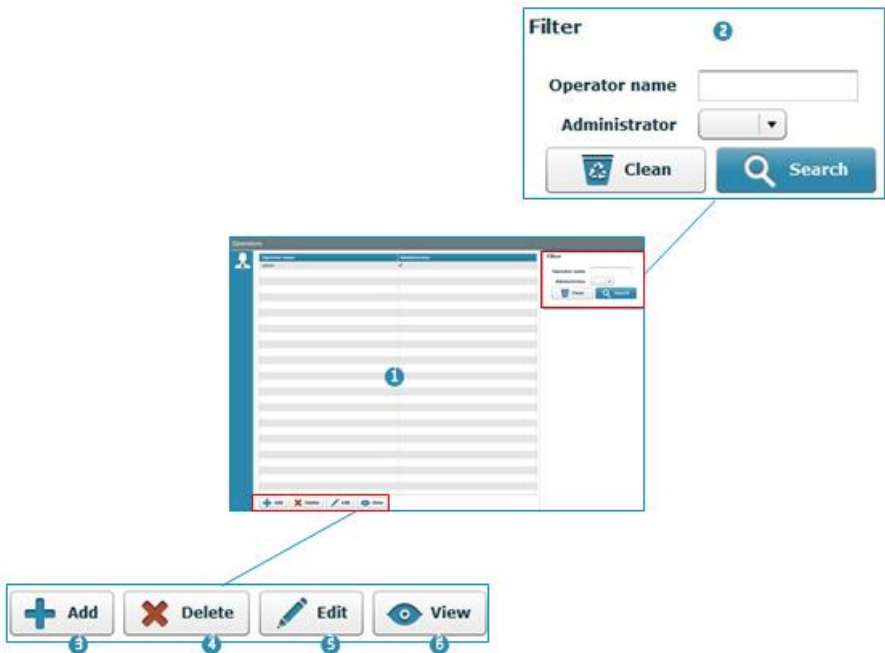
The installation CD provides an administrator user name and password (see the "default user" file in the "Licence" folder). This Administrator user can create the remaining application users.



- NOTE: There must be at least one administrator user in the application.

Access this screen via the "Configuration / Operators" menu or by clicking on the following button on the main screen:



The main Operators screen displays the following information:



1. List all operators created: This list is made up of two columns. One with the name of the operator and the other indicating whether or not the operator is Administrator. If the operator is administrator, this icon  will be displayed. Where the operator has some kind of permission restriction, the following icon  will be displayed.
2. Filter Window: This allows for the results of the window (1) to be filtered, displaying only the criteria ticked in the "Operator name" and/or "Administrator [yes/no]" field.
3. Add: Adds a new Operator to the list (See Section 4.7.1).

4. Delete: Deletes an Operator. To do so, select it from the list and click on this button.
5. Edit: Allows for the Operator data/permissions to be modified (See Section 4.7.1). To do so, select it from the list and click on this button.
6. View: Allows for all data/permissions assigned to the user to be viewed. To do so, select it from the list and click on this button.

## 4.7.1 Add New Operator

Fill in the following fields to add a new operator.

1. Operator name.
  2. Password.
- NOTE: The password must contain at least 4 characters.
3. Repeat password: This must match the password [2].
  4. Administrator: On ticking this box, all permissions from the list [5] will be assigned to the user.
  5. Permissions list: If the Administrator tab [4] is not ticked, no custom permissions can be assigned. The full list is given below:
    - Operators:
      - View operators (this box must be ticked in order to tick the subgroup boxes)
        - > Modify operators
        - > Add operators

- > Delete operators
- Time zones:
  - View time zones (this box must be ticked in order to tick the subgroup boxes)
    - > Modify time zones
    - > Add time zones
    - > Delete time zones
- SW configuration options:
  - View configuration options (this box must be ticked in order to tick the subgroup boxes)
    - > Modify read/write Key
    - > Modify data sectors
- Users:
  - View users (this box must be ticked in order to tick the subgroup boxes)
    - > Modify users
    - > Add users
    - > Delete users
- Programmer type:
  - View type of programmer (this box must be ticked in order to tick the subgroup boxes)
    - > Modify COM ports
    - > Modify programmer type
- Subgroups:
  - View Subgroups (this box must be ticked in order to tick the subgroup boxes)
    - > Modify Subgroups
    - > Add Subgroups
    - > Delete Subgroups
- Locks:
  - View locks (this box must be ticked in order to tick the subgroup boxes)
    - > View lock configuration

- > Modify lock configuration
  - > Add locks
  - > Delete locks
  - > Modify installation properties
- Events:
  - View events (this box must be ticked in order to tick the subgroup boxes)
    - > Delete event list
    - > Print events
    - > Export events to a file
- Set-up keys:
  - View set-up keys (this box must be ticked in order to tick the subgroup boxes)
    - > Set-up keys
- User keys:
  - View user keys (this box must be ticked in order to tick the subgroup boxes)
    - > User keys
- Cancellation keys:
  - View cancellation keys (this box must be ticked in order to tick the subgroup boxes)
    - > Cancellation keys
- Maintenance keys:
  - View maintenance keys (this box must be ticked in order to tick the subgroup boxes)
    - > Maintenance keys
- PC-Programmer:
  - View programmers (this box must be ticked in order to tick the subgroup boxes)
    - > Modify programmers

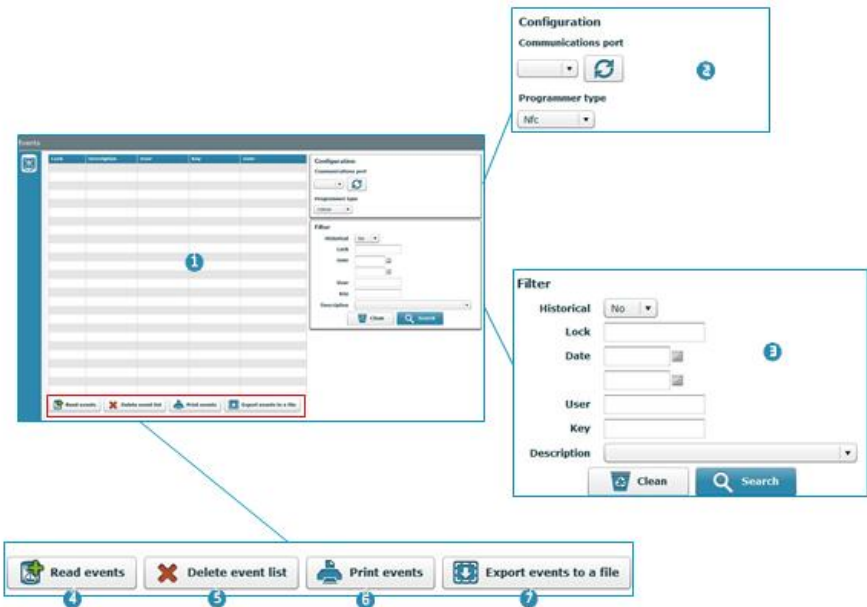
## 4.8 EVENTS

The locks are able to store accesses and actions that have occurred on them. The Ojmar NFC programmer or an events key must be used to collect these movements (See Section 4.14.1). The events screen displays these movements.

Access this screen via the "Communications / Events" menu or by clicking on the following button on the main screen:



The main Events screen displays the following information:



The screenshot shows the Events screen interface. It includes a main table area (1) with a header row containing 'Date', 'Communication', 'User', 'Key', and 'Action'. To the right of the table is a 'Configuration' panel (2) with 'Communications port' and 'Programmer type' dropdowns, and a 'Filter' panel (3) with fields for 'Historical', 'Lock', 'Date', 'User', 'Key', and 'Description'. At the bottom, there is a toolbar (4) with buttons for 'Read events', 'Delete event list', 'Print events', and 'Export events to a file'. A red box highlights the toolbar buttons, and a blue box highlights the configuration and filter panels.

1. List of events: This list displays the events recorded on the events key or in the Ojmar NFC programmer. Example:

- The lock number used.
- Action taken on the lock.
- User to have performed the event.
- Key used.
- Date of the event.



2. Configuration: This displays the configuration defined in Section 4.15 or establishes a new connection with the programmer by clicking on the following icon (See Section 4.17).
3. Filter: This allows for the results of the window (1) to be filtered, displaying only the criteria ticked in the fields described here.
4. Read events: See Section 4.8.1.
5. Delete event list: Deletes the events displayed in the window (1).
6. Print events: Generates a document containing the events displayed in the window (1) and displays it on the screen. This list can be printed or saved in pdf format.
7. Export events to a file: Exports the events displayed in the window (1) to an Excel file.

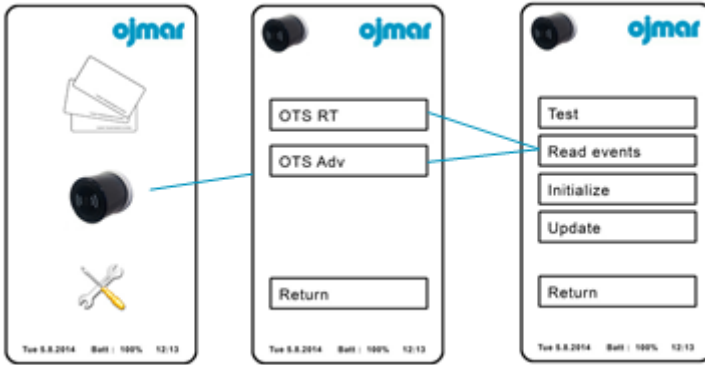
### 4.8.1 Read Events

It is possible to read events from an events key (See Section 4.14.1) or from the Ojmar NFC programmer.

The following screen is displayed on clicking on this button:



- Read events from the programmer: The following steps must first have been taken to be able to read the events stored in the Ojmar NFC programmer:
  - Load the locks on which the events are to be collected in the programmer (See point (5) of Section 4.6).
  - Connect the programmer on any of the locks added in the previous point and click on the "Read events" button of the programmer.



- **EXAMPLE:** To learn which events have occurred on lock 1. First load this lock in the programmer (See Section 4.8.1). Then connect the programmer to the lock in line with the process indicated in the illustration above. Finally tick the "Read events from the programmer" tab and click on Send.
- Read events from the key: To read events from an events key, place the key in the reading zone of any of the two programmers and click on "Send".

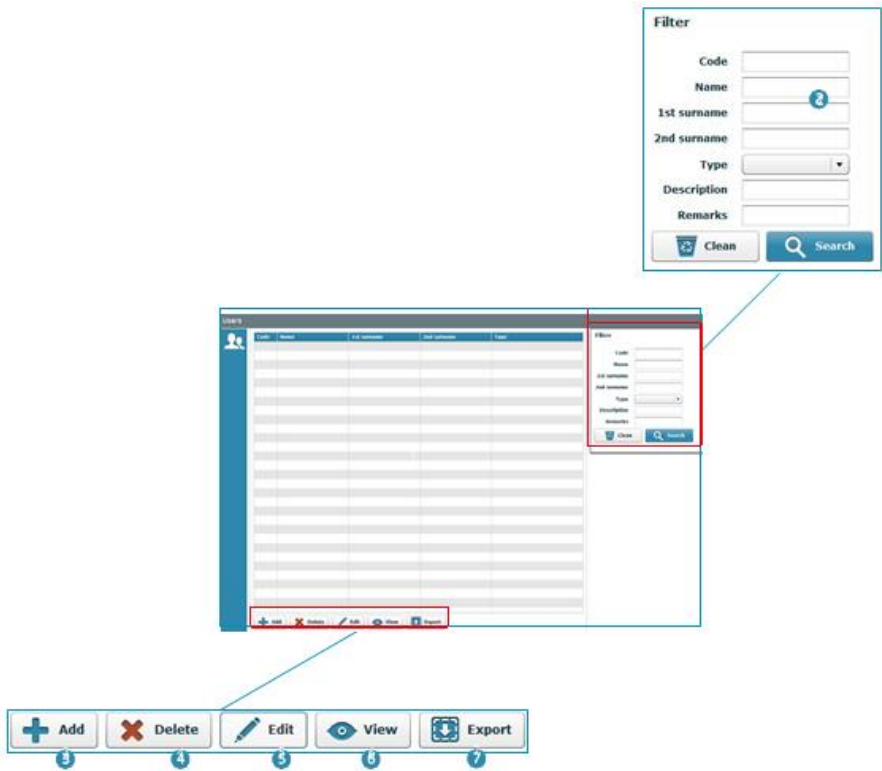
## 4.9 USERS

The user screen allows for a list to be created containing clients that can later be associated to the keys.

Access this screen via the "Configuration / Users" menu or by clicking on the following button on the main screen:



The main Users screen displays the following information:



1. List all users created: This list displays the personal details of the user and the type of lock associated.
2. Filter Window: This allows for the results of the window (1) to be filtered, displaying only the criteria ticked in the fields described here.
3. Add: Adds a new user (See Section 4.9.1).
4. Delete: Deletes a User from the list. To do so, select it and click on this button.
5. Edit: Allows for the User parameters to be modified (See Section 4.9.1). To do so, select a User from the list and click on this button.
6. View: Allows for the User parameters to be viewed (See Section 4.9.1). To do so, select a User from the list and click on this button.
7. Export: Exports the full list to a file in Excel format.

## 4.9.1 Add User

Fill in the following fields to add a new user.

- NOTE: All of the fields marked with an \* must be filled in.

The screenshot shows a web interface for adding a user. The form is titled "Add user" and includes several input fields and sections. Numbered callouts (1-6) point to specific elements: 1. \*Name (text input); 2. \*1st surname (text input); 3. \*Lock type (dropdown menu, currently showing "OTS"); 4. Expiry date (calendar icon) and Expiry time (time selection dropdowns); 5. Description and Remarks (text areas); 6. Time zones section, which includes an Interval input, a 24-hour clock visualization, and a Days selection grid (M, T, W, T, F, S, S).

1. Name: User name.
2. 1st and 2nd surname: User's Surnames, the first being mandatory.
3. Lock type: Type of lock associated to the user.
4. Expiry date and time: Precise date and time when the user account will expire.
  - NOTE: The keys associated to the user will be disabled from this time and may not be used in any lock.
  - NOTE: The expiry date and time must be entered.
5. Description and remarks: Optional fields to add extra information on the user.
6. Time Zones: Displays the time zones assigned to the user (See Section 4.10).
  - NOTE: Up to a maximum of 5 time zones can be assigned to each user.

## 4.10 TIME ZONES

Time zones are used to define the period of hours during which the keys can be used. User keys with an associated time period may access the lock within the times specified and will be rejected if access is attempted outside these times.

The following key types can have a time zone associated to them:

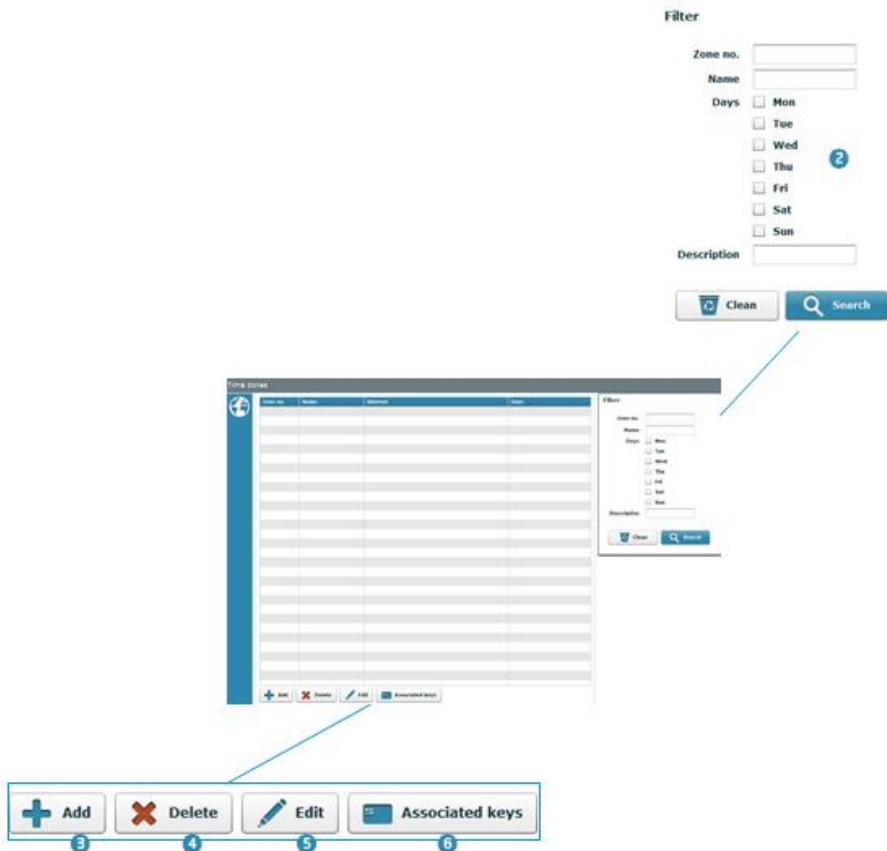
- Free.
- Multifunction.
- Master subgroup.

The time on the locks must be correctly set for the Time Zones to function correctly (See Section 4.11).

Access this screen via the "Configuration / Time zones" menu or by clicking on the following button on the main screen:



The main Time Zones screen displays the following information:



1. List all time zones created: This list displays the number and name of the zone, time period and days of the week when it is operational.
  2. Filter Window: This allows for the results of the window (1) to be filtered, displaying only the criteria ticked in the fields described here.
  3. Add: Adds a new Time Zone (See Section 4.10.1).
  4. Delete: Deletes a Time Zone from the list. To do so, select it and click on this button.
  5. Edit: Allows for the Time Zone parameters to be modified (See Section 4.10.1). To do so, select a Time Zone from the list and click on this button.
  6. Associated keys: Displays a full list of all keys associated to the Time Zone.
- NOTE: Whenever a key is programmed and a Time Zone assigned to it, this list is updated.

## 4.10.1 Add Time Zone

Fill in the following fields to add a new Time Zone.

- NOTE: A total of 5 different Time Zones can be added.

The screenshot shows a dialog box titled "Add time zone" with a globe icon on the left. The dialog is divided into six numbered sections:

- 1** \*Zone no.: A text input field containing "01".
- 2** \*Name: A text input field.
- 3** \*Initial interval: Two dropdown menus separated by a colon.
- 4** \*Final interval: Two dropdown menus separated by a colon.
- 5** \*Days: Seven checkboxes labeled Mon, Tue, Wed, Thu, Fri, Sat, and Sun.
- 6** Description: A large text area.

At the bottom right, there are "Save" and "Cancel" buttons.

- NOTE: All of the fields marked with an \* must be filled in.

1. Zone no.: Alphanumerical field that the application fills in automatically.
2. Name: Name of the Time Zone.

- NOTE: A name should be given that helps to clearly identify the Zone (e.g. "Morning Group", "Afternoon Group").

3. Initial interval: Time from when operations are possible.
4. Final interval: Time until when operations are possible.

- NOTE: The time format of "Initial Interval" and "Final interval" is 24h.

5. Days: Establishes the days of the week when the Time Zone will be applied.
6. Description: A more detailed description of the Time zone can optionally be added.

- EXAMPLE: We create a new Time Zone called "Morning". This key is operational from 7.45 a.m. to 1.00 p.m., from Monday to Friday.

## 4.11 SET-UP KEYS

Set-up keys allow for a lock to be configured, leaving it operational (if the lock was previously factory configured) or changing its properties.

Set-up keys can:

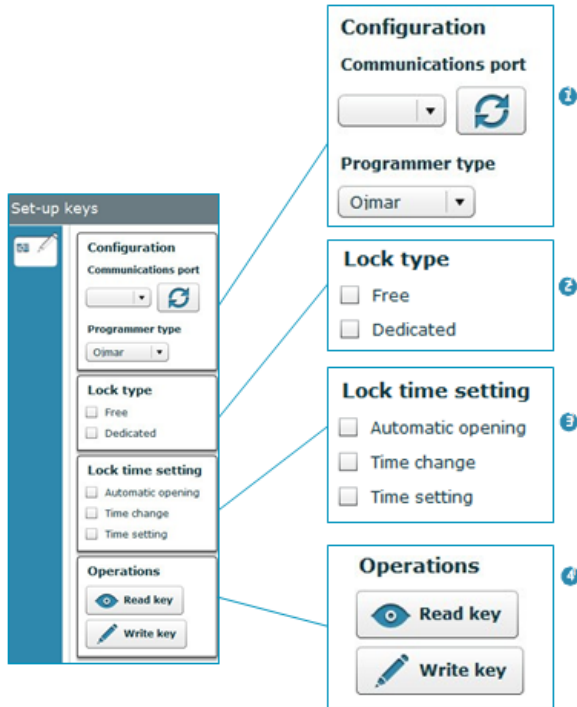
- Configure one or several "Free" type locks.
- Configure one or several "Dedicated" type locks.
- Assign an automatic opening time to the lock.
- Change the time zone of the lock.
- Set the time on the lock.


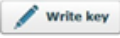
Access this screen via the "Keys / Set-up keys" menu or by clicking on the following button on the main screen:

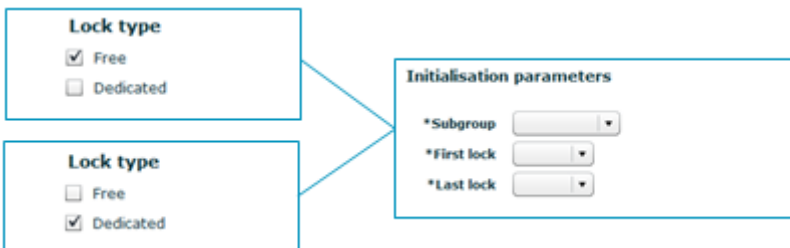




The main set-up keys screen displays the following information:



1. Configuration: This displays the configuration defined in Section 4.15 or establishes a new connection with the programmer by clicking on the following icon  [See Section 4.17].
2. Lock type: Set-up keys can be programmed from here for:
  - "Free" and "Dedicated" type locks: To do so, select the lock type, a subgroup, the start and end lock and click on the  button.



- NOTE: The set-up keys must be created for consecutive lock groups. See the example below.
  - EXAMPLE: There are several free locks to be initialised: from 1 to 10 and from 40 to 50. In this case, two set-up keys must be created. One for the 1 to 10 group and another key for the 40 to 50 group.
3. Lock time setting: Creates a key with the time and date defined on the PC at that time.
    - NOTE: Use it on all locks, remembering that for every block of 15 locks, another minute is added to the next block
  4. Operations: This allows for the contents of the key to be read or for the values entered in Points (2) and (3) to be recorded.

## 4.12 RECORD USER KEYS

Access this screen via the "Keys / User keys" menu or by clicking on the following button on the main screen:



The main user keys screen displays the following information:

Configuration of the key.

\*Lock number: [dropdown]  
 \*User: [dropdown]  
 \*Frame date: [dropdown]  
 \*Expiry date: [dropdown]  
 \*Prohibition: [dropdown]

\*Subgroup: [dropdown] Group 1  
 [dropdown] Group 2

Event status  
 [dropdown] Pending

Behavior: [dropdown]  
 [dropdown]  
 Steps: [dropdown] [dropdown] [dropdown] [dropdown] [dropdown] [dropdown] [dropdown] [dropdown]

Configuration of the key.

\*Associated lock: [dropdown]  
 Associated lock2: [dropdown] [dropdown] [dropdown]  
 Repeat fixed lock: [dropdown]  
 User: [dropdown] Search  
 Date: [dropdown]  
 Time: [dropdown] [dropdown]  
 Prohibition: [dropdown]

Configuration of the key.

\*Lock number: [dropdown]  
 \*User: [dropdown]  
 \*Frame date: [dropdown]  
 \*Expiry date: [dropdown]  
 \*Prohibition: [dropdown]

\*Subgroup: [dropdown] Group 1  
 [dropdown] Group 2

Event status  
 [dropdown] Pending

Behavior: [dropdown]  
 [dropdown]  
 Steps: [dropdown] [dropdown] [dropdown] [dropdown] [dropdown] [dropdown] [dropdown] [dropdown]

**Configuration**

Communications port  
 [dropdown] [refresh icon]


Programmer type  
 [dropdown] Oimar

**Key type**

Free  
 Dedicated  
 Multifunction

**Operations**

[eye icon] Read key  
 [pencil icon] Write key

1. Configuration: This displays the configuration defined in Section 4.15 or establishes a new connection with the programmer by clicking on the following icon .
2. Free key type: See Section 4.12.1.
3. Dedicated key type: See Section 4.12.2.
4. Multi-function key type: See Section 4.12.3.
5. Operations: This allows the contents of the key to be read or the values entered in Points (2), (3) and (4) to be recorded.

## 4.12.1 Write Free Key

- NOTE: There must be at least one Free key in order to be able to create a key of this type.

**Configuration of the key.**

\*Lock number  ①

User  ③

Expiry date  ④

Expiry time  :  ④

Prohibition  ⑤

\*Subgroup

0 Group 1 ②

1 Group 2 ②

**Time zones**

Morning ⑥

Interval

[OH]  [24H]

Days  H  T  W  T  F  S  S

- NOTE: All of the fields marked with an \* must be filled in.
- Number of locks: Number of locks that a key can open (maximum 3).
  - EXAMPLE: 1 lock per user. 2 or 3 locks per family.
  - Subgroup: Subgroup (more than one can be selected) to which the key belongs (See Section 4.5).
  - User: A previously created user can be selected for greater control and information on the key (See Section 4.9).
  - Expiry Date/Time: Assign an expiry date and time to the key.
  - Prohibition: Where an expiry date and time have been defined (4), the following restrictions can be added to the key:
    - None: No restriction will be applied as of the expiry date/time.
    - Opening: The locker may be closed but not opened as of the expiry date/time.
    - Closing: The locker may be opened but not closed as of the expiry date/time.
    - Opening and closing: The locker may be neither opened nor closed as of the expiry date/time.

6. Time zones: This allows for up to a total of 5 time zones per key to be defined (See Section 4.10).

### 4.12.2 Write Dedicated Key

- NOTE: There must be at least one dedicated key in order to be able to create a key of this type.

**Configuration of the key.**

\* Associated lock  ⓘ

Associated lock2   ⓘ

Repeat fixed lock  ⓘ

User  Search ⓘ

Date  ⓘ

Time  :  ⓘ

Prohibition  ⓘ

- NOTE: All of the fields marked with an \* must be filled in.
1. Associated lock: Displays a list of dedicated locks that can be assigned.
  2. Associated lock 2: Additionally, the key can be linked to more than one dedicated lock.
- NOTE: A dedicated key can manage a total of 6 dedicated locks.
3. Repeat dedicated lock: Allows for a duplicate dedicated key to be created. In this case, a list will be displayed with the lock numbers and an \* above the lock number with a duplicate dedicated key.
  4. User: A previously created user can be selected for greater control and information on the key (See Section 4.9).
  5. Expiry Date/Time: Assign an expiry date and time to the key.
  6. Prohibition: Where an expiry date and time have been defined (5), the following restrictions can be added to the key:
    - None: No restriction will be applied as of the expiry date/time.
    - Opening: The locker may be closed but not opened as of the expiry date/time.
    - Closing: The locker may be opened but not closed as of the expiry date/time.

- Opening and closing: The locker may be neither opened nor closed as of the expiry date/time.

• NOTE: Dedicated keys are not subject to Time Zones.

### 4.12.3 Write Multifunction Keys

• NOTE: There must be at least one Free and Dedicated key in order to be able to create a key of this type.

• NOTE: All of the fields marked with an \* must be filled in.

1. Number of locks: Number of free locks that a key can open (maximum 3).
2. Subgroup: Subgroup (more than one can be selected) to which the key belongs (See Section 4.5).
3. Associated lock: Displays a list of dedicated locks that can be assigned. Additionally, the key can be linked to 2 more dedicated locks from the "Associated lock 2" field.
4. Repeat dedicated lock: Allows for a duplicate dedicated key to be created. In this case, a list will be displayed with the lock numbers and an \* above the lock number with a duplicate dedicated key.
5. User: A previously created user can be selected for greater control and information on the key (See Section 4.9).
6. Expiry Date/Time: Assign an expiry date and time to the key.
7. Prohibition: Where an expiry date and time have been defined (6), the following restrictions can be added to the key:
  - None: No restriction will be applied as of the expiry date/time.
  - Opening: The locker may be closed but not opened as of the expiry date/time.

- Closing: The locker may be opened but not closed as of the expiry date/time.
  - Opening and closing: The locker may be neither opened nor closed as of the expiry date/time.
8. Time zones: This allows for up to a total of 5 time zones per key to be defined (See Section 4.10).
- NOTE: The time restriction will only apply to Free locks that may have the multifunction key assigned.



## 4.13 CANCELLATION KEYS

Access this screen via the "Keys / Cancellation keys" menu or by clicking on the following button on the main screen:




The main cancellation keys screen displays the following information:

1. Configuration: This displays the configuration defined in Section 4.15 or establishes a new connection with the programmer by clicking on the following icon (See Section 4.16).
2. Read key: This allows for the key to be read, displaying its contents on the screen.
3. Write key: Records the value selected in Point (6) on the key.

4. Search key ID: Displays a detailed list of stored users of the facility. Select the key to be cancelled from the database and click on  .
  5. Clear: Clears the fields ticked on the screen.
  6. Query mode: Allows search and selection of the type of cancellation key to be recorded:
    - Key serial number: Enter the serial number of the key to be cancelled.
- NOTE: This code may be between 8 and 14 characters in length (depending on the key technology).
  - User: Select the user to be cancelled from the drop-down list.
  - NOTE: Where the user has more than one key, a list with all those available will be displayed. In this case, select the key to be cancelled and click on  .

Select key X

Key serial number	Name	1st surname	2nd surname	Date	Prohibition	Cancelled
BAA07FCF	User 1	User 1				No
158ABGH1A	User 1	User 1				

- Database: Select the key to be cancelled from the database and click on  . This database contains all of the records stored for the facility and displays a detailed list of them.

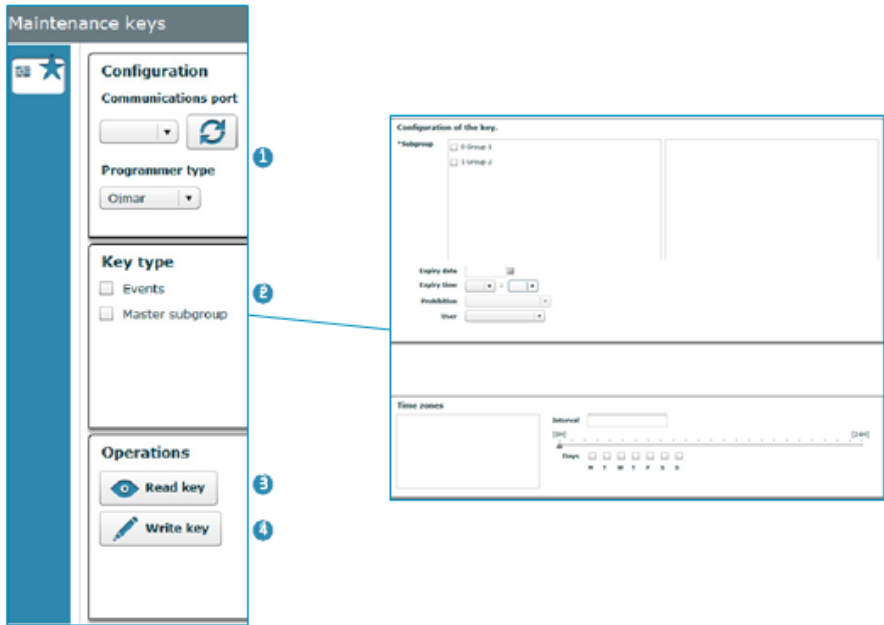
## 4.14 MAINTENANCE KEYS


Access this screen via the "Keys / Maintenance keys" menu or by clicking on the following button on the main screen:



The main cancellation keys screen displays the following information:





1. Configuration: This displays the configuration defined in Section 4.15 or establishes a new connection with the programmer by clicking on the following icon  (See Section 4.16).
2. Key types: There are two types of maintenance key that can be programmed:
  - Events key: See Section 4.14.1.
  - Master subgroups key: See Section 4.14.2.
3. Read key: This allows for the key to be read, displaying its contents on the screen.
4. Write key: Records the value selected in Point (2) on the key.

### 4.14.1 Events Key

Events keys are used to store events for a specific lock on them:

- “Mifare Classic” type keys can store between 3 and 5 events.
- “Mifare Desfire EV1” type keys store the last 3 events.
- EXAMPLE: If you want to know which keys accessed a specific lock and at what times. Create an events key. Go to the lock and pass the key over it. The key will store the latest events of the lock.

Once the events have been stored on the key, see Section 4.8 to read them on the screen.

### 4.14.2 Master subgroups Key

The Master subgroup key can operate in two different ways depending on the status of the lock:

- Lock closed: If the lock is closed, it can be opened without deleting any information saved. It can only open it if the subgroup assigned to the lock matches that of the key.
  - Lock open: If the lock is open then this key can close it, provided the subgroup assigned to the key matches.
- NOTE: All of the free locks required can be used.

Configuration of the key:

\*Subgroup

0 Group 1

1 Group 2

Expiry date: [calendar icon]

Expiry time: [time selection icon]

Prohibition: [dropdown arrow]

User: [dropdown arrow]

Time zones

Interval: [input field]

[00] [24]

Week: [M] [T] [W] [T] [F] [S] [S]

To create a key of this type, a subgroup must be selected. All other fields are optional.

## 4.15 PROGRAMMER TYPE

One programmer and one communications port can be predetermined so that communications do not have to be established with the programmer whenever the keys are to be used.

Access this screen via the "Communications / Programmer Type" menu or by clicking on the following button on the main screen:



The main programmer type screen displays the following information:



1. Programmer type: Select between NFC or CNReader model.
  2. COM port number: Select the communications port where the programmer is connected.
- NOTE: See Section 4.17 for information on the communications port (COM) that is connected to the programmer.

## 4.16 PC-PROGRAMMER

The OTS Software allows for the following firmware versions to be updated:

- The Ojmar programmer.
  - The OTS RT locks.
  - The OTS UN locks.
- NOTE: Firmware is a small software that is located in the memory of these devices and that allows them to be initialised and used.
  - WARNING: Only the Firmware supplied by Ojmar must be used.

Access this screen via the "Communications / PC-Programmer" menu or by clicking on the following button on the main screen:



- NOTE: This button is only displayed if the preset programmer type is Ojmar NFC [See Section 4.15].

The main programmer type screen displays the following information:




1. Reprogram programmer: Proceed as follows to update the Ojmar NFC programmer firmware:
  1. Switch on the programmer and connect it to the PC.
  2. Select the file (with extension ".hex" or ".bin") supplied by Ojmar and click on "OK".
2. and 3 Reprogram OTS clock and OTS Advance lock: Proceed as follows to update the firmware for either of these two locks:
  1. Switch on the programmer and connect it to the PC.
  2. Select the file (with extension ".hex" or ".bin") supplied by Ojmar and click on "OK".
  3. Ask the Ojmar technical service for guidance on the updating process [See Section 0.4].

## 4.17 ESTABLISH COMMUNICATIONS WITH THE PROGRAMMER

Communications must be established with the programmer before you can use the keys.



To do so:

1. Select programmer type: Select between the Ojmar NFC or CNReader programmer.
2. COM port number: Click on the following icon  for the communications port (COM) to be automatically detected.

• NOTE: The port resulting from the automatic search (COM1, COM2, etc.) may be used to configure the "Programmer Type" (See Section 4.15)

## 5. FAQs

### 5.1 FAQs

QUESTION	CAUSE	SOLUTION
The following message is displayed on attempting to read a key: "Check the programmer's connection. It may be turned off or disconnected"	Communications have not been established with the programmer.	Check that the programmer: <ul style="list-style-type: none"><li>• Is correctly connected to the USB port.</li><li>• The programmer drivers are correctly configured. See Sections 2.4 and 2.5.</li><li>• Communications have been established with the programmer from the OTS Management Software. See Section 4.17.</li><li>• Select the correct programmer model: CNReader or Ojmar.</li></ul>
On creating a cancellation key, the following message is displayed when the database is selected: "There are no keys assigned to users in the database"	<ul style="list-style-type: none"><li>• There is no user in the database.</li><li>• No key has been created.</li><li>• User keys (free or dedicated) have been created but no user from the database has been assigned to them.</li></ul>	There must be at least one user and one key (free or dedicated) to which a user has been assigned.
The following message is displayed on attempting to connect to the programmer: "No COM port on the list is of the OTS type"	The programmer type is incorrect.	Select the correct programmer model: CNReader or Ojmar.
The following message is displayed on attempting to read or record a key: "No key on the programmer"	No key has been placed on the programmer or it is incorrectly placed.	Place a key on the programmer within the reading limits.

QUESTION	CAUSE	SOLUTION
The following message is displayed on attempting to read the events of a lock from the Ojmar NFC programmer: "No comm with lock. Result: ERROR"	The lock type selected is incorrect.	Make sure the lock is OTS RT or OTS Adv.
The following message is displayed on initialising a lock using the Ojmar NFC programmer: "Lock is NOT in the list"	The lock has not been added to the list of locks in the programmer.	Add the lock, following the steps given in Section 4.8.1.
The lock does not open	The lock is being used by another key.	Pass the master key (Red) and check that it has been correctly released by closing and opening the lock using a free user key.
The lock is not working	The lock has detected flat battery (see lock flashes).	Replace the lock batteries and check that it works by closing and opening it using a free user key.
The key does not work on the locks.	The key is being used in another lock or the key has never been used.	Check whether the key has never been used or is in use by reading it using the programmer or software. If it is being used, release it using the Management Software or by closing and opening the lock in use. If it has never been used, record the key on the programmer or in the Management Software.



## INTELLIGENT LOCKING SYSTEMS

OJMAR, S.A.  
Polígono Industrial de Lerun, s/n  
20870 Elgoibar · Gipuzkoa  
SPAIN  
T. +34 943 748484  
[www.ojmar.com](http://www.ojmar.com)

